

## ANALYTICAL REPORT

Eurofins Lancaster Laboratories Env, LLC  
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Lancaster, PA 17601  
Tel: (717)656-2300

Laboratory Job ID: 410-50369-1

Client Project/Site: Boeing Portland, TSA - 0251 16.620.640

For:

Landau & Associates, Inc.  
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Edmonds, Washington 98020

Attn: Evelyn Ives



Authorized for release by:  
8/13/2021 4:14:09 PM

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*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*



Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
  - Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.
  - Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.
- Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

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A handwritten signature in black ink that reads "Vanessa N. Badman".

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Vanessa Badman  
Project Manager  
8/13/2021 4:14:09 PM



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## Definitions/Glossary

Client: Landau & Associates, Inc.  
Project/Site: Boeing Portland, TSA - 0251 16.620.640

Job ID: 410-50369-1

### Qualifiers

#### GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
1C	Result is from the primary column on a dual-column method.
2C	Result is from the confirmation column on a dual-column method.
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

# Case Narrative

Client: Landau & Associates, Inc.  
Project/Site: Boeing Portland, TSA - 0251 16.620.640

Job ID: 410-50369-1

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## Job ID: 410-50369-1

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### Laboratory: Eurofins Lancaster Laboratories Env, LLC

#### Narrative

#### Job Narrative 410-50369-1

#### Receipt

The samples were received on 8/6/2021 10:31 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was -1.0°C

#### GC/MS VOA

Method 8260C\_LL: The method requirement for no headspace was not met. The following volatile sample was analyzed with headspace in the sample container(s): Tripblank - 0821 (410-50369-1). The sample container was received with headspace.

Method 8260C\_LL: The following volatiles sample was diluted due to foaming at the time of purging during the original sample analysis: EW - 13 - 0821 (410-50369-14). Elevated reporting limits (RLs) are provided.

Method 8260C\_LL: The continuing calibration verification (CCV) associated with batch 410-158976 recovered outside acceptance criteria, low biased, for 1,1,2,2-Tetrachloroethane, Acetone, 2-Butanone and 4-Methyl-2-pentanone. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Non-detections of the affected analytes are reported. Any detections are considered estimated.

Method 8260C\_LL: The continuing calibration verification (CCV) analyzed on analytical batch 410-158976 is compliant under 8260C method criteria for 2-Hexanone. The software does not display the % Drift data to the whole number as is listed in the method (i.e. limit of 20%). When applying the evaluation to a whole number, the check passes the criteria with a value of 20% Drift. EW - 3 - 0821 (410-50369-13), EW - 13 - 0821 (410-50369-14) and BOP - 66ds - 0821 (410-50369-15)

Method 8260C\_LL: The continuing calibration verification (CCV) associated with batch 410-159902 recovered outside acceptance criteria, low biased, for 1,1,2,2-Tetrachloroethane, 2-Butanone, 2-Hexanone, 4-Methyl-2-pentanone and Acetone. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Non-detections of the affected analytes are reported. Any detections are considered estimated.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

# Detection Summary

Client: Landau & Associates, Inc.  
Project/Site: Boeing Portland, TSA - 0251 16.620.640

Job ID: 410-50369-1

## Client Sample ID: Tripblank - 0821

Lab Sample ID: 410-50369-1

No Detections.

## Client Sample ID: BOP - 31dg - 0821

Lab Sample ID: 410-50369-2

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	0.240		0.200	ug/L	1		8260C LL	Total/NA
cis-1,2-Dichloroethene	0.238		0.200	ug/L	1		8260C LL	Total/NA
Tetrachloroethene	0.394		0.200	ug/L	1		8260C LL	Total/NA
Trichloroethene	2.64		0.200	ug/L	1		8260C LL	Total/NA

## Client Sample ID: BOP - 31ds - 0821

Lab Sample ID: 410-50369-3

No Detections.

## Client Sample ID: BOP - 20dg - 0821

Lab Sample ID: 410-50369-4

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	35.8		5.00	ug/L	1		8260C LL	Total/NA

## Client Sample ID: BOP - 13ds - 0821

Lab Sample ID: 410-50369-5

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Carbon disulfide	1.10		0.500	ug/L	1		8260C LL	Total/NA
cis-1,2-Dichloroethene	0.286		0.200	ug/L	1		8260C LL	Total/NA
Trichloroethene	1.89		0.200	ug/L	1		8260C LL	Total/NA

## Client Sample ID: BOP - 13dg - 0821

Lab Sample ID: 410-50369-6

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	14.3		5.00	ug/L	1		8260C LL	Total/NA
Trichloroethene	0.355		0.200	ug/L	1		8260C LL	Total/NA

## Client Sample ID: BOP - 61dg - 0821

Lab Sample ID: 410-50369-7

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	0.308		0.200	ug/L	1		8260C LL	Total/NA
cis-1,2-Dichloroethene	0.201		0.200	ug/L	1		8260C LL	Total/NA
Trichloroethene	3.22		0.200	ug/L	1		8260C LL	Total/NA

## Client Sample ID: BOP - 23dg - 0821

Lab Sample ID: 410-50369-8

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	11.8		5.00	ug/L	1		8260C LL	Total/NA
Trichloroethene	0.853		0.200	ug/L	1		8260C LL	Total/NA

## Client Sample ID: BOP - 20ds - 0821

Lab Sample ID: 410-50369-9

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	19.0		5.00	ug/L	1		8260C LL	Total/NA
Toluene	0.537		0.200	ug/L	1		8260C LL	Total/NA

## Client Sample ID: BOP - z - 0821

Lab Sample ID: 410-50369-10

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	19.9		5.00	ug/L	1		8260C LL	Total/NA
Toluene	0.564		0.200	ug/L	1		8260C LL	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Env, LLC

# Detection Summary

Client: Landau & Associates, Inc.  
Project/Site: Boeing Portland, TSA - 0251 16.620.640

Job ID: 410-50369-1

## Client Sample ID: BOP - 62ds - 0821

Lab Sample ID: 410-50369-11

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.282		0.200	ug/L	1		8260C LL	Total/NA
Trichloroethene	0.970		0.200	ug/L	1		8260C LL	Total/NA

## Client Sample ID: BOP - y - 0821

Lab Sample ID: 410-50369-12

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.265		0.200	ug/L	1		8260C LL	Total/NA
Trichloroethene	0.946		0.200	ug/L	1		8260C LL	Total/NA

## Client Sample ID: EW - 3 - 0821

Lab Sample ID: 410-50369-13

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	242		5.00	ug/L	1		8260C LL	Total/NA

## Client Sample ID: EW - 13 - 0821

Lab Sample ID: 410-50369-14

No Detections.

## Client Sample ID: BOP - 66ds - 0821

Lab Sample ID: 410-50369-15

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	0.241		0.200	ug/L	1		8260C LL	Total/NA
Trichloroethene	0.974		0.200	ug/L	1		8260C LL	Total/NA

## Client Sample ID: BOP - 65ds - 0821

Lab Sample ID: 410-50369-16

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	0.250		0.200	ug/L	1		8260C LL	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Env, LLC

# Client Sample Results

Client: Landau & Associates, Inc.  
 Project/Site: Boeing Portland, TSA - 0251 16.620.640

Job ID: 410-50369-1

**Client Sample ID: Tripblank - 0821**

**Lab Sample ID: 410-50369-1**

Date Collected: 08/03/21 00:00

Matrix: Water

Date Received: 08/06/21 10:31

**Method: 8260C LL - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.500	U	0.500	ug/L			08/10/21 00:59	1
1,1,1,2-Tetrachloroethane	0.200	U	0.200	ug/L			08/10/21 00:59	1
1,1,2-Trichloroethane	0.200	U	0.200	ug/L			08/10/21 00:59	1
1,1-Dichloroethane	0.500	U	0.500	ug/L			08/10/21 00:59	1
1,1-Dichloroethene	0.200	U	0.200	ug/L			08/10/21 00:59	1
1,2-Dichloroethane	0.200	U	0.200	ug/L			08/10/21 00:59	1
1,2-Dichloropropane	0.500	U	0.500	ug/L			08/10/21 00:59	1
2-Butanone	5.00	U	5.00	ug/L			08/10/21 00:59	1
2-Hexanone	5.00	U	5.00	ug/L			08/10/21 00:59	1
4-Methyl-2-pentanone	5.00	U	5.00	ug/L			08/10/21 00:59	1
Acetone	5.00	U	5.00	ug/L			08/10/21 00:59	1
Benzene	0.200	U	0.200	ug/L			08/10/21 00:59	1
Bromodichloromethane	0.500	U	0.500	ug/L			08/10/21 00:59	1
Bromoform	1.00	U	1.00	ug/L			08/10/21 00:59	1
Bromomethane	0.500	U	0.500	ug/L			08/10/21 00:59	1
Carbon disulfide	0.500	U	0.500	ug/L			08/10/21 00:59	1
Carbon tetrachloride	0.200	U	0.200	ug/L			08/10/21 00:59	1
Chlorobenzene	0.500	U	0.500	ug/L			08/10/21 00:59	1
Chloroethane	0.500	U	0.500	ug/L			08/10/21 00:59	1
Chloroform	0.200	U	0.200	ug/L			08/10/21 00:59	1
Chloromethane	0.500	U	0.500	ug/L			08/10/21 00:59	1
cis-1,2-Dichloroethene	0.200	U	0.200	ug/L			08/10/21 00:59	1
cis-1,3-Dichloropropene	0.200	U	0.200	ug/L			08/10/21 00:59	1
Dibromochloromethane	0.500	U	0.500	ug/L			08/10/21 00:59	1
Ethylbenzene	0.500	U	0.500	ug/L			08/10/21 00:59	1
Freon 113	0.500	U	0.500	ug/L			08/10/21 00:59	1
m&p-Xylene	0.500	U	0.500	ug/L			08/10/21 00:59	1
Methylene Chloride	0.500	U	0.500	ug/L			08/10/21 00:59	1
o-Xylene	0.500	U	0.500	ug/L			08/10/21 00:59	1
Styrene	0.500	U	0.500	ug/L			08/10/21 00:59	1
Tetrachloroethene	0.200	U	0.200	ug/L			08/10/21 00:59	1
Toluene	0.200	U	0.200	ug/L			08/10/21 00:59	1
trans-1,2-Dichloroethene	0.200	U	0.200	ug/L			08/10/21 00:59	1
trans-1,3-Dichloropropene	0.200	U	0.200	ug/L			08/10/21 00:59	1
Trichloroethene	0.200	U	0.200	ug/L			08/10/21 00:59	1
Trichlorofluoromethane	0.500	U	0.500	ug/L			08/10/21 00:59	1
Vinyl acetate	0.500	U	0.500	ug/L			08/10/21 00:59	1
Vinyl chloride	0.200	U	0.200	ug/L			08/10/21 00:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		80 - 120		08/10/21 00:59	1
Dibromofluoromethane (Surr)	96		80 - 120		08/10/21 00:59	1
4-Bromofluorobenzene (Surr)	96		80 - 120		08/10/21 00:59	1
Toluene-d8 (Surr)	97		80 - 120		08/10/21 00:59	1

# Client Sample Results

Client: Landau & Associates, Inc.  
 Project/Site: Boeing Portland, TSA - 0251 16.620.640

Job ID: 410-50369-1

**Client Sample ID: BOP - 31dg - 0821**

**Lab Sample ID: 410-50369-2**

Date Collected: 08/03/21 14:00

Matrix: Water

Date Received: 08/06/21 10:31

**Method: 8260C LL - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.500	U	0.500	ug/L			08/10/21 02:05	1
1,1,1,2-Tetrachloroethane	0.200	U	0.200	ug/L			08/10/21 02:05	1
1,1,2-Trichloroethane	0.200	U	0.200	ug/L			08/10/21 02:05	1
1,1-Dichloroethane	0.500	U	0.500	ug/L			08/10/21 02:05	1
1,1-Dichloroethene	0.200	U	0.200	ug/L			08/10/21 02:05	1
1,2-Dichloroethane	0.200	U	0.200	ug/L			08/10/21 02:05	1
1,2-Dichloropropane	0.500	U	0.500	ug/L			08/10/21 02:05	1
2-Butanone	5.00	U	5.00	ug/L			08/10/21 02:05	1
2-Hexanone	5.00	U	5.00	ug/L			08/10/21 02:05	1
4-Methyl-2-pentanone	5.00	U	5.00	ug/L			08/10/21 02:05	1
Acetone	5.00	U	5.00	ug/L			08/10/21 02:05	1
Benzene	0.200	U	0.200	ug/L			08/10/21 02:05	1
Bromodichloromethane	0.500	U	0.500	ug/L			08/10/21 02:05	1
Bromoform	1.00	U	1.00	ug/L			08/10/21 02:05	1
Bromomethane	0.500	U	0.500	ug/L			08/10/21 02:05	1
Carbon disulfide	0.500	U	0.500	ug/L			08/10/21 02:05	1
Carbon tetrachloride	0.200	U	0.200	ug/L			08/10/21 02:05	1
Chlorobenzene	0.500	U	0.500	ug/L			08/10/21 02:05	1
Chloroethane	0.500	U	0.500	ug/L			08/10/21 02:05	1
<b>Chloroform</b>	<b>0.240</b>		0.200	ug/L			08/10/21 02:05	1
Chloromethane	0.500	U	0.500	ug/L			08/10/21 02:05	1
<b>cis-1,2-Dichloroethene</b>	<b>0.238</b>		0.200	ug/L			08/10/21 02:05	1
cis-1,3-Dichloropropene	0.200	U	0.200	ug/L			08/10/21 02:05	1
Dibromochloromethane	0.500	U	0.500	ug/L			08/10/21 02:05	1
Ethylbenzene	0.500	U	0.500	ug/L			08/10/21 02:05	1
Freon 113	0.500	U	0.500	ug/L			08/10/21 02:05	1
m&p-Xylene	0.500	U	0.500	ug/L			08/10/21 02:05	1
Methylene Chloride	0.500	U	0.500	ug/L			08/10/21 02:05	1
o-Xylene	0.500	U	0.500	ug/L			08/10/21 02:05	1
Styrene	0.500	U	0.500	ug/L			08/10/21 02:05	1
<b>Tetrachloroethene</b>	<b>0.394</b>		0.200	ug/L			08/10/21 02:05	1
Toluene	0.200	U	0.200	ug/L			08/10/21 02:05	1
trans-1,2-Dichloroethene	0.200	U	0.200	ug/L			08/10/21 02:05	1
trans-1,3-Dichloropropene	0.200	U	0.200	ug/L			08/10/21 02:05	1
<b>Trichloroethene</b>	<b>2.64</b>		0.200	ug/L			08/10/21 02:05	1
Trichlorofluoromethane	0.500	U	0.500	ug/L			08/10/21 02:05	1
Vinyl acetate	0.500	U	0.500	ug/L			08/10/21 02:05	1
Vinyl chloride	0.200	U	0.200	ug/L			08/10/21 02:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		80 - 120		08/10/21 02:05	1
Dibromofluoromethane (Surr)	96		80 - 120		08/10/21 02:05	1
4-Bromofluorobenzene (Surr)	96		80 - 120		08/10/21 02:05	1
Toluene-d8 (Surr)	97		80 - 120		08/10/21 02:05	1

# Client Sample Results

Client: Landau & Associates, Inc.  
 Project/Site: Boeing Portland, TSA - 0251 16.620.640

Job ID: 410-50369-1

**Client Sample ID: BOP - 31ds - 0821**

**Lab Sample ID: 410-50369-3**

Date Collected: 08/03/21 14:15

Matrix: Water

Date Received: 08/06/21 10:31

**Method: 8260C LL - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.500	U	0.500	ug/L			08/10/21 02:27	1
1,1,1,2-Tetrachloroethane	0.200	U	0.200	ug/L			08/10/21 02:27	1
1,1,2-Trichloroethane	0.200	U	0.200	ug/L			08/10/21 02:27	1
1,1-Dichloroethane	0.500	U	0.500	ug/L			08/10/21 02:27	1
1,1-Dichloroethene	0.200	U	0.200	ug/L			08/10/21 02:27	1
1,2-Dichloroethane	0.200	U	0.200	ug/L			08/10/21 02:27	1
1,2-Dichloropropane	0.500	U	0.500	ug/L			08/10/21 02:27	1
2-Butanone	5.00	U	5.00	ug/L			08/10/21 02:27	1
2-Hexanone	5.00	U	5.00	ug/L			08/10/21 02:27	1
4-Methyl-2-pentanone	5.00	U	5.00	ug/L			08/10/21 02:27	1
Acetone	5.00	U	5.00	ug/L			08/10/21 02:27	1
Benzene	0.200	U	0.200	ug/L			08/10/21 02:27	1
Bromodichloromethane	0.500	U	0.500	ug/L			08/10/21 02:27	1
Bromoform	1.00	U	1.00	ug/L			08/10/21 02:27	1
Bromomethane	0.500	U	0.500	ug/L			08/10/21 02:27	1
Carbon disulfide	0.500	U	0.500	ug/L			08/10/21 02:27	1
Carbon tetrachloride	0.200	U	0.200	ug/L			08/10/21 02:27	1
Chlorobenzene	0.500	U	0.500	ug/L			08/10/21 02:27	1
Chloroethane	0.500	U	0.500	ug/L			08/10/21 02:27	1
Chloroform	0.200	U	0.200	ug/L			08/10/21 02:27	1
Chloromethane	0.500	U	0.500	ug/L			08/10/21 02:27	1
cis-1,2-Dichloroethene	0.200	U	0.200	ug/L			08/10/21 02:27	1
cis-1,3-Dichloropropene	0.200	U	0.200	ug/L			08/10/21 02:27	1
Dibromochloromethane	0.500	U	0.500	ug/L			08/10/21 02:27	1
Ethylbenzene	0.500	U	0.500	ug/L			08/10/21 02:27	1
Freon 113	0.500	U	0.500	ug/L			08/10/21 02:27	1
m&p-Xylene	0.500	U	0.500	ug/L			08/10/21 02:27	1
Methylene Chloride	0.500	U	0.500	ug/L			08/10/21 02:27	1
o-Xylene	0.500	U	0.500	ug/L			08/10/21 02:27	1
Styrene	0.500	U	0.500	ug/L			08/10/21 02:27	1
Tetrachloroethene	0.200	U	0.200	ug/L			08/10/21 02:27	1
Toluene	0.200	U	0.200	ug/L			08/10/21 02:27	1
trans-1,2-Dichloroethene	0.200	U	0.200	ug/L			08/10/21 02:27	1
trans-1,3-Dichloropropene	0.200	U	0.200	ug/L			08/10/21 02:27	1
Trichloroethene	0.200	U	0.200	ug/L			08/10/21 02:27	1
Trichlorofluoromethane	0.500	U	0.500	ug/L			08/10/21 02:27	1
Vinyl acetate	0.500	U	0.500	ug/L			08/10/21 02:27	1
Vinyl chloride	0.200	U	0.200	ug/L			08/10/21 02:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		80 - 120		08/10/21 02:27	1
Dibromofluoromethane (Surr)	96		80 - 120		08/10/21 02:27	1
4-Bromofluorobenzene (Surr)	95		80 - 120		08/10/21 02:27	1
Toluene-d8 (Surr)	97		80 - 120		08/10/21 02:27	1

# Client Sample Results

Client: Landau & Associates, Inc.  
 Project/Site: Boeing Portland, TSA - 0251 16.620.640

Job ID: 410-50369-1

**Client Sample ID: BOP - 20dg - 0821**

**Lab Sample ID: 410-50369-4**

Date Collected: 08/03/21 14:45

Matrix: Water

Date Received: 08/06/21 10:31

**Method: 8260C LL - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.500	U	0.500	ug/L			08/10/21 02:50	1
1,1,2,2-Tetrachloroethane	0.200	U	0.200	ug/L			08/10/21 02:50	1
1,1,2-Trichloroethane	0.200	U	0.200	ug/L			08/10/21 02:50	1
1,1-Dichloroethane	0.500	U	0.500	ug/L			08/10/21 02:50	1
1,1-Dichloroethene	0.200	U	0.200	ug/L			08/10/21 02:50	1
1,2-Dichloroethane	0.200	U	0.200	ug/L			08/10/21 02:50	1
1,2-Dichloropropane	0.500	U	0.500	ug/L			08/10/21 02:50	1
2-Butanone	5.00	U	5.00	ug/L			08/10/21 02:50	1
2-Hexanone	5.00	U	5.00	ug/L			08/10/21 02:50	1
4-Methyl-2-pentanone	5.00	U	5.00	ug/L			08/10/21 02:50	1
<b>Acetone</b>	<b>35.8</b>		5.00	ug/L			08/10/21 02:50	1
Benzene	0.200	U	0.200	ug/L			08/10/21 02:50	1
Bromodichloromethane	0.500	U	0.500	ug/L			08/10/21 02:50	1
Bromoform	1.00	U	1.00	ug/L			08/10/21 02:50	1
Bromomethane	0.500	U	0.500	ug/L			08/10/21 02:50	1
Carbon disulfide	0.500	U	0.500	ug/L			08/10/21 02:50	1
Carbon tetrachloride	0.200	U	0.200	ug/L			08/10/21 02:50	1
Chlorobenzene	0.500	U	0.500	ug/L			08/10/21 02:50	1
Chloroethane	0.500	U	0.500	ug/L			08/10/21 02:50	1
Chloroform	0.200	U	0.200	ug/L			08/10/21 02:50	1
Chloromethane	0.500	U	0.500	ug/L			08/10/21 02:50	1
cis-1,2-Dichloroethene	0.200	U	0.200	ug/L			08/10/21 02:50	1
cis-1,3-Dichloropropene	0.200	U	0.200	ug/L			08/10/21 02:50	1
Dibromochloromethane	0.500	U	0.500	ug/L			08/10/21 02:50	1
Ethylbenzene	0.500	U	0.500	ug/L			08/10/21 02:50	1
Freon 113	0.500	U	0.500	ug/L			08/10/21 02:50	1
m&p-Xylene	0.500	U	0.500	ug/L			08/10/21 02:50	1
Methylene Chloride	0.500	U	0.500	ug/L			08/10/21 02:50	1
o-Xylene	0.500	U	0.500	ug/L			08/10/21 02:50	1
Styrene	0.500	U	0.500	ug/L			08/10/21 02:50	1
Tetrachloroethene	0.200	U	0.200	ug/L			08/10/21 02:50	1
Toluene	0.200	U	0.200	ug/L			08/10/21 02:50	1
trans-1,2-Dichloroethene	0.200	U	0.200	ug/L			08/10/21 02:50	1
trans-1,3-Dichloropropene	0.200	U	0.200	ug/L			08/10/21 02:50	1
Trichloroethene	0.200	U	0.200	ug/L			08/10/21 02:50	1
Trichlorofluoromethane	0.500	U	0.500	ug/L			08/10/21 02:50	1
Vinyl acetate	0.500	U	0.500	ug/L			08/10/21 02:50	1
Vinyl chloride	0.200	U	0.200	ug/L			08/10/21 02:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		80 - 120		08/10/21 02:50	1
Dibromofluoromethane (Surr)	96		80 - 120		08/10/21 02:50	1
4-Bromofluorobenzene (Surr)	95		80 - 120		08/10/21 02:50	1
Toluene-d8 (Surr)	97		80 - 120		08/10/21 02:50	1

# Client Sample Results

Client: Landau & Associates, Inc.  
 Project/Site: Boeing Portland, TSA - 0251 16.620.640

Job ID: 410-50369-1

**Client Sample ID: BOP - 13ds - 0821**

**Lab Sample ID: 410-50369-5**

Date Collected: 08/03/21 15:40

Matrix: Water

Date Received: 08/06/21 10:31

**Method: 8260C LL - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.500	U	0.500	ug/L			08/10/21 03:12	1
1,1,1,2-Tetrachloroethane	0.200	U	0.200	ug/L			08/10/21 03:12	1
1,1,2-Trichloroethane	0.200	U	0.200	ug/L			08/10/21 03:12	1
1,1-Dichloroethane	0.500	U	0.500	ug/L			08/10/21 03:12	1
1,1-Dichloroethene	0.200	U	0.200	ug/L			08/10/21 03:12	1
1,2-Dichloroethane	0.200	U	0.200	ug/L			08/10/21 03:12	1
1,2-Dichloropropane	0.500	U	0.500	ug/L			08/10/21 03:12	1
2-Butanone	5.00	U	5.00	ug/L			08/10/21 03:12	1
2-Hexanone	5.00	U	5.00	ug/L			08/10/21 03:12	1
4-Methyl-2-pentanone	5.00	U	5.00	ug/L			08/10/21 03:12	1
Acetone	5.00	U	5.00	ug/L			08/10/21 03:12	1
Benzene	0.200	U	0.200	ug/L			08/10/21 03:12	1
Bromodichloromethane	0.500	U	0.500	ug/L			08/10/21 03:12	1
Bromoform	1.00	U	1.00	ug/L			08/10/21 03:12	1
Bromomethane	0.500	U	0.500	ug/L			08/10/21 03:12	1
<b>Carbon disulfide</b>	<b>1.10</b>		0.500	ug/L			08/10/21 03:12	1
Carbon tetrachloride	0.200	U	0.200	ug/L			08/10/21 03:12	1
Chlorobenzene	0.500	U	0.500	ug/L			08/10/21 03:12	1
Chloroethane	0.500	U	0.500	ug/L			08/10/21 03:12	1
Chloroform	0.200	U	0.200	ug/L			08/10/21 03:12	1
Chloromethane	0.500	U	0.500	ug/L			08/10/21 03:12	1
<b>cis-1,2-Dichloroethene</b>	<b>0.286</b>		0.200	ug/L			08/10/21 03:12	1
cis-1,3-Dichloropropene	0.200	U	0.200	ug/L			08/10/21 03:12	1
Dibromochloromethane	0.500	U	0.500	ug/L			08/10/21 03:12	1
Ethylbenzene	0.500	U	0.500	ug/L			08/10/21 03:12	1
Freon 113	0.500	U	0.500	ug/L			08/10/21 03:12	1
m&p-Xylene	0.500	U	0.500	ug/L			08/10/21 03:12	1
Methylene Chloride	0.500	U	0.500	ug/L			08/10/21 03:12	1
o-Xylene	0.500	U	0.500	ug/L			08/10/21 03:12	1
Styrene	0.500	U	0.500	ug/L			08/10/21 03:12	1
Tetrachloroethene	0.200	U	0.200	ug/L			08/10/21 03:12	1
Toluene	0.200	U	0.200	ug/L			08/10/21 03:12	1
trans-1,2-Dichloroethene	0.200	U	0.200	ug/L			08/10/21 03:12	1
trans-1,3-Dichloropropene	0.200	U	0.200	ug/L			08/10/21 03:12	1
<b>Trichloroethene</b>	<b>1.89</b>		0.200	ug/L			08/10/21 03:12	1
Trichlorofluoromethane	0.500	U	0.500	ug/L			08/10/21 03:12	1
Vinyl acetate	0.500	U	0.500	ug/L			08/10/21 03:12	1
Vinyl chloride	0.200	U	0.200	ug/L			08/10/21 03:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		80 - 120		08/10/21 03:12	1
Dibromofluoromethane (Surr)	97		80 - 120		08/10/21 03:12	1
4-Bromofluorobenzene (Surr)	96		80 - 120		08/10/21 03:12	1
Toluene-d8 (Surr)	96		80 - 120		08/10/21 03:12	1

# Client Sample Results

Client: Landau & Associates, Inc.  
 Project/Site: Boeing Portland, TSA - 0251 16.620.640

Job ID: 410-50369-1

**Client Sample ID: BOP - 13dg - 0821**

**Lab Sample ID: 410-50369-6**

Date Collected: 08/03/21 15:55

Matrix: Water

Date Received: 08/06/21 10:31

**Method: 8260C LL - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.500	U	0.500	ug/L			08/10/21 03:34	1
1,1,1,2-Tetrachloroethane	0.200	U	0.200	ug/L			08/10/21 03:34	1
1,1,2-Trichloroethane	0.200	U	0.200	ug/L			08/10/21 03:34	1
1,1-Dichloroethane	0.500	U	0.500	ug/L			08/10/21 03:34	1
1,1-Dichloroethene	0.200	U	0.200	ug/L			08/10/21 03:34	1
1,2-Dichloroethane	0.200	U	0.200	ug/L			08/10/21 03:34	1
1,2-Dichloropropane	0.500	U	0.500	ug/L			08/10/21 03:34	1
2-Butanone	5.00	U	5.00	ug/L			08/10/21 03:34	1
2-Hexanone	5.00	U	5.00	ug/L			08/10/21 03:34	1
4-Methyl-2-pentanone	5.00	U	5.00	ug/L			08/10/21 03:34	1
<b>Acetone</b>	<b>14.3</b>		5.00	ug/L			08/10/21 03:34	1
Benzene	0.200	U	0.200	ug/L			08/10/21 03:34	1
Bromodichloromethane	0.500	U	0.500	ug/L			08/10/21 03:34	1
Bromoform	1.00	U	1.00	ug/L			08/10/21 03:34	1
Bromomethane	0.500	U	0.500	ug/L			08/10/21 03:34	1
Carbon disulfide	0.500	U	0.500	ug/L			08/10/21 03:34	1
Carbon tetrachloride	0.200	U	0.200	ug/L			08/10/21 03:34	1
Chlorobenzene	0.500	U	0.500	ug/L			08/10/21 03:34	1
Chloroethane	0.500	U	0.500	ug/L			08/10/21 03:34	1
Chloroform	0.200	U	0.200	ug/L			08/10/21 03:34	1
Chloromethane	0.500	U	0.500	ug/L			08/10/21 03:34	1
cis-1,2-Dichloroethene	0.200	U	0.200	ug/L			08/10/21 03:34	1
cis-1,3-Dichloropropene	0.200	U	0.200	ug/L			08/10/21 03:34	1
Dibromochloromethane	0.500	U	0.500	ug/L			08/10/21 03:34	1
Ethylbenzene	0.500	U	0.500	ug/L			08/10/21 03:34	1
Freon 113	0.500	U	0.500	ug/L			08/10/21 03:34	1
m&p-Xylene	0.500	U	0.500	ug/L			08/10/21 03:34	1
Methylene Chloride	0.500	U	0.500	ug/L			08/10/21 03:34	1
o-Xylene	0.500	U	0.500	ug/L			08/10/21 03:34	1
Styrene	0.500	U	0.500	ug/L			08/10/21 03:34	1
Tetrachloroethene	0.200	U	0.200	ug/L			08/10/21 03:34	1
Toluene	0.200	U	0.200	ug/L			08/10/21 03:34	1
trans-1,2-Dichloroethene	0.200	U	0.200	ug/L			08/10/21 03:34	1
trans-1,3-Dichloropropene	0.200	U	0.200	ug/L			08/10/21 03:34	1
<b>Trichloroethene</b>	<b>0.355</b>		0.200	ug/L			08/10/21 03:34	1
Trichlorofluoromethane	0.500	U	0.500	ug/L			08/10/21 03:34	1
Vinyl acetate	0.500	U	0.500	ug/L			08/10/21 03:34	1
Vinyl chloride	0.200	U	0.200	ug/L			08/10/21 03:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		80 - 120		08/10/21 03:34	1
Dibromofluoromethane (Surr)	96		80 - 120		08/10/21 03:34	1
4-Bromofluorobenzene (Surr)	95		80 - 120		08/10/21 03:34	1
Toluene-d8 (Surr)	97		80 - 120		08/10/21 03:34	1

# Client Sample Results

Client: Landau & Associates, Inc.  
 Project/Site: Boeing Portland, TSA - 0251 16.620.640

Job ID: 410-50369-1

**Client Sample ID: BOP - 61dg - 0821**

**Lab Sample ID: 410-50369-7**

Date Collected: 08/04/21 09:30

Matrix: Water

Date Received: 08/06/21 10:31

**Method: 8260C LL - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.500	U	0.500	ug/L			08/10/21 03:56	1
1,1,1,2-Tetrachloroethane	0.200	U	0.200	ug/L			08/10/21 03:56	1
1,1,2-Trichloroethane	0.200	U	0.200	ug/L			08/10/21 03:56	1
1,1-Dichloroethane	0.500	U	0.500	ug/L			08/10/21 03:56	1
1,1-Dichloroethene	0.200	U	0.200	ug/L			08/10/21 03:56	1
1,2-Dichloroethane	0.200	U	0.200	ug/L			08/10/21 03:56	1
1,2-Dichloropropane	0.500	U	0.500	ug/L			08/10/21 03:56	1
2-Butanone	5.00	U	5.00	ug/L			08/10/21 03:56	1
2-Hexanone	5.00	U	5.00	ug/L			08/10/21 03:56	1
4-Methyl-2-pentanone	5.00	U	5.00	ug/L			08/10/21 03:56	1
Acetone	5.00	U	5.00	ug/L			08/10/21 03:56	1
Benzene	0.200	U	0.200	ug/L			08/10/21 03:56	1
Bromodichloromethane	0.500	U	0.500	ug/L			08/10/21 03:56	1
Bromoform	1.00	U	1.00	ug/L			08/10/21 03:56	1
Bromomethane	0.500	U	0.500	ug/L			08/10/21 03:56	1
Carbon disulfide	0.500	U	0.500	ug/L			08/10/21 03:56	1
Carbon tetrachloride	0.200	U	0.200	ug/L			08/10/21 03:56	1
Chlorobenzene	0.500	U	0.500	ug/L			08/10/21 03:56	1
Chloroethane	0.500	U	0.500	ug/L			08/10/21 03:56	1
<b>Chloroform</b>	<b>0.308</b>		0.200	ug/L			08/10/21 03:56	1
Chloromethane	0.500	U	0.500	ug/L			08/10/21 03:56	1
<b>cis-1,2-Dichloroethene</b>	<b>0.201</b>		0.200	ug/L			08/10/21 03:56	1
cis-1,3-Dichloropropene	0.200	U	0.200	ug/L			08/10/21 03:56	1
Dibromochloromethane	0.500	U	0.500	ug/L			08/10/21 03:56	1
Ethylbenzene	0.500	U	0.500	ug/L			08/10/21 03:56	1
Freon 113	0.500	U	0.500	ug/L			08/10/21 03:56	1
m&p-Xylene	0.500	U	0.500	ug/L			08/10/21 03:56	1
Methylene Chloride	0.500	U	0.500	ug/L			08/10/21 03:56	1
o-Xylene	0.500	U	0.500	ug/L			08/10/21 03:56	1
Styrene	0.500	U	0.500	ug/L			08/10/21 03:56	1
Tetrachloroethene	0.200	U	0.200	ug/L			08/10/21 03:56	1
Toluene	0.200	U	0.200	ug/L			08/10/21 03:56	1
trans-1,2-Dichloroethene	0.200	U	0.200	ug/L			08/10/21 03:56	1
trans-1,3-Dichloropropene	0.200	U	0.200	ug/L			08/10/21 03:56	1
<b>Trichloroethene</b>	<b>3.22</b>		0.200	ug/L			08/10/21 03:56	1
Trichlorofluoromethane	0.500	U	0.500	ug/L			08/10/21 03:56	1
Vinyl acetate	0.500	U	0.500	ug/L			08/10/21 03:56	1
Vinyl chloride	0.200	U	0.200	ug/L			08/10/21 03:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		80 - 120		08/10/21 03:56	1
Dibromofluoromethane (Surr)	96		80 - 120		08/10/21 03:56	1
4-Bromofluorobenzene (Surr)	95		80 - 120		08/10/21 03:56	1
Toluene-d8 (Surr)	97		80 - 120		08/10/21 03:56	1

# Client Sample Results

Client: Landau & Associates, Inc.  
 Project/Site: Boeing Portland, TSA - 0251 16.620.640

Job ID: 410-50369-1

**Client Sample ID: BOP - 23dg - 0821**

**Lab Sample ID: 410-50369-8**

Date Collected: 08/04/21 10:35

Matrix: Water

Date Received: 08/06/21 10:31

**Method: 8260C LL - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.500	U	0.500	ug/L			08/10/21 04:18	1
1,1,1,2-Tetrachloroethane	0.200	U	0.200	ug/L			08/10/21 04:18	1
1,1,2-Trichloroethane	0.200	U	0.200	ug/L			08/10/21 04:18	1
1,1-Dichloroethane	0.500	U	0.500	ug/L			08/10/21 04:18	1
1,1-Dichloroethene	0.200	U	0.200	ug/L			08/10/21 04:18	1
1,2-Dichloroethane	0.200	U	0.200	ug/L			08/10/21 04:18	1
1,2-Dichloropropane	0.500	U	0.500	ug/L			08/10/21 04:18	1
2-Butanone	5.00	U	5.00	ug/L			08/10/21 04:18	1
2-Hexanone	5.00	U	5.00	ug/L			08/10/21 04:18	1
4-Methyl-2-pentanone	5.00	U	5.00	ug/L			08/10/21 04:18	1
<b>Acetone</b>	<b>11.8</b>		5.00	ug/L			08/10/21 04:18	1
Benzene	0.200	U	0.200	ug/L			08/10/21 04:18	1
Bromodichloromethane	0.500	U	0.500	ug/L			08/10/21 04:18	1
Bromoform	1.00	U	1.00	ug/L			08/10/21 04:18	1
Bromomethane	0.500	U	0.500	ug/L			08/10/21 04:18	1
Carbon disulfide	0.500	U	0.500	ug/L			08/10/21 04:18	1
Carbon tetrachloride	0.200	U	0.200	ug/L			08/10/21 04:18	1
Chlorobenzene	0.500	U	0.500	ug/L			08/10/21 04:18	1
Chloroethane	0.500	U	0.500	ug/L			08/10/21 04:18	1
Chloroform	0.200	U	0.200	ug/L			08/10/21 04:18	1
Chloromethane	0.500	U	0.500	ug/L			08/10/21 04:18	1
cis-1,2-Dichloroethene	0.200	U	0.200	ug/L			08/10/21 04:18	1
cis-1,3-Dichloropropene	0.200	U	0.200	ug/L			08/10/21 04:18	1
Dibromochloromethane	0.500	U	0.500	ug/L			08/10/21 04:18	1
Ethylbenzene	0.500	U	0.500	ug/L			08/10/21 04:18	1
Freon 113	0.500	U	0.500	ug/L			08/10/21 04:18	1
m&p-Xylene	0.500	U	0.500	ug/L			08/10/21 04:18	1
Methylene Chloride	0.500	U	0.500	ug/L			08/10/21 04:18	1
o-Xylene	0.500	U	0.500	ug/L			08/10/21 04:18	1
Styrene	0.500	U	0.500	ug/L			08/10/21 04:18	1
Tetrachloroethene	0.200	U	0.200	ug/L			08/10/21 04:18	1
Toluene	0.200	U	0.200	ug/L			08/10/21 04:18	1
trans-1,2-Dichloroethene	0.200	U	0.200	ug/L			08/10/21 04:18	1
trans-1,3-Dichloropropene	0.200	U	0.200	ug/L			08/10/21 04:18	1
<b>Trichloroethene</b>	<b>0.853</b>		0.200	ug/L			08/10/21 04:18	1
Trichlorofluoromethane	0.500	U	0.500	ug/L			08/10/21 04:18	1
Vinyl acetate	0.500	U	0.500	ug/L			08/10/21 04:18	1
Vinyl chloride	0.200	U	0.200	ug/L			08/10/21 04:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		80 - 120		08/10/21 04:18	1
Dibromofluoromethane (Surr)	96		80 - 120		08/10/21 04:18	1
4-Bromofluorobenzene (Surr)	95		80 - 120		08/10/21 04:18	1
Toluene-d8 (Surr)	97		80 - 120		08/10/21 04:18	1

# Client Sample Results

Client: Landau & Associates, Inc.  
 Project/Site: Boeing Portland, TSA - 0251 16.620.640

Job ID: 410-50369-1

**Client Sample ID: BOP - 20ds - 0821**

**Lab Sample ID: 410-50369-9**

Date Collected: 08/04/21 11:30

Matrix: Water

Date Received: 08/06/21 10:31

**Method: 8260C LL - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.500	U	0.500	ug/L			08/10/21 04:40	1
1,1,1,2-Tetrachloroethane	0.200	U	0.200	ug/L			08/10/21 04:40	1
1,1,2-Trichloroethane	0.200	U	0.200	ug/L			08/10/21 04:40	1
1,1-Dichloroethane	0.500	U	0.500	ug/L			08/10/21 04:40	1
1,1-Dichloroethene	0.200	U	0.200	ug/L			08/10/21 04:40	1
1,2-Dichloroethane	0.200	U	0.200	ug/L			08/10/21 04:40	1
1,2-Dichloropropane	0.500	U	0.500	ug/L			08/10/21 04:40	1
2-Butanone	5.00	U	5.00	ug/L			08/10/21 04:40	1
2-Hexanone	5.00	U	5.00	ug/L			08/10/21 04:40	1
4-Methyl-2-pentanone	5.00	U	5.00	ug/L			08/10/21 04:40	1
<b>Acetone</b>	<b>19.0</b>		5.00	ug/L			08/10/21 04:40	1
Benzene	0.200	U	0.200	ug/L			08/10/21 04:40	1
Bromodichloromethane	0.500	U	0.500	ug/L			08/10/21 04:40	1
Bromoform	1.00	U	1.00	ug/L			08/10/21 04:40	1
Bromomethane	0.500	U	0.500	ug/L			08/10/21 04:40	1
Carbon disulfide	0.500	U	0.500	ug/L			08/10/21 04:40	1
Carbon tetrachloride	0.200	U	0.200	ug/L			08/10/21 04:40	1
Chlorobenzene	0.500	U	0.500	ug/L			08/10/21 04:40	1
Chloroethane	0.500	U	0.500	ug/L			08/10/21 04:40	1
Chloroform	0.200	U	0.200	ug/L			08/10/21 04:40	1
Chloromethane	0.500	U	0.500	ug/L			08/10/21 04:40	1
cis-1,2-Dichloroethene	0.200	U	0.200	ug/L			08/10/21 04:40	1
cis-1,3-Dichloropropene	0.200	U	0.200	ug/L			08/10/21 04:40	1
Dibromochloromethane	0.500	U	0.500	ug/L			08/10/21 04:40	1
Ethylbenzene	0.500	U	0.500	ug/L			08/10/21 04:40	1
Freon 113	0.500	U	0.500	ug/L			08/10/21 04:40	1
m&p-Xylene	0.500	U	0.500	ug/L			08/10/21 04:40	1
Methylene Chloride	0.500	U	0.500	ug/L			08/10/21 04:40	1
o-Xylene	0.500	U	0.500	ug/L			08/10/21 04:40	1
Styrene	0.500	U	0.500	ug/L			08/10/21 04:40	1
Tetrachloroethene	0.200	U	0.200	ug/L			08/10/21 04:40	1
<b>Toluene</b>	<b>0.537</b>		0.200	ug/L			08/10/21 04:40	1
trans-1,2-Dichloroethene	0.200	U	0.200	ug/L			08/10/21 04:40	1
trans-1,3-Dichloropropene	0.200	U	0.200	ug/L			08/10/21 04:40	1
Trichloroethene	0.200	U	0.200	ug/L			08/10/21 04:40	1
Trichlorofluoromethane	0.500	U	0.500	ug/L			08/10/21 04:40	1
Vinyl acetate	0.500	U	0.500	ug/L			08/10/21 04:40	1
Vinyl chloride	0.200	U	0.200	ug/L			08/10/21 04:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		80 - 120		08/10/21 04:40	1
Dibromofluoromethane (Surr)	96		80 - 120		08/10/21 04:40	1
4-Bromofluorobenzene (Surr)	95		80 - 120		08/10/21 04:40	1
Toluene-d8 (Surr)	97		80 - 120		08/10/21 04:40	1

# Client Sample Results

Client: Landau & Associates, Inc.  
 Project/Site: Boeing Portland, TSA - 0251 16.620.640

Job ID: 410-50369-1

**Client Sample ID: BOP - z - 0821**

**Lab Sample ID: 410-50369-10**

Date Collected: 08/04/21 11:35

Matrix: Water

Date Received: 08/06/21 10:31

**Method: 8260C LL - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.500	U	0.500	ug/L			08/10/21 05:02	1
1,1,1,2-Tetrachloroethane	0.200	U	0.200	ug/L			08/10/21 05:02	1
1,1,2-Trichloroethane	0.200	U	0.200	ug/L			08/10/21 05:02	1
1,1-Dichloroethane	0.500	U	0.500	ug/L			08/10/21 05:02	1
1,1-Dichloroethene	0.200	U	0.200	ug/L			08/10/21 05:02	1
1,2-Dichloroethane	0.200	U	0.200	ug/L			08/10/21 05:02	1
1,2-Dichloropropane	0.500	U	0.500	ug/L			08/10/21 05:02	1
2-Butanone	5.00	U	5.00	ug/L			08/10/21 05:02	1
2-Hexanone	5.00	U	5.00	ug/L			08/10/21 05:02	1
4-Methyl-2-pentanone	5.00	U	5.00	ug/L			08/10/21 05:02	1
<b>Acetone</b>	<b>19.9</b>		5.00	ug/L			08/10/21 05:02	1
Benzene	0.200	U	0.200	ug/L			08/10/21 05:02	1
Bromodichloromethane	0.500	U	0.500	ug/L			08/10/21 05:02	1
Bromoform	1.00	U	1.00	ug/L			08/10/21 05:02	1
Bromomethane	0.500	U	0.500	ug/L			08/10/21 05:02	1
Carbon disulfide	0.500	U	0.500	ug/L			08/10/21 05:02	1
Carbon tetrachloride	0.200	U	0.200	ug/L			08/10/21 05:02	1
Chlorobenzene	0.500	U	0.500	ug/L			08/10/21 05:02	1
Chloroethane	0.500	U	0.500	ug/L			08/10/21 05:02	1
Chloroform	0.200	U	0.200	ug/L			08/10/21 05:02	1
Chloromethane	0.500	U	0.500	ug/L			08/10/21 05:02	1
cis-1,2-Dichloroethene	0.200	U	0.200	ug/L			08/10/21 05:02	1
cis-1,3-Dichloropropene	0.200	U	0.200	ug/L			08/10/21 05:02	1
Dibromochloromethane	0.500	U	0.500	ug/L			08/10/21 05:02	1
Ethylbenzene	0.500	U	0.500	ug/L			08/10/21 05:02	1
Freon 113	0.500	U	0.500	ug/L			08/10/21 05:02	1
m&p-Xylene	0.500	U	0.500	ug/L			08/10/21 05:02	1
Methylene Chloride	0.500	U	0.500	ug/L			08/10/21 05:02	1
o-Xylene	0.500	U	0.500	ug/L			08/10/21 05:02	1
Styrene	0.500	U	0.500	ug/L			08/10/21 05:02	1
Tetrachloroethene	0.200	U	0.200	ug/L			08/10/21 05:02	1
<b>Toluene</b>	<b>0.564</b>		0.200	ug/L			08/10/21 05:02	1
trans-1,2-Dichloroethene	0.200	U	0.200	ug/L			08/10/21 05:02	1
trans-1,3-Dichloropropene	0.200	U	0.200	ug/L			08/10/21 05:02	1
Trichloroethene	0.200	U	0.200	ug/L			08/10/21 05:02	1
Trichlorofluoromethane	0.500	U	0.500	ug/L			08/10/21 05:02	1
Vinyl acetate	0.500	U	0.500	ug/L			08/10/21 05:02	1
Vinyl chloride	0.200	U	0.200	ug/L			08/10/21 05:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		80 - 120		08/10/21 05:02	1
Dibromofluoromethane (Surr)	96		80 - 120		08/10/21 05:02	1
4-Bromofluorobenzene (Surr)	95		80 - 120		08/10/21 05:02	1
Toluene-d8 (Surr)	97		80 - 120		08/10/21 05:02	1

# Client Sample Results

Client: Landau & Associates, Inc.  
 Project/Site: Boeing Portland, TSA - 0251 16.620.640

Job ID: 410-50369-1

**Client Sample ID: BOP - 62ds - 0821**

**Lab Sample ID: 410-50369-11**

Date Collected: 08/04/21 13:46

Matrix: Water

Date Received: 08/06/21 10:31

**Method: 8260C LL - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.500	U	0.500	ug/L			08/10/21 05:24	1
1,1,1,2-Tetrachloroethane	0.200	U	0.200	ug/L			08/10/21 05:24	1
1,1,2-Trichloroethane	0.200	U	0.200	ug/L			08/10/21 05:24	1
1,1-Dichloroethane	0.500	U	0.500	ug/L			08/10/21 05:24	1
1,1-Dichloroethene	0.200	U	0.200	ug/L			08/10/21 05:24	1
1,2-Dichloroethane	0.200	U	0.200	ug/L			08/10/21 05:24	1
1,2-Dichloropropane	0.500	U	0.500	ug/L			08/10/21 05:24	1
2-Butanone	5.00	U	5.00	ug/L			08/10/21 05:24	1
2-Hexanone	5.00	U	5.00	ug/L			08/10/21 05:24	1
4-Methyl-2-pentanone	5.00	U	5.00	ug/L			08/10/21 05:24	1
Acetone	5.00	U	5.00	ug/L			08/10/21 05:24	1
Benzene	0.200	U	0.200	ug/L			08/10/21 05:24	1
Bromodichloromethane	0.500	U	0.500	ug/L			08/10/21 05:24	1
Bromoform	1.00	U	1.00	ug/L			08/10/21 05:24	1
Bromomethane	0.500	U	0.500	ug/L			08/10/21 05:24	1
Carbon disulfide	0.500	U	0.500	ug/L			08/10/21 05:24	1
Carbon tetrachloride	0.200	U	0.200	ug/L			08/10/21 05:24	1
Chlorobenzene	0.500	U	0.500	ug/L			08/10/21 05:24	1
Chloroethane	0.500	U	0.500	ug/L			08/10/21 05:24	1
Chloroform	0.200	U	0.200	ug/L			08/10/21 05:24	1
Chloromethane	0.500	U	0.500	ug/L			08/10/21 05:24	1
<b>cis-1,2-Dichloroethene</b>	<b>0.282</b>		0.200	ug/L			08/10/21 05:24	1
cis-1,3-Dichloropropene	0.200	U	0.200	ug/L			08/10/21 05:24	1
Dibromochloromethane	0.500	U	0.500	ug/L			08/10/21 05:24	1
Ethylbenzene	0.500	U	0.500	ug/L			08/10/21 05:24	1
Freon 113	0.500	U	0.500	ug/L			08/10/21 05:24	1
m&p-Xylene	0.500	U	0.500	ug/L			08/10/21 05:24	1
Methylene Chloride	0.500	U	0.500	ug/L			08/10/21 05:24	1
o-Xylene	0.500	U	0.500	ug/L			08/10/21 05:24	1
Styrene	0.500	U	0.500	ug/L			08/10/21 05:24	1
Tetrachloroethene	0.200	U	0.200	ug/L			08/10/21 05:24	1
Toluene	0.200	U	0.200	ug/L			08/10/21 05:24	1
trans-1,2-Dichloroethene	0.200	U	0.200	ug/L			08/10/21 05:24	1
trans-1,3-Dichloropropene	0.200	U	0.200	ug/L			08/10/21 05:24	1
<b>Trichloroethene</b>	<b>0.970</b>		0.200	ug/L			08/10/21 05:24	1
Trichlorofluoromethane	0.500	U	0.500	ug/L			08/10/21 05:24	1
Vinyl acetate	0.500	U	0.500	ug/L			08/10/21 05:24	1
Vinyl chloride	0.200	U	0.200	ug/L			08/10/21 05:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		80 - 120		08/10/21 05:24	1
Dibromofluoromethane (Surr)	96		80 - 120		08/10/21 05:24	1
4-Bromofluorobenzene (Surr)	95		80 - 120		08/10/21 05:24	1
Toluene-d8 (Surr)	97		80 - 120		08/10/21 05:24	1

# Client Sample Results

Client: Landau & Associates, Inc.  
 Project/Site: Boeing Portland, TSA - 0251 16.620.640

Job ID: 410-50369-1

**Client Sample ID: BOP - y - 0821**

**Lab Sample ID: 410-50369-12**

Date Collected: 08/04/21 13:50

Matrix: Water

Date Received: 08/06/21 10:31

**Method: 8260C LL - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.500	U	0.500	ug/L			08/10/21 05:47	1
1,1,1,2-Tetrachloroethane	0.200	U	0.200	ug/L			08/10/21 05:47	1
1,1,2-Trichloroethane	0.200	U	0.200	ug/L			08/10/21 05:47	1
1,1-Dichloroethane	0.500	U	0.500	ug/L			08/10/21 05:47	1
1,1-Dichloroethene	0.200	U	0.200	ug/L			08/10/21 05:47	1
1,2-Dichloroethane	0.200	U	0.200	ug/L			08/10/21 05:47	1
1,2-Dichloropropane	0.500	U	0.500	ug/L			08/10/21 05:47	1
2-Butanone	5.00	U	5.00	ug/L			08/10/21 05:47	1
2-Hexanone	5.00	U	5.00	ug/L			08/10/21 05:47	1
4-Methyl-2-pentanone	5.00	U	5.00	ug/L			08/10/21 05:47	1
Acetone	5.00	U	5.00	ug/L			08/10/21 05:47	1
Benzene	0.200	U	0.200	ug/L			08/10/21 05:47	1
Bromodichloromethane	0.500	U	0.500	ug/L			08/10/21 05:47	1
Bromoform	1.00	U	1.00	ug/L			08/10/21 05:47	1
Bromomethane	0.500	U	0.500	ug/L			08/10/21 05:47	1
Carbon disulfide	0.500	U	0.500	ug/L			08/10/21 05:47	1
Carbon tetrachloride	0.200	U	0.200	ug/L			08/10/21 05:47	1
Chlorobenzene	0.500	U	0.500	ug/L			08/10/21 05:47	1
Chloroethane	0.500	U	0.500	ug/L			08/10/21 05:47	1
Chloroform	0.200	U	0.200	ug/L			08/10/21 05:47	1
Chloromethane	0.500	U	0.500	ug/L			08/10/21 05:47	1
<b>cis-1,2-Dichloroethene</b>	<b>0.265</b>		0.200	ug/L			08/10/21 05:47	1
cis-1,3-Dichloropropene	0.200	U	0.200	ug/L			08/10/21 05:47	1
Dibromochloromethane	0.500	U	0.500	ug/L			08/10/21 05:47	1
Ethylbenzene	0.500	U	0.500	ug/L			08/10/21 05:47	1
Freon 113	0.500	U	0.500	ug/L			08/10/21 05:47	1
m&p-Xylene	0.500	U	0.500	ug/L			08/10/21 05:47	1
Methylene Chloride	0.500	U	0.500	ug/L			08/10/21 05:47	1
o-Xylene	0.500	U	0.500	ug/L			08/10/21 05:47	1
Styrene	0.500	U	0.500	ug/L			08/10/21 05:47	1
Tetrachloroethene	0.200	U	0.200	ug/L			08/10/21 05:47	1
Toluene	0.200	U	0.200	ug/L			08/10/21 05:47	1
trans-1,2-Dichloroethene	0.200	U	0.200	ug/L			08/10/21 05:47	1
trans-1,3-Dichloropropene	0.200	U	0.200	ug/L			08/10/21 05:47	1
<b>Trichloroethene</b>	<b>0.946</b>		0.200	ug/L			08/10/21 05:47	1
Trichlorofluoromethane	0.500	U	0.500	ug/L			08/10/21 05:47	1
Vinyl acetate	0.500	U	0.500	ug/L			08/10/21 05:47	1
Vinyl chloride	0.200	U	0.200	ug/L			08/10/21 05:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		80 - 120		08/10/21 05:47	1
Dibromofluoromethane (Surr)	96		80 - 120		08/10/21 05:47	1
4-Bromofluorobenzene (Surr)	96		80 - 120		08/10/21 05:47	1
Toluene-d8 (Surr)	97		80 - 120		08/10/21 05:47	1

# Client Sample Results

Client: Landau & Associates, Inc.  
 Project/Site: Boeing Portland, TSA - 0251 16.620.640

Job ID: 410-50369-1

**Client Sample ID: EW - 3 - 0821**

**Lab Sample ID: 410-50369-13**

Date Collected: 08/04/21 14:40

Matrix: Water

Date Received: 08/06/21 10:31

**Method: 8260C LL - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.500	U	0.500	ug/L			08/11/21 15:15	1
1,1,1,2-Tetrachloroethane	0.200	U	0.200	ug/L			08/11/21 15:15	1
1,1,2-Trichloroethane	0.200	U	0.200	ug/L			08/11/21 15:15	1
1,1-Dichloroethane	0.500	U	0.500	ug/L			08/11/21 15:15	1
1,1-Dichloroethene	0.200	U	0.200	ug/L			08/11/21 15:15	1
1,2-Dichloroethane	0.200	U	0.200	ug/L			08/11/21 15:15	1
1,2-Dichloropropane	0.500	U	0.500	ug/L			08/11/21 15:15	1
2-Butanone	5.00	U	5.00	ug/L			08/11/21 15:15	1
2-Hexanone	5.00	U	5.00	ug/L			08/11/21 15:15	1
4-Methyl-2-pentanone	5.00	U	5.00	ug/L			08/11/21 15:15	1
<b>Acetone</b>	<b>242</b>		5.00	ug/L			08/11/21 15:15	1
Benzene	0.200	U	0.200	ug/L			08/11/21 15:15	1
Bromodichloromethane	0.500	U	0.500	ug/L			08/11/21 15:15	1
Bromoform	1.00	U	1.00	ug/L			08/11/21 15:15	1
Bromomethane	0.500	U	0.500	ug/L			08/11/21 15:15	1
Carbon disulfide	0.500	U	0.500	ug/L			08/11/21 15:15	1
Carbon tetrachloride	0.200	U	0.200	ug/L			08/11/21 15:15	1
Chlorobenzene	0.500	U	0.500	ug/L			08/11/21 15:15	1
Chloroethane	0.500	U	0.500	ug/L			08/11/21 15:15	1
Chloroform	0.200	U	0.200	ug/L			08/11/21 15:15	1
Chloromethane	0.500	U	0.500	ug/L			08/11/21 15:15	1
cis-1,2-Dichloroethene	0.200	U	0.200	ug/L			08/11/21 15:15	1
cis-1,3-Dichloropropene	0.200	U	0.200	ug/L			08/11/21 15:15	1
Dibromochloromethane	0.500	U	0.500	ug/L			08/11/21 15:15	1
Ethylbenzene	0.500	U	0.500	ug/L			08/11/21 15:15	1
Freon 113	0.500	U	0.500	ug/L			08/11/21 15:15	1
m&p-Xylene	0.500	U	0.500	ug/L			08/11/21 15:15	1
Methylene Chloride	0.500	U	0.500	ug/L			08/11/21 15:15	1
o-Xylene	0.500	U	0.500	ug/L			08/11/21 15:15	1
Styrene	0.500	U	0.500	ug/L			08/11/21 15:15	1
Tetrachloroethene	0.200	U	0.200	ug/L			08/11/21 15:15	1
Toluene	0.200	U	0.200	ug/L			08/11/21 15:15	1
trans-1,2-Dichloroethene	0.200	U	0.200	ug/L			08/11/21 15:15	1
trans-1,3-Dichloropropene	0.200	U	0.200	ug/L			08/11/21 15:15	1
Trichloroethene	0.200	U	0.200	ug/L			08/11/21 15:15	1
Trichlorofluoromethane	0.500	U	0.500	ug/L			08/11/21 15:15	1
Vinyl acetate	0.500	U	0.500	ug/L			08/11/21 15:15	1
Vinyl chloride	0.200	U	0.200	ug/L			08/11/21 15:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		80 - 120		08/11/21 15:15	1
Dibromofluoromethane (Surr)	113		80 - 120		08/11/21 15:15	1
4-Bromofluorobenzene (Surr)	98		80 - 120		08/11/21 15:15	1
Toluene-d8 (Surr)	88		80 - 120		08/11/21 15:15	1

# Client Sample Results

Client: Landau & Associates, Inc.  
 Project/Site: Boeing Portland, TSA - 0251 16.620.640

Job ID: 410-50369-1

**Client Sample ID: EW - 13 - 0821**

**Lab Sample ID: 410-50369-14**

Date Collected: 08/04/21 14:50

Matrix: Water

Date Received: 08/06/21 10:31

**Method: 8260C LL - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	2.50	U	2.50	ug/L			08/11/21 16:58	5
1,1,1,2-Tetrachloroethane	1.00	U	1.00	ug/L			08/11/21 16:58	5
1,1,2-Trichloroethane	1.00	U	1.00	ug/L			08/11/21 16:58	5
1,1-Dichloroethane	2.50	U	2.50	ug/L			08/11/21 16:58	5
1,1-Dichloroethene	1.00	U	1.00	ug/L			08/11/21 16:58	5
1,2-Dichloroethane	1.00	U	1.00	ug/L			08/11/21 16:58	5
1,2-Dichloropropane	2.50	U	2.50	ug/L			08/11/21 16:58	5
2-Butanone	25.0	U	25.0	ug/L			08/11/21 16:58	5
2-Hexanone	25.0	U	25.0	ug/L			08/11/21 16:58	5
4-Methyl-2-pentanone	25.0	U	25.0	ug/L			08/11/21 16:58	5
Acetone	25.0	U	25.0	ug/L			08/11/21 16:58	5
Benzene	1.00	U	1.00	ug/L			08/11/21 16:58	5
Bromodichloromethane	2.50	U	2.50	ug/L			08/11/21 16:58	5
Bromoform	5.00	U	5.00	ug/L			08/11/21 16:58	5
Bromomethane	2.50	U	2.50	ug/L			08/11/21 16:58	5
Carbon disulfide	2.50	U	2.50	ug/L			08/11/21 16:58	5
Carbon tetrachloride	1.00	U	1.00	ug/L			08/11/21 16:58	5
Chlorobenzene	2.50	U	2.50	ug/L			08/11/21 16:58	5
Chloroethane	2.50	U	2.50	ug/L			08/11/21 16:58	5
Chloroform	1.00	U	1.00	ug/L			08/11/21 16:58	5
Chloromethane	2.50	U	2.50	ug/L			08/11/21 16:58	5
cis-1,2-Dichloroethene	1.00	U	1.00	ug/L			08/11/21 16:58	5
cis-1,3-Dichloropropene	1.00	U	1.00	ug/L			08/11/21 16:58	5
Dibromochloromethane	2.50	U	2.50	ug/L			08/11/21 16:58	5
Ethylbenzene	2.50	U	2.50	ug/L			08/11/21 16:58	5
Freon 113	2.50	U	2.50	ug/L			08/11/21 16:58	5
m&p-Xylene	2.50	U	2.50	ug/L			08/11/21 16:58	5
Methylene Chloride	2.50	U	2.50	ug/L			08/11/21 16:58	5
o-Xylene	2.50	U	2.50	ug/L			08/11/21 16:58	5
Styrene	2.50	U	2.50	ug/L			08/11/21 16:58	5
Tetrachloroethene	1.00	U	1.00	ug/L			08/11/21 16:58	5
Toluene	1.00	U	1.00	ug/L			08/11/21 16:58	5
trans-1,2-Dichloroethene	1.00	U	1.00	ug/L			08/11/21 16:58	5
trans-1,3-Dichloropropene	1.00	U	1.00	ug/L			08/11/21 16:58	5
Trichloroethene	1.00	U	1.00	ug/L			08/11/21 16:58	5
Trichlorofluoromethane	2.50	U	2.50	ug/L			08/11/21 16:58	5
Vinyl acetate	2.50	U	2.50	ug/L			08/11/21 16:58	5
Vinyl chloride	1.00	U	1.00	ug/L			08/11/21 16:58	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		80 - 120		08/11/21 16:58	5
Dibromofluoromethane (Surr)	114		80 - 120		08/11/21 16:58	5
4-Bromofluorobenzene (Surr)	98		80 - 120		08/11/21 16:58	5
Toluene-d8 (Surr)	89		80 - 120		08/11/21 16:58	5

# Client Sample Results

Client: Landau & Associates, Inc.  
 Project/Site: Boeing Portland, TSA - 0251 16.620.640

Job ID: 410-50369-1

**Client Sample ID: BOP - 66ds - 0821**

**Lab Sample ID: 410-50369-15**

Date Collected: 08/04/21 15:35

Matrix: Water

Date Received: 08/06/21 10:31

**Method: 8260C LL - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.500	U	0.500	ug/L			08/11/21 15:36	1
1,1,1,2-Tetrachloroethane	0.200	U	0.200	ug/L			08/11/21 15:36	1
1,1,2-Trichloroethane	0.200	U	0.200	ug/L			08/11/21 15:36	1
1,1-Dichloroethane	0.500	U	0.500	ug/L			08/11/21 15:36	1
1,1-Dichloroethene	0.200	U	0.200	ug/L			08/11/21 15:36	1
1,2-Dichloroethane	0.200	U	0.200	ug/L			08/11/21 15:36	1
1,2-Dichloropropane	0.500	U	0.500	ug/L			08/11/21 15:36	1
2-Butanone	5.00	U	5.00	ug/L			08/11/21 15:36	1
2-Hexanone	5.00	U	5.00	ug/L			08/11/21 15:36	1
4-Methyl-2-pentanone	5.00	U	5.00	ug/L			08/11/21 15:36	1
Acetone	5.00	U	5.00	ug/L			08/11/21 15:36	1
Benzene	0.200	U	0.200	ug/L			08/11/21 15:36	1
Bromodichloromethane	0.500	U	0.500	ug/L			08/11/21 15:36	1
Bromoform	1.00	U	1.00	ug/L			08/11/21 15:36	1
Bromomethane	0.500	U	0.500	ug/L			08/11/21 15:36	1
Carbon disulfide	0.500	U	0.500	ug/L			08/11/21 15:36	1
Carbon tetrachloride	0.200	U	0.200	ug/L			08/11/21 15:36	1
Chlorobenzene	0.500	U	0.500	ug/L			08/11/21 15:36	1
Chloroethane	0.500	U	0.500	ug/L			08/11/21 15:36	1
<b>Chloroform</b>	<b>0.241</b>		0.200	ug/L			08/11/21 15:36	1
Chloromethane	0.500	U	0.500	ug/L			08/11/21 15:36	1
cis-1,2-Dichloroethene	0.200	U	0.200	ug/L			08/11/21 15:36	1
cis-1,3-Dichloropropene	0.200	U	0.200	ug/L			08/11/21 15:36	1
Dibromochloromethane	0.500	U	0.500	ug/L			08/11/21 15:36	1
Ethylbenzene	0.500	U	0.500	ug/L			08/11/21 15:36	1
Freon 113	0.500	U	0.500	ug/L			08/11/21 15:36	1
m&p-Xylene	0.500	U	0.500	ug/L			08/11/21 15:36	1
Methylene Chloride	0.500	U	0.500	ug/L			08/11/21 15:36	1
o-Xylene	0.500	U	0.500	ug/L			08/11/21 15:36	1
Styrene	0.500	U	0.500	ug/L			08/11/21 15:36	1
Tetrachloroethene	0.200	U	0.200	ug/L			08/11/21 15:36	1
Toluene	0.200	U	0.200	ug/L			08/11/21 15:36	1
trans-1,2-Dichloroethene	0.200	U	0.200	ug/L			08/11/21 15:36	1
trans-1,3-Dichloropropene	0.200	U	0.200	ug/L			08/11/21 15:36	1
<b>Trichloroethene</b>	<b>0.974</b>		0.200	ug/L			08/11/21 15:36	1
Trichlorofluoromethane	0.500	U	0.500	ug/L			08/11/21 15:36	1
Vinyl acetate	0.500	U	0.500	ug/L			08/11/21 15:36	1
Vinyl chloride	0.200	U	0.200	ug/L			08/11/21 15:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		80 - 120		08/11/21 15:36	1
Dibromofluoromethane (Surr)	114		80 - 120		08/11/21 15:36	1
4-Bromofluorobenzene (Surr)	99		80 - 120		08/11/21 15:36	1
Toluene-d8 (Surr)	89		80 - 120		08/11/21 15:36	1

# Client Sample Results

Client: Landau & Associates, Inc.  
 Project/Site: Boeing Portland, TSA - 0251 16.620.640

Job ID: 410-50369-1

**Client Sample ID: BOP - 65ds - 0821**

**Lab Sample ID: 410-50369-16**

Date Collected: 08/05/21 10:05

Matrix: Water

Date Received: 08/06/21 10:31

**Method: 8260C LL - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.500	U	0.500	ug/L			08/12/21 21:51	1
1,1,1,2-Tetrachloroethane	0.200	U	0.200	ug/L			08/12/21 21:51	1
1,1,2-Trichloroethane	0.200	U	0.200	ug/L			08/12/21 21:51	1
1,1-Dichloroethane	0.500	U	0.500	ug/L			08/12/21 21:51	1
1,1-Dichloroethene	0.200	U	0.200	ug/L			08/12/21 21:51	1
1,2-Dichloroethane	0.200	U	0.200	ug/L			08/12/21 21:51	1
1,2-Dichloropropane	0.500	U	0.500	ug/L			08/12/21 21:51	1
2-Butanone	5.00	U	5.00	ug/L			08/12/21 21:51	1
2-Hexanone	5.00	U	5.00	ug/L			08/12/21 21:51	1
4-Methyl-2-pentanone	5.00	U	5.00	ug/L			08/12/21 21:51	1
Acetone	5.00	U	5.00	ug/L			08/12/21 21:51	1
Benzene	0.200	U	0.200	ug/L			08/12/21 21:51	1
Bromodichloromethane	0.500	U	0.500	ug/L			08/12/21 21:51	1
Bromoform	1.00	U	1.00	ug/L			08/12/21 21:51	1
Bromomethane	0.500	U	0.500	ug/L			08/12/21 21:51	1
Carbon disulfide	0.500	U	0.500	ug/L			08/12/21 21:51	1
Carbon tetrachloride	0.200	U	0.200	ug/L			08/12/21 21:51	1
Chlorobenzene	0.500	U	0.500	ug/L			08/12/21 21:51	1
Chloroethane	0.500	U	0.500	ug/L			08/12/21 21:51	1
Chloroform	0.200	U	0.200	ug/L			08/12/21 21:51	1
Chloromethane	0.500	U	0.500	ug/L			08/12/21 21:51	1
cis-1,2-Dichloroethene	0.200	U	0.200	ug/L			08/12/21 21:51	1
cis-1,3-Dichloropropene	0.200	U	0.200	ug/L			08/12/21 21:51	1
Dibromochloromethane	0.500	U	0.500	ug/L			08/12/21 21:51	1
Ethylbenzene	0.500	U	0.500	ug/L			08/12/21 21:51	1
Freon 113	0.500	U	0.500	ug/L			08/12/21 21:51	1
m&p-Xylene	0.500	U	0.500	ug/L			08/12/21 21:51	1
Methylene Chloride	0.500	U	0.500	ug/L			08/12/21 21:51	1
o-Xylene	0.500	U	0.500	ug/L			08/12/21 21:51	1
Styrene	0.500	U	0.500	ug/L			08/12/21 21:51	1
Tetrachloroethene	0.200	U	0.200	ug/L			08/12/21 21:51	1
Toluene	0.200	U	0.200	ug/L			08/12/21 21:51	1
trans-1,2-Dichloroethene	0.200	U	0.200	ug/L			08/12/21 21:51	1
trans-1,3-Dichloropropene	0.200	U	0.200	ug/L			08/12/21 21:51	1
<b>Trichloroethene</b>	<b>0.250</b>		0.200	ug/L			08/12/21 21:51	1
Trichlorofluoromethane	0.500	U	0.500	ug/L			08/12/21 21:51	1
Vinyl acetate	0.500	U	0.500	ug/L			08/12/21 21:51	1
Vinyl chloride	0.200	U	0.200	ug/L			08/12/21 21:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		80 - 120		08/12/21 21:51	1
Dibromofluoromethane (Surr)	108		80 - 120		08/12/21 21:51	1
4-Bromofluorobenzene (Surr)	95		80 - 120		08/12/21 21:51	1
Toluene-d8 (Surr)	92		80 - 120		08/12/21 21:51	1

# Surrogate Summary

Client: Landau & Associates, Inc.  
 Project/Site: Boeing Portland, TSA - 0251 16.620.640

Job ID: 410-50369-1

## Method: 8260C LL - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (80-120)	DBFM (80-120)	BFB (80-120)	TOL (80-120)
410-50369-1	Tripblank - 0821	101	96	96	97
410-50369-2	BOP - 31dg - 0821	98	96	96	97
410-50369-3	BOP - 31ds - 0821	98	96	95	97
410-50369-4	BOP - 20dg - 0821	102	96	95	97
410-50369-5	BOP - 13ds - 0821	101	97	96	96
410-50369-6	BOP - 13dg - 0821	98	96	95	97
410-50369-7	BOP - 61dg - 0821	100	96	95	97
410-50369-8	BOP - 23dg - 0821	99	96	95	97
410-50369-9	BOP - 20ds - 0821	99	96	95	97
410-50369-10	BOP - z - 0821	100	96	95	97
410-50369-11	BOP - 62ds - 0821	98	96	95	97
410-50369-12	BOP - y - 0821	100	96	96	97
410-50369-13	EW - 3 - 0821	104	113	98	88
410-50369-14	EW - 13 - 0821	104	114	98	89
410-50369-15	BOP - 66ds - 0821	106	114	99	89
410-50369-16	BOP - 65ds - 0821	103	108	95	92
LCS 410-158338/5	Lab Control Sample	98	96	97	98
LCS 410-158338/7	Lab Control Sample	99	95	97	98
LCS 410-158976/4	Lab Control Sample	104	112	100	89
LCS 410-158976/7	Lab Control Sample	99	112	99	88
LCS 410-159902/5	Lab Control Sample	100	108	99	91
LCS 410-159902/6	Lab Control Sample	104	109	97	90
LCSD 410-158338/6	Lab Control Sample Dup	98	95	98	98
LCSD 410-158338/8	Lab Control Sample Dup	98	95	97	98
LCSD 410-158976/5	Lab Control Sample Dup	102	113	99	89
LCSD 410-158976/8	Lab Control Sample Dup	106	112	100	88
MB 410-158338/10	Method Blank	99	95	97	98
MB 410-158976/10	Method Blank	106	112	98	88
MB 410-159902/8	Method Blank	102	108	97	91

**Surrogate Legend**

- DCA = 1,2-Dichloroethane-d4 (Surr)
- DBFM = Dibromofluoromethane (Surr)
- BFB = 4-Bromofluorobenzene (Surr)
- TOL = Toluene-d8 (Surr)

# QC Sample Results

Client: Landau & Associates, Inc.  
 Project/Site: Boeing Portland, TSA - 0251 16.620.640

Job ID: 410-50369-1

## Method: 8260C LL - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 410-158338/10

Matrix: Water

Analysis Batch: 158338

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
1,1,1-Trichloroethane	0.500	U	0.500	ug/L			08/09/21 21:18	1
1,1,1,2-Tetrachloroethane	0.200	U	0.200	ug/L			08/09/21 21:18	1
1,1,2-Trichloroethane	0.200	U	0.200	ug/L			08/09/21 21:18	1
1,1-Dichloroethane	0.500	U	0.500	ug/L			08/09/21 21:18	1
1,1-Dichloroethene	0.200	U	0.200	ug/L			08/09/21 21:18	1
1,2-Dichloroethane	0.200	U	0.200	ug/L			08/09/21 21:18	1
1,2-Dichloropropane	0.500	U	0.500	ug/L			08/09/21 21:18	1
2-Butanone	5.00	U	5.00	ug/L			08/09/21 21:18	1
2-Hexanone	5.00	U	5.00	ug/L			08/09/21 21:18	1
4-Methyl-2-pentanone	5.00	U	5.00	ug/L			08/09/21 21:18	1
Acetone	5.00	U	5.00	ug/L			08/09/21 21:18	1
Benzene	0.200	U	0.200	ug/L			08/09/21 21:18	1
Bromodichloromethane	0.500	U	0.500	ug/L			08/09/21 21:18	1
Bromoform	1.00	U	1.00	ug/L			08/09/21 21:18	1
Bromomethane	0.500	U	0.500	ug/L			08/09/21 21:18	1
Carbon disulfide	0.500	U	0.500	ug/L			08/09/21 21:18	1
Carbon tetrachloride	0.200	U	0.200	ug/L			08/09/21 21:18	1
Chlorobenzene	0.500	U	0.500	ug/L			08/09/21 21:18	1
Chloroethane	0.500	U	0.500	ug/L			08/09/21 21:18	1
Chloroform	0.200	U	0.200	ug/L			08/09/21 21:18	1
Chloromethane	0.500	U	0.500	ug/L			08/09/21 21:18	1
cis-1,2-Dichloroethene	0.200	U	0.200	ug/L			08/09/21 21:18	1
cis-1,3-Dichloropropene	0.200	U	0.200	ug/L			08/09/21 21:18	1
Dibromochloromethane	0.500	U	0.500	ug/L			08/09/21 21:18	1
Ethylbenzene	0.500	U	0.500	ug/L			08/09/21 21:18	1
Freon 113	0.500	U	0.500	ug/L			08/09/21 21:18	1
m&p-Xylene	0.500	U	0.500	ug/L			08/09/21 21:18	1
Methylene Chloride	0.500	U	0.500	ug/L			08/09/21 21:18	1
o-Xylene	0.500	U	0.500	ug/L			08/09/21 21:18	1
Styrene	0.500	U	0.500	ug/L			08/09/21 21:18	1
Tetrachloroethene	0.200	U	0.200	ug/L			08/09/21 21:18	1
Toluene	0.200	U	0.200	ug/L			08/09/21 21:18	1
trans-1,2-Dichloroethene	0.200	U	0.200	ug/L			08/09/21 21:18	1
trans-1,3-Dichloropropene	0.200	U	0.200	ug/L			08/09/21 21:18	1
Trichloroethene	0.200	U	0.200	ug/L			08/09/21 21:18	1
Trichlorofluoromethane	0.500	U	0.500	ug/L			08/09/21 21:18	1
Vinyl acetate	0.500	U	0.500	ug/L			08/09/21 21:18	1
Vinyl chloride	0.200	U	0.200	ug/L			08/09/21 21:18	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	99		80 - 120		08/09/21 21:18	1
Dibromofluoromethane (Surr)	95		80 - 120		08/09/21 21:18	1
4-Bromofluorobenzene (Surr)	97		80 - 120		08/09/21 21:18	1
Toluene-d8 (Surr)	98		80 - 120		08/09/21 21:18	1

# QC Sample Results

Client: Landau & Associates, Inc.  
 Project/Site: Boeing Portland, TSA - 0251 16.620.640

Job ID: 410-50369-1

## Method: 8260C LL - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 410-158338/5

Matrix: Water

Analysis Batch: 158338

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	5.00	4.963		ug/L		99	78 - 126
1,1,1,2-Tetrachloroethane	5.00	5.382		ug/L		108	75 - 123
1,1,2-Trichloroethane	5.00	5.324		ug/L		106	80 - 120
1,1-Dichloroethane	5.00	4.842		ug/L		97	74 - 120
1,1-Dichloroethene	5.00	5.070		ug/L		101	80 - 131
1,2-Dichloroethane	5.00	4.777		ug/L		96	69 - 122
1,2-Dichloropropane	5.00	5.067		ug/L		101	80 - 120
2-Butanone	62.5	61.03		ug/L		98	59 - 141
2-Hexanone	62.5	65.78		ug/L		105	52 - 140
4-Methyl-2-pentanone	62.5	63.23		ug/L		101	55 - 140
Acetone	62.5	54.13		ug/L		87	60 - 146
Benzene	5.00	5.041		ug/L		101	80 - 120
Bromodichloromethane	5.00	5.097		ug/L		102	73 - 124
Bromoform	5.00	5.060		ug/L		101	49 - 144
Bromomethane	5.00	4.967		ug/L		99	60 - 136
Carbon disulfide	5.00	4.701		ug/L		94	67 - 130
Carbon tetrachloride	5.00	4.848		ug/L		97	64 - 141
Chlorobenzene	5.00	5.060		ug/L		101	80 - 120
Chloroethane	5.00	4.861		ug/L		97	63 - 120
Chloroform	5.00	4.981		ug/L		100	80 - 120
Chloromethane	5.00	5.159		ug/L		103	56 - 124
cis-1,2-Dichloroethene	5.00	5.154		ug/L		103	80 - 122
cis-1,3-Dichloropropene	5.00	5.182		ug/L		104	67 - 121
Dibromochloromethane	5.00	5.164		ug/L		103	64 - 138
Ethylbenzene	5.00	5.110		ug/L		102	80 - 120
Freon 113	5.00	4.739		ug/L		95	75 - 133
m&p-Xylene	10.0	10.36		ug/L		104	80 - 120
Methylene Chloride	5.00	4.925		ug/L		98	80 - 120
o-Xylene	5.00	5.133		ug/L		103	80 - 120
Styrene	5.00	5.332		ug/L		107	80 - 120
Tetrachloroethene	5.00	4.969		ug/L		99	80 - 120
Toluene	5.00	5.120		ug/L		102	80 - 120
trans-1,2-Dichloroethene	5.00	5.049		ug/L		101	80 - 122
trans-1,3-Dichloropropene	5.00	5.454		ug/L		109	61 - 129
Trichloroethene	5.00	4.982		ug/L		100	80 - 120
Trichlorofluoromethane	5.00	4.793		ug/L		96	62 - 136
Vinyl chloride	5.00	4.950		ug/L		99	60 - 125

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	96		80 - 120
4-Bromofluorobenzene (Surr)	97		80 - 120
Toluene-d8 (Surr)	98		80 - 120

# QC Sample Results

Client: Landau & Associates, Inc.  
 Project/Site: Boeing Portland, TSA - 0251 16.620.640

Job ID: 410-50369-1

## Method: 8260C LL - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: LCS 410-158338/7**

**Matrix: Water**

**Analysis Batch: 158338**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Vinyl acetate	12.5	11.75		ug/L		94	38 - 145

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	95		80 - 120
4-Bromofluorobenzene (Surr)	97		80 - 120
Toluene-d8 (Surr)	98		80 - 120

**Lab Sample ID: LCSD 410-158338/6**

**Matrix: Water**

**Analysis Batch: 158338**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	5.00	5.040		ug/L		101	78 - 126	2	30
1,1,1,2-Tetrachloroethane	5.00	5.470		ug/L		109	75 - 123	2	30
1,1,1,2-Trichloroethane	5.00	5.375		ug/L		108	80 - 120	1	30
1,1-Dichloroethane	5.00	4.956		ug/L		99	74 - 120	2	30
1,1-Dichloroethene	5.00	5.059		ug/L		101	80 - 131	0	30
1,2-Dichloroethane	5.00	4.662		ug/L		93	69 - 122	2	30
1,2-Dichloropropane	5.00	5.133		ug/L		103	80 - 120	1	30
2-Butanone	62.5	66.69		ug/L		107	59 - 141	9	30
2-Hexanone	62.5	71.33		ug/L		114	52 - 140	8	30
4-Methyl-2-pentanone	62.5	69.37		ug/L		111	55 - 140	9	30
Acetone	62.5	59.43		ug/L		95	60 - 146	9	30
Benzene	5.00	5.086		ug/L		102	80 - 120	1	30
Bromodichloromethane	5.00	5.157		ug/L		103	73 - 124	1	30
Bromoform	5.00	5.129		ug/L		103	49 - 144	1	30
Bromomethane	5.00	4.928		ug/L		99	60 - 136	1	30
Carbon disulfide	5.00	4.668		ug/L		93	67 - 130	1	30
Carbon tetrachloride	5.00	4.885		ug/L		98	64 - 141	1	30
Chlorobenzene	5.00	5.114		ug/L		102	80 - 120	1	30
Chloroethane	5.00	4.829		ug/L		97	63 - 120	1	30
Chloroform	5.00	5.017		ug/L		100	80 - 120	1	30
Chloromethane	5.00	5.147		ug/L		103	56 - 124	0	30
cis-1,2-Dichloroethene	5.00	5.234		ug/L		105	80 - 122	2	30
cis-1,3-Dichloropropene	5.00	5.231		ug/L		105	67 - 121	1	30
Dibromochloromethane	5.00	5.159		ug/L		103	64 - 138	0	30
Ethylbenzene	5.00	5.193		ug/L		104	80 - 120	2	30
Freon 113	5.00	4.624		ug/L		92	75 - 133	2	30
m&p-Xylene	10.0	10.54		ug/L		105	80 - 120	2	30
Methylene Chloride	5.00	5.010		ug/L		100	80 - 120	2	30
o-Xylene	5.00	5.224		ug/L		104	80 - 120	2	30
Styrene	5.00	5.396		ug/L		108	80 - 120	1	30
Tetrachloroethene	5.00	5.018		ug/L		100	80 - 120	1	30
Toluene	5.00	5.195		ug/L		104	80 - 120	1	30
trans-1,2-Dichloroethene	5.00	5.088		ug/L		102	80 - 122	1	30
trans-1,3-Dichloropropene	5.00	5.495		ug/L		110	61 - 129	1	30
Trichloroethene	5.00	5.048		ug/L		101	80 - 120	1	30

Eurofins Lancaster Laboratories Env, LLC

# QC Sample Results

Client: Landau & Associates, Inc.  
 Project/Site: Boeing Portland, TSA - 0251 16.620.640

Job ID: 410-50369-1

## Method: 8260C LL - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 410-158338/6

Matrix: Water

Analysis Batch: 158338

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Trichlorofluoromethane	5.00	4.781		ug/L		96	62 - 136	0	30
Vinyl chloride	5.00	5.051		ug/L		101	60 - 125	2	30

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
1,2-Dichloroethane-d4 (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	95		80 - 120
4-Bromofluorobenzene (Surr)	98		80 - 120
Toluene-d8 (Surr)	98		80 - 120

Lab Sample ID: LCSD 410-158338/8

Matrix: Water

Analysis Batch: 158338

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Vinyl acetate	12.5	11.76		ug/L		94	38 - 145	0	30

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
1,2-Dichloroethane-d4 (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	95		80 - 120
4-Bromofluorobenzene (Surr)	97		80 - 120
Toluene-d8 (Surr)	98		80 - 120

Lab Sample ID: MB 410-158976/10

Matrix: Water

Analysis Batch: 158976

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.500	U	0.500	ug/L			08/11/21 12:09	1
1,1,1,2-Tetrachloroethane	0.200	U	0.200	ug/L			08/11/21 12:09	1
1,1,2-Trichloroethane	0.200	U	0.200	ug/L			08/11/21 12:09	1
1,1-Dichloroethane	0.500	U	0.500	ug/L			08/11/21 12:09	1
1,1-Dichloroethene	0.200	U	0.200	ug/L			08/11/21 12:09	1
1,2-Dichloroethane	0.200	U	0.200	ug/L			08/11/21 12:09	1
1,2-Dichloropropane	0.500	U	0.500	ug/L			08/11/21 12:09	1
2-Butanone	5.00	U	5.00	ug/L			08/11/21 12:09	1
2-Hexanone	5.00	U	5.00	ug/L			08/11/21 12:09	1
4-Methyl-2-pentanone	5.00	U	5.00	ug/L			08/11/21 12:09	1
Acetone	5.00	U	5.00	ug/L			08/11/21 12:09	1
Benzene	0.200	U	0.200	ug/L			08/11/21 12:09	1
Bromodichloromethane	0.500	U	0.500	ug/L			08/11/21 12:09	1
Bromoform	1.00	U	1.00	ug/L			08/11/21 12:09	1
Bromomethane	0.500	U	0.500	ug/L			08/11/21 12:09	1
Carbon disulfide	0.500	U	0.500	ug/L			08/11/21 12:09	1
Carbon tetrachloride	0.200	U	0.200	ug/L			08/11/21 12:09	1
Chlorobenzene	0.500	U	0.500	ug/L			08/11/21 12:09	1
Chloroethane	0.500	U	0.500	ug/L			08/11/21 12:09	1
Chloroform	0.200	U	0.200	ug/L			08/11/21 12:09	1
Chloromethane	0.500	U	0.500	ug/L			08/11/21 12:09	1

Eurofins Lancaster Laboratories Env, LLC

# QC Sample Results

Client: Landau & Associates, Inc.  
 Project/Site: Boeing Portland, TSA - 0251 16.620.640

Job ID: 410-50369-1

## Method: 8260C LL - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 410-158976/10

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 158976

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
cis-1,2-Dichloroethene	0.200	U	0.200	ug/L			08/11/21 12:09	1
cis-1,3-Dichloropropene	0.200	U	0.200	ug/L			08/11/21 12:09	1
Dibromochloromethane	0.500	U	0.500	ug/L			08/11/21 12:09	1
Ethylbenzene	0.500	U	0.500	ug/L			08/11/21 12:09	1
Freon 113	0.500	U	0.500	ug/L			08/11/21 12:09	1
m&p-Xylene	0.500	U	0.500	ug/L			08/11/21 12:09	1
Methylene Chloride	0.500	U	0.500	ug/L			08/11/21 12:09	1
o-Xylene	0.500	U	0.500	ug/L			08/11/21 12:09	1
Styrene	0.500	U	0.500	ug/L			08/11/21 12:09	1
Tetrachloroethene	0.200	U	0.200	ug/L			08/11/21 12:09	1
Toluene	0.200	U	0.200	ug/L			08/11/21 12:09	1
trans-1,2-Dichloroethene	0.200	U	0.200	ug/L			08/11/21 12:09	1
trans-1,3-Dichloropropene	0.200	U	0.200	ug/L			08/11/21 12:09	1
Trichloroethene	0.200	U	0.200	ug/L			08/11/21 12:09	1
Trichlorofluoromethane	0.500	U	0.500	ug/L			08/11/21 12:09	1
Vinyl acetate	0.500	U	0.500	ug/L			08/11/21 12:09	1
Vinyl chloride	0.200	U	0.200	ug/L			08/11/21 12:09	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	106		80 - 120		08/11/21 12:09	1
Dibromofluoromethane (Surr)	112		80 - 120		08/11/21 12:09	1
4-Bromofluorobenzene (Surr)	98		80 - 120		08/11/21 12:09	1
Toluene-d8 (Surr)	88		80 - 120		08/11/21 12:09	1

Lab Sample ID: LCS 410-158976/4

Client Sample ID: Lab Control Sample

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 158976

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2,2-Tetrachloroethane	5.00	4.024		ug/L		80	75 - 123
1,1,2-Trichloroethane	5.00	4.419		ug/L		88	80 - 120
1,1-Dichloroethane	5.00	5.049		ug/L		101	74 - 120
1,1-Dichloroethene	5.00	4.877		ug/L		98	80 - 131
1,2-Dichloroethane	5.00	5.512		ug/L		110	69 - 122
1,2-Dichloropropane	5.00	5.227		ug/L		105	80 - 120
2-Butanone	62.5	50.36		ug/L		81	59 - 141
2-Hexanone	62.5	52.30		ug/L		84	52 - 140
4-Methyl-2-pentanone	62.5	50.09		ug/L		80	55 - 140
Acetone	62.5	46.41		ug/L		74	60 - 146
Benzene	5.00	5.206		ug/L		104	80 - 120
Bromodichloromethane	5.00	5.549		ug/L		111	73 - 124
Bromoform	5.00	4.466		ug/L		89	49 - 144
Bromomethane	5.00	5.377		ug/L		108	60 - 136
Carbon disulfide	5.00	4.494		ug/L		90	67 - 130
Carbon tetrachloride	5.00	5.719		ug/L		114	64 - 141
Chlorobenzene	5.00	4.432		ug/L		89	80 - 120
Chloroethane	5.00	5.083		ug/L		102	63 - 120

# QC Sample Results

Client: Landau & Associates, Inc.  
 Project/Site: Boeing Portland, TSA - 0251 16.620.640

Job ID: 410-50369-1

## Method: 8260C LL - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: LCS 410-158976/4**

**Matrix: Water**

**Analysis Batch: 158976**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Chloroform	5.00	5.461		ug/L		109	80 - 120
Chloromethane	5.00	5.264		ug/L		105	56 - 124
cis-1,2-Dichloroethene	5.00	5.396		ug/L		108	80 - 122
cis-1,3-Dichloropropene	5.00	5.169		ug/L		103	67 - 121
Dibromochloromethane	5.00	4.353		ug/L		87	64 - 138
Ethylbenzene	5.00	4.366		ug/L		87	80 - 120
Freon 113	5.00	5.010		ug/L		100	75 - 133
m&p-Xylene	10.0	9.061		ug/L		91	80 - 120
Methylene Chloride	5.00	5.205		ug/L		104	80 - 120
o-Xylene	5.00	4.352		ug/L		87	80 - 120
Styrene	5.00	4.462		ug/L		89	80 - 120
Tetrachloroethene	5.00	4.486		ug/L		90	80 - 120
Toluene	5.00	4.241		ug/L		85	80 - 120
trans-1,2-Dichloroethene	5.00	5.135		ug/L		103	80 - 122
trans-1,3-Dichloropropene	5.00	4.269		ug/L		85	61 - 129
Trichloroethene	5.00	5.448		ug/L		109	80 - 120
Trichlorofluoromethane	5.00	5.698		ug/L		114	62 - 136
Vinyl chloride	5.00	5.316		ug/L		106	60 - 125

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	104		80 - 120
Dibromofluoromethane (Surr)	112		80 - 120
4-Bromofluorobenzene (Surr)	100		80 - 120
Toluene-d8 (Surr)	89		80 - 120

**Lab Sample ID: LCS 410-158976/7**

**Matrix: Water**

**Analysis Batch: 158976**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Vinyl acetate	12.5	12.93		ug/L		103	38 - 145

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	112		80 - 120
4-Bromofluorobenzene (Surr)	99		80 - 120
Toluene-d8 (Surr)	88		80 - 120

**Lab Sample ID: LCSD 410-158976/5**

**Matrix: Water**

**Analysis Batch: 158976**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD	LCSD	Unit	D	%Rec	%Rec. Limits	RPD	Limit
		Result	Qualifier						
1,1,1-Trichloroethane	5.00	5.577		ug/L		112	78 - 126	1	30
1,1,1,2-Tetrachloroethane	5.00	4.129		ug/L		83	75 - 123	3	30
1,1,2-Trichloroethane	5.00	4.284		ug/L		86	80 - 120	3	30
1,1-Dichloroethane	5.00	5.184		ug/L		104	74 - 120	3	30
1,1-Dichloroethene	5.00	5.085		ug/L		102	80 - 131	4	30

Eurofins Lancaster Laboratories Env, LLC

# QC Sample Results

Client: Landau & Associates, Inc.  
 Project/Site: Boeing Portland, TSA - 0251 16.620.640

Job ID: 410-50369-1

## Method: 8260C LL - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 410-158976/5

Matrix: Water

Analysis Batch: 158976

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dichloroethane	5.00	5.449		ug/L		109	69 - 122	1	30
1,2-Dichloropropane	5.00	5.259		ug/L		105	80 - 120	1	30
2-Butanone	62.5	51.99		ug/L		83	59 - 141	3	30
2-Hexanone	62.5	52.99		ug/L		85	52 - 140	1	30
4-Methyl-2-pentanone	62.5	51.44		ug/L		82	55 - 140	3	30
Acetone	62.5	47.33		ug/L		76	60 - 146	2	30
Benzene	5.00	5.342		ug/L		107	80 - 120	3	30
Bromodichloromethane	5.00	5.634		ug/L		113	73 - 124	2	30
Bromoform	5.00	4.452		ug/L		89	49 - 144	0	30
Bromomethane	5.00	5.385		ug/L		108	60 - 136	0	30
Carbon disulfide	5.00	4.581		ug/L		92	67 - 130	2	30
Carbon tetrachloride	5.00	5.673		ug/L		113	64 - 141	1	30
Chlorobenzene	5.00	4.424		ug/L		88	80 - 120	0	30
Chloroethane	5.00	5.117		ug/L		102	63 - 120	1	30
Chloroform	5.00	5.523		ug/L		110	80 - 120	1	30
Chloromethane	5.00	5.191		ug/L		104	56 - 124	1	30
cis-1,2-Dichloroethene	5.00	5.502		ug/L		110	80 - 122	2	30
cis-1,3-Dichloropropene	5.00	5.210		ug/L		104	67 - 121	1	30
Dibromochloromethane	5.00	4.378		ug/L		88	64 - 138	1	30
Ethylbenzene	5.00	4.375		ug/L		87	80 - 120	0	30
Freon 113	5.00	4.969		ug/L		99	75 - 133	1	30
m&p-Xylene	10.0	9.084		ug/L		91	80 - 120	0	30
Methylene Chloride	5.00	5.300		ug/L		106	80 - 120	2	30
o-Xylene	5.00	4.371		ug/L		87	80 - 120	0	30
Styrene	5.00	4.467		ug/L		89	80 - 120	0	30
Tetrachloroethene	5.00	4.418		ug/L		88	80 - 120	2	30
Toluene	5.00	4.262		ug/L		85	80 - 120	0	30
trans-1,2-Dichloroethene	5.00	5.221		ug/L		104	80 - 122	2	30
trans-1,3-Dichloropropene	5.00	4.318		ug/L		86	61 - 129	1	30
Trichloroethene	5.00	5.534		ug/L		111	80 - 120	2	30
Trichlorofluoromethane	5.00	5.864		ug/L		117	62 - 136	3	30
Vinyl chloride	5.00	5.305		ug/L		106	60 - 125	0	30

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
1,2-Dichloroethane-d4 (Surr)	102		80 - 120
Dibromofluoromethane (Surr)	113		80 - 120
4-Bromofluorobenzene (Surr)	99		80 - 120
Toluene-d8 (Surr)	89		80 - 120

Lab Sample ID: LCSD 410-158976/8

Matrix: Water

Analysis Batch: 158976

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Vinyl acetate	12.5	12.70		ug/L		102	38 - 145	2	30

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
1,2-Dichloroethane-d4 (Surr)	106		80 - 120

Eurofins Lancaster Laboratories Env, LLC

# QC Sample Results

Client: Landau & Associates, Inc.  
 Project/Site: Boeing Portland, TSA - 0251 16.620.640

Job ID: 410-50369-1

## Method: 8260C LL - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 410-158976/8

Matrix: Water

Analysis Batch: 158976

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Surrogate	LCSD	LCSD	Limits
	%Recovery	Qualifier	
Dibromofluoromethane (Surr)	112		80 - 120
4-Bromofluorobenzene (Surr)	100		80 - 120
Toluene-d8 (Surr)	88		80 - 120

Lab Sample ID: MB 410-159902/8

Matrix: Water

Analysis Batch: 159902

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
1,1,1-Trichloroethane	0.500	U	0.500	ug/L			08/12/21 20:49	1
1,1,1,2-Tetrachloroethane	0.200	U	0.200	ug/L			08/12/21 20:49	1
1,1,2-Trichloroethane	0.200	U	0.200	ug/L			08/12/21 20:49	1
1,1-Dichloroethane	0.500	U	0.500	ug/L			08/12/21 20:49	1
1,1-Dichloroethene	0.200	U	0.200	ug/L			08/12/21 20:49	1
1,2-Dichloroethane	0.200	U	0.200	ug/L			08/12/21 20:49	1
1,2-Dichloropropane	0.500	U	0.500	ug/L			08/12/21 20:49	1
2-Butanone	5.00	U	5.00	ug/L			08/12/21 20:49	1
2-Hexanone	5.00	U	5.00	ug/L			08/12/21 20:49	1
4-Methyl-2-pentanone	5.00	U	5.00	ug/L			08/12/21 20:49	1
Acetone	5.00	U	5.00	ug/L			08/12/21 20:49	1
Benzene	0.200	U	0.200	ug/L			08/12/21 20:49	1
Bromodichloromethane	0.500	U	0.500	ug/L			08/12/21 20:49	1
Bromoform	1.00	U	1.00	ug/L			08/12/21 20:49	1
Bromomethane	0.500	U	0.500	ug/L			08/12/21 20:49	1
Carbon disulfide	0.500	U	0.500	ug/L			08/12/21 20:49	1
Carbon tetrachloride	0.200	U	0.200	ug/L			08/12/21 20:49	1
Chlorobenzene	0.500	U	0.500	ug/L			08/12/21 20:49	1
Chloroethane	0.500	U	0.500	ug/L			08/12/21 20:49	1
Chloroform	0.200	U	0.200	ug/L			08/12/21 20:49	1
Chloromethane	0.500	U	0.500	ug/L			08/12/21 20:49	1
cis-1,2-Dichloroethene	0.200	U	0.200	ug/L			08/12/21 20:49	1
cis-1,3-Dichloropropene	0.200	U	0.200	ug/L			08/12/21 20:49	1
Dibromochloromethane	0.500	U	0.500	ug/L			08/12/21 20:49	1
Ethylbenzene	0.500	U	0.500	ug/L			08/12/21 20:49	1
Freon 113	0.500	U	0.500	ug/L			08/12/21 20:49	1
m&p-Xylene	0.500	U	0.500	ug/L			08/12/21 20:49	1
Methylene Chloride	0.500	U	0.500	ug/L			08/12/21 20:49	1
o-Xylene	0.500	U	0.500	ug/L			08/12/21 20:49	1
Styrene	0.500	U	0.500	ug/L			08/12/21 20:49	1
Tetrachloroethene	0.200	U	0.200	ug/L			08/12/21 20:49	1
Toluene	0.200	U	0.200	ug/L			08/12/21 20:49	1
trans-1,2-Dichloroethene	0.200	U	0.200	ug/L			08/12/21 20:49	1
trans-1,3-Dichloropropene	0.200	U	0.200	ug/L			08/12/21 20:49	1
Trichloroethene	0.200	U	0.200	ug/L			08/12/21 20:49	1
Trichlorofluoromethane	0.500	U	0.500	ug/L			08/12/21 20:49	1
Vinyl acetate	0.500	U	0.500	ug/L			08/12/21 20:49	1
Vinyl chloride	0.200	U	0.200	ug/L			08/12/21 20:49	1

# QC Sample Results

Client: Landau & Associates, Inc.  
 Project/Site: Boeing Portland, TSA - 0251 16.620.640

Job ID: 410-50369-1

## Method: 8260C LL - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 410-159902/8

Matrix: Water

Analysis Batch: 159902

Client Sample ID: Method Blank

Prep Type: Total/NA

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		80 - 120		08/12/21 20:49	1
Dibromofluoromethane (Surr)	108		80 - 120		08/12/21 20:49	1
4-Bromofluorobenzene (Surr)	97		80 - 120		08/12/21 20:49	1
Toluene-d8 (Surr)	91		80 - 120		08/12/21 20:49	1

Lab Sample ID: LCS 410-159902/5

Matrix: Water

Analysis Batch: 159902

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	5.00	4.877		ug/L		98	78 - 126
1,1,1,2-Tetrachloroethane	5.00	4.141		ug/L		83	75 - 123
1,1,2-Trichloroethane	5.00	4.335		ug/L		87	80 - 120
1,1-Dichloroethane	5.00	4.681		ug/L		94	74 - 120
1,1-Dichloroethene	5.00	4.579		ug/L		92	80 - 131
1,2-Dichloroethane	5.00	5.101		ug/L		102	69 - 122
1,2-Dichloropropane	5.00	4.869		ug/L		97	80 - 120
2-Butanone	62.5	51.10		ug/L		82	59 - 141
2-Hexanone	62.5	51.40		ug/L		82	52 - 140
4-Methyl-2-pentanone	62.5	49.69		ug/L		80	55 - 140
Acetone	62.5	46.76		ug/L		75	60 - 146
Benzene	5.00	4.778		ug/L		96	80 - 120
Bromodichloromethane	5.00	5.199		ug/L		104	73 - 124
Bromoform	5.00	4.656		ug/L		93	49 - 144
Bromomethane	5.00	4.773		ug/L		95	60 - 136
Carbon disulfide	5.00	4.327		ug/L		87	67 - 130
Carbon tetrachloride	5.00	4.937		ug/L		99	64 - 141
Chlorobenzene	5.00	4.311		ug/L		86	80 - 120
Chloroethane	5.00	4.566		ug/L		91	63 - 120
Chloroform	5.00	5.065		ug/L		101	80 - 120
Chloromethane	5.00	4.564		ug/L		91	56 - 124
cis-1,2-Dichloroethene	5.00	4.981		ug/L		100	80 - 122
cis-1,3-Dichloropropene	5.00	4.796		ug/L		96	67 - 121
Dibromochloromethane	5.00	4.268		ug/L		85	64 - 138
Ethylbenzene	5.00	4.153		ug/L		83	80 - 120
Freon 113	5.00	4.398		ug/L		88	75 - 133
m&p-Xylene	10.0	8.565		ug/L		86	80 - 120
Methylene Chloride	5.00	4.844		ug/L		97	80 - 120
o-Xylene	5.00	4.177		ug/L		84	80 - 120
Styrene	5.00	4.293		ug/L		86	80 - 120
Tetrachloroethene	5.00	4.145		ug/L		83	80 - 120
Toluene	5.00	4.017		ug/L		80	80 - 120
trans-1,2-Dichloroethene	5.00	4.784		ug/L		96	80 - 122
trans-1,3-Dichloropropene	5.00	4.312		ug/L		86	61 - 129
Trichloroethene	5.00	4.899		ug/L		98	80 - 120
Trichlorofluoromethane	5.00	4.841		ug/L		97	62 - 136
Vinyl chloride	5.00	4.573		ug/L		91	60 - 125

# QC Sample Results

Client: Landau & Associates, Inc.  
 Project/Site: Boeing Portland, TSA - 0251 16.620.640

Job ID: 410-50369-1

## Method: 8260C LL - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 410-159902/5

Matrix: Water

Analysis Batch: 159902

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Surrogate	LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	108		80 - 120
4-Bromofluorobenzene (Surr)	99		80 - 120
Toluene-d8 (Surr)	91		80 - 120

Lab Sample ID: LCS 410-159902/6

Matrix: Water

Analysis Batch: 159902

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS		Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Vinyl acetate	12.5	12.34		ug/L		99	38 - 145

Surrogate	LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	104		80 - 120
Dibromofluoromethane (Surr)	109		80 - 120
4-Bromofluorobenzene (Surr)	97		80 - 120
Toluene-d8 (Surr)	90		80 - 120

# QC Association Summary

Client: Landau & Associates, Inc.  
 Project/Site: Boeing Portland, TSA - 0251 16.620.640

Job ID: 410-50369-1

## GC/MS VOA

### Analysis Batch: 158338

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-50369-1	Tripblank - 0821	Total/NA	Water	8260C LL	
410-50369-2	BOP - 31dg - 0821	Total/NA	Water	8260C LL	
410-50369-3	BOP - 31ds - 0821	Total/NA	Water	8260C LL	
410-50369-4	BOP - 20dg - 0821	Total/NA	Water	8260C LL	
410-50369-5	BOP - 13ds - 0821	Total/NA	Water	8260C LL	
410-50369-6	BOP - 13dg - 0821	Total/NA	Water	8260C LL	
410-50369-7	BOP - 61dg - 0821	Total/NA	Water	8260C LL	
410-50369-8	BOP - 23dg - 0821	Total/NA	Water	8260C LL	
410-50369-9	BOP - 20ds - 0821	Total/NA	Water	8260C LL	
410-50369-10	BOP - z - 0821	Total/NA	Water	8260C LL	
410-50369-11	BOP - 62ds - 0821	Total/NA	Water	8260C LL	
410-50369-12	BOP - y - 0821	Total/NA	Water	8260C LL	
MB 410-158338/10	Method Blank	Total/NA	Water	8260C LL	
LCS 410-158338/5	Lab Control Sample	Total/NA	Water	8260C LL	
LCS 410-158338/7	Lab Control Sample	Total/NA	Water	8260C LL	
LCSD 410-158338/6	Lab Control Sample Dup	Total/NA	Water	8260C LL	
LCSD 410-158338/8	Lab Control Sample Dup	Total/NA	Water	8260C LL	

### Analysis Batch: 158976

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-50369-13	EW - 3 - 0821	Total/NA	Water	8260C LL	
410-50369-14	EW - 13 - 0821	Total/NA	Water	8260C LL	
410-50369-15	BOP - 66ds - 0821	Total/NA	Water	8260C LL	
MB 410-158976/10	Method Blank	Total/NA	Water	8260C LL	
LCS 410-158976/4	Lab Control Sample	Total/NA	Water	8260C LL	
LCS 410-158976/7	Lab Control Sample	Total/NA	Water	8260C LL	
LCSD 410-158976/5	Lab Control Sample Dup	Total/NA	Water	8260C LL	
LCSD 410-158976/8	Lab Control Sample Dup	Total/NA	Water	8260C LL	

### Analysis Batch: 159902

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-50369-16	BOP - 65ds - 0821	Total/NA	Water	8260C LL	
MB 410-159902/8	Method Blank	Total/NA	Water	8260C LL	
LCS 410-159902/5	Lab Control Sample	Total/NA	Water	8260C LL	
LCS 410-159902/6	Lab Control Sample	Total/NA	Water	8260C LL	

# Lab Chronicle

Client: Landau & Associates, Inc.  
Project/Site: Boeing Portland, TSA - 0251 16.620.640

Job ID: 410-50369-1

## Client Sample ID: Tripblank - 0821

Lab Sample ID: 410-50369-1

Date Collected: 08/03/21 00:00

Matrix: Water

Date Received: 08/06/21 10:31

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C LL		1	158338	08/10/21 00:59	K4WN	ELLE

## Client Sample ID: BOP - 31dg - 0821

Lab Sample ID: 410-50369-2

Date Collected: 08/03/21 14:00

Matrix: Water

Date Received: 08/06/21 10:31

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C LL		1	158338	08/10/21 02:05	K4WN	ELLE

## Client Sample ID: BOP - 31ds - 0821

Lab Sample ID: 410-50369-3

Date Collected: 08/03/21 14:15

Matrix: Water

Date Received: 08/06/21 10:31

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C LL		1	158338	08/10/21 02:27	K4WN	ELLE

## Client Sample ID: BOP - 20dg - 0821

Lab Sample ID: 410-50369-4

Date Collected: 08/03/21 14:45

Matrix: Water

Date Received: 08/06/21 10:31

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C LL		1	158338	08/10/21 02:50	K4WN	ELLE

## Client Sample ID: BOP - 13ds - 0821

Lab Sample ID: 410-50369-5

Date Collected: 08/03/21 15:40

Matrix: Water

Date Received: 08/06/21 10:31

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C LL		1	158338	08/10/21 03:12	K4WN	ELLE

## Client Sample ID: BOP - 13dg - 0821

Lab Sample ID: 410-50369-6

Date Collected: 08/03/21 15:55

Matrix: Water

Date Received: 08/06/21 10:31

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C LL		1	158338	08/10/21 03:34	K4WN	ELLE

## Client Sample ID: BOP - 61dg - 0821

Lab Sample ID: 410-50369-7

Date Collected: 08/04/21 09:30

Matrix: Water

Date Received: 08/06/21 10:31

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C LL		1	158338	08/10/21 03:56	K4WN	ELLE

# Lab Chronicle

Client: Landau & Associates, Inc.  
Project/Site: Boeing Portland, TSA - 0251 16.620.640

Job ID: 410-50369-1

## Client Sample ID: BOP - 23dg - 0821

Lab Sample ID: 410-50369-8

Date Collected: 08/04/21 10:35

Matrix: Water

Date Received: 08/06/21 10:31

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C LL		1	158338	08/10/21 04:18	K4WN	ELLE

## Client Sample ID: BOP - 20ds - 0821

Lab Sample ID: 410-50369-9

Date Collected: 08/04/21 11:30

Matrix: Water

Date Received: 08/06/21 10:31

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C LL		1	158338	08/10/21 04:40	K4WN	ELLE

## Client Sample ID: BOP - z - 0821

Lab Sample ID: 410-50369-10

Date Collected: 08/04/21 11:35

Matrix: Water

Date Received: 08/06/21 10:31

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C LL		1	158338	08/10/21 05:02	K4WN	ELLE

## Client Sample ID: BOP - 62ds - 0821

Lab Sample ID: 410-50369-11

Date Collected: 08/04/21 13:46

Matrix: Water

Date Received: 08/06/21 10:31

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C LL		1	158338	08/10/21 05:24	K4WN	ELLE

## Client Sample ID: BOP - y - 0821

Lab Sample ID: 410-50369-12

Date Collected: 08/04/21 13:50

Matrix: Water

Date Received: 08/06/21 10:31

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C LL		1	158338	08/10/21 05:47	K4WN	ELLE

## Client Sample ID: EW - 3 - 0821

Lab Sample ID: 410-50369-13

Date Collected: 08/04/21 14:40

Matrix: Water

Date Received: 08/06/21 10:31

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C LL		1	158976	08/11/21 15:15	J5QQ	ELLE

## Client Sample ID: EW - 13 - 0821

Lab Sample ID: 410-50369-14

Date Collected: 08/04/21 14:50

Matrix: Water

Date Received: 08/06/21 10:31

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C LL		5	158976	08/11/21 16:58	J5QQ	ELLE

# Lab Chronicle

Client: Landau & Associates, Inc.  
Project/Site: Boeing Portland, TSA - 0251 16.620.640

Job ID: 410-50369-1

**Client Sample ID: BOP - 66ds - 0821**

**Lab Sample ID: 410-50369-15**

Date Collected: 08/04/21 15:35

Matrix: Water

Date Received: 08/06/21 10:31

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C LL		1	158976	08/11/21 15:36	J5QQ	ELLE

**Client Sample ID: BOP - 65ds - 0821**

**Lab Sample ID: 410-50369-16**

Date Collected: 08/05/21 10:05

Matrix: Water

Date Received: 08/06/21 10:31

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C LL		1	159902	08/12/21 21:51	K4WN	ELLE

**Laboratory References:**

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

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# Accreditation/Certification Summary

Client: Landau & Associates, Inc.  
Project/Site: Boeing Portland, TSA - 0251 16.620.640

Job ID: 410-50369-1

## Laboratory: Eurofins Lancaster Laboratories Env, LLC

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	PA200001-018	09-12-21

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# Method Summary

Client: Landau & Associates, Inc.  
Project/Site: Boeing Portland, TSA - 0251 16.620.640

Job ID: 410-50369-1

Method	Method Description	Protocol	Laboratory
8260C LL	Volatile Organic Compounds by GC/MS	SW846	ELLE
5030C	Purge and Trap	SW846	ELLE

**Protocol References:**

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300



# Sample Summary

Client: Landau & Associates, Inc.  
Project/Site: Boeing Portland, TSA - 0251 16.620.640

Job ID: 410-50369-1

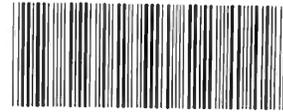
Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-50369-1	Tripblank - 0821	Water	08/03/21 00:00	08/06/21 10:31
410-50369-2	BOP - 31dg - 0821	Water	08/03/21 14:00	08/06/21 10:31
410-50369-3	BOP - 31ds - 0821	Water	08/03/21 14:15	08/06/21 10:31
410-50369-4	BOP - 20dg - 0821	Water	08/03/21 14:45	08/06/21 10:31
410-50369-5	BOP - 13ds - 0821	Water	08/03/21 15:40	08/06/21 10:31
410-50369-6	BOP - 13dg - 0821	Water	08/03/21 15:55	08/06/21 10:31
410-50369-7	BOP - 61dg - 0821	Water	08/04/21 09:30	08/06/21 10:31
410-50369-8	BOP - 23dg - 0821	Water	08/04/21 10:35	08/06/21 10:31
410-50369-9	BOP - 20ds - 0821	Water	08/04/21 11:30	08/06/21 10:31
410-50369-10	BOP - z - 0821	Water	08/04/21 11:35	08/06/21 10:31
410-50369-11	BOP - 62ds - 0821	Water	08/04/21 13:46	08/06/21 10:31
410-50369-12	BOP - y - 0821	Water	08/04/21 13:50	08/06/21 10:31
410-50369-13	EW - 3 - 0821	Water	08/04/21 14:40	08/06/21 10:31
410-50369-14	EW - 13 - 0821	Water	08/04/21 14:50	08/06/21 10:31
410-50369-15	BOP - 66ds - 0821	Water	08/04/21 15:35	08/06/21 10:31
410-50369-16	BOP - 65ds - 0821	Water	08/05/21 10:05	08/06/21 10:31



**Eurofins Lancaster Laboratories Env, LLC**

2425 New Holland Pike  
Lancaster, PA 17601  
Phone (717) 656-2300

**Chain of Custody Record**



410-50369 Chain of Custody

eurofins Environment Testing America

<b>Client Information</b>		Sampler: <b>JEC/EMW</b>		Lab PM: <b>Badman, Vanessa</b>		COC No: <b>410-29677-9231.2</b>													
Client Contact: <b>Deborah Taeye</b>		Phone:		E-Mail: <b>vanessa.badman@eurofinset.com</b>		Page: <b>2 of 3 - 1022</b>													
Company: <b>The Boeing Company</b>		PWSID:		<b>Analysis Requested</b>		Job #:													
Address: <b>Support Services PO BOX 34083</b>		Due Date Requested:		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) 8250C_LL - Boeing 38 8250C 8270E_SIM - 1,4-Dioxane		Total Number of containers													
City: <b>Seattle</b>		TAT Requested (days): <b>Standard</b>																	
State, Zip: <b>WA, 98124</b>		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No																	
Phone:		PO #: <b>025116 620 640</b>																	
Email: <b>deborah.taeye@boeing.com</b>		WO #:																	
Project Name: <b>Boeing Portland, Annual GW Event PL-2 TSA</b>		Project #: <b>41003196</b>																	
Site: <b>Oregon</b>		SSOW#:				Preservation Codes: A - HCL                      M - Hexane B - NaOH                    N - None C - Zn Acetate              O - AsNaO2 D - Nitric Acid              P - Na2O4S E - NaHSO4                 Q - Na2SO3 F - MeOH                    R - Na2S2O3 G - Amchlor                S - H2SO4 H - Ascorbic Acid          T - TSP Dodecahydrate I - Ice                         U - Acetone J - DI Water                 V - MCAA K - EDTA                    W - pH 4-5 L - EDA                      Z - other (specify)													
<b>Sample Identification</b>		<b>Sample Date</b>		<b>Sample Time</b>		<b>Sample Type (C=comp, G=grab)</b>		<b>Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, AA=Air)</b>		<b>Field Filtered Sample (Yes or No)</b>		<b>Perform MS/MSD (Yes or No)</b>		<b>8250C_LL - Boeing 38 8250C</b>		<b>8270E_SIM - 1,4-Dioxane</b>		<b>Special Instructions/Note:</b>	
<b>TRIP blank - 0821</b>								W				X						2 Please forward	
<b>BOP - 31dg - 0821</b>		8/3/21		1400		G		W				X						3 results to	
<b>BOP - 31ds - 0821</b>		8/3/21		1415		G		W				X						3 D. Taeye +	
<b>BOP - 20dg - 0821</b>		8/3/21		1445		G		W				X						3 Evelyn Iveta at	
<b>BOP - 13ds - 0821</b>		8/3/21		1540		G		W				X						3 eives of landamine. con.	
<b>BOP - 13dg - 0821</b>		8/3/21		1555		G		W				X						3 (please see LIMS	
<b>BOP - 61dg - 0821</b>		8/4/21		0930		G		W				X						3 list for additional	
<b>BOP - 23dg - 0821</b>		8/4/21		1035		G		W				X						3 contacts)	
<b>BOP - 20ds - 0821</b>		8/4/21		1130		G		W				X						3	
<b>BOP - 2 - 0821</b>		8/4/21		1135		G		W				X						3 - 2 ml	
<b>BOP - 62ds - 0821</b>		8/4/21		1340		G		W				X						3	
<b>Possible Hazard Identification</b>						<b>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</b>													
<input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological						<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months													
Deliverable Requested: I, II, III, IV, Other (specify)						Special Instructions/QC Requirements:													
Empty Kit Relinquished by:				Date:		Time:		Method of Shipment:											
Relinquished by: <b>Shwartz</b>				Date/Time: <b>8/5/21 11:16</b>		Company: <b>LAI</b>		Received by:											
Relinquished by:				Date/Time:		Company:		Received by:											
Relinquished by:				Date/Time:		Company:		Received by: <b>NR</b>											
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No				Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: <b>-1.0</b>													

ANL

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## Login Sample Receipt Checklist

Client: Landau & Associates, Inc.

Job Number: 410-50369-1

**Login Number: 50369**

**List Number: 1**

**Creator: Reiff, Nicole L**

**List Source: Eurofins Lancaster Laboratories Env, LLC**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable ( $\leq 6^{\circ}\text{C}$ , not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable ( $\leq 6^{\circ}\text{C}$ , not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	N/A	
Is the Field Sampler's name present on COC?	True	
Sample Preservation Verified.	N/A	
Residual Chlorine Checked.	N/A	
Sample custody seals are intact.	True	