Memo

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SUBJECT
March 2023 Vapor Sampling Event Memo
Univar Solutions USA, Inc.
Wyoming, Michigan
EPA ID: MID980477079

TO
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Remedial Project Manager
USEPA
77 West Jackson Blvd.
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DATE
June 16, 2023

OUR REF
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On behalf of the Univar Solutions USA, Inc (Univar), Arcadis of Michigan, LLC (Arcadis) has prepared this technical memorandum for the vapor intrusion pathway activities completed at the Grand Rapids facility located in Wyoming, Michigan (the Site). This technical memorandum was prepared to summarize the details and results of the March 2023 vapor sampling event, which focused on paired indoor air samples with floor drains and select sub-slab monitoring ports.

March 2023 Vapor Sampling Event Scope of Work

A total of 15 vapor sampling locations were identified for sampling during the March 2023 event. These locations were selected in accordance with the 2023 Vapor and Utility Corridor Investigation Work Plan (Arcadis 2023). This work plan was approved by the United States Environmental Protection Agency (USEPA) with modifications on March 20, 2023. The 15 vapor sampling locations included a total of six indoor air, three ambient air, four sub-slab monitoring ports (SSMPs), and two utility corridor headspace samples, which were collected both at the Univar facility and off-site properties as shown on **Figure 1**.

Under the USEPA's request, Non-Residential Indoor Air Quality Evaluation Forms were conducted at each off-site facility that was sampled and are included in the field documentation attachments.

During the sampling event, SSMP-302 was identified as destroyed during facility renovations at the Gilmore building shown on **Figure 2**. The location was re-installed as SSMP-302R on March 30, 2023, within 1 foot of the original location and sampled with accompanying indoor air on March 31, 2023.

Due to access restrictions and time constraints at off-site facilities, soil gas samples were collected on a separate day from the accompanying indoor and ambient air samples. Documentation of field details related to each sample are provided within the field document attachments.

All samples were submitted to SGS Accutest Laboratories (SGS), located in Dayton, New Jersey, using proper quality assurance and quality control procedures and chain-of-custody protocols. Vapor samples were submitted for analyses of volatile organic compounds (VOCs) in accordance with the USEPA Compendium Method TO-15.

March 2023 Vapor Sampling Event Results

Results of the March 2023 vapor sampling event are presented in **Table 1** and shown on **Figure 1**. Databoxes shown on **Figure 1** display detections at each vapor sampling location. The location of each vapor sample is further outlined in each facility building on **Figure 2** through **Figure 5**.

Soil gas samples are compared to the Site-Specific Non-Residential Volatilization to Indoor Air Criteria for soil gas provided by the Michigan Department of Environment, Great Lakes, and Energy (EGLE) in August 2017. The restricted site-specific criteria apply to non-residential structures (<50,000 square feet [ft^2]) with a slab-on-grade and the depth to groundwater submitted for this facility (i.e., 3 feet). Soil gas samples were also compared to USEPA commercial Vapor Intrusion Screening Levels (VISLs), which were calculated from USEPA online VISL calculator using standard variables, a Target Hazard Quotient (THQ) of 1 and a Target Cancer Risk (TCR) of 1E-5. No soil gas sample results were found to exceed either criterion during the March 2023 sampling event. Results from the soil gas samples are presented with historical analytical data in **Table 2**. Three selected soil gas samples (SSMP-13, SSMP-401, and SSMP-510) demonstrate consistency in analyte detections when compared to historical results. The soil gas sample from SSMP-302R demonstrates a decrease in concentration of all analytes after replacement, which may be attributed to a three-year data gap or movement from a small, concentrated area.

Indoor air, ambient air, and headspace vapor from the floor drain samples are compared to EGLE Non-Residential Recommended Interim Action Screening Levels (EGLE, December 2020) and USEPA-calculated VISLs with the same standards used for the soil gas criteria calculation. Of the six indoor air samples collected, results from only one exceeded the criteria identified above. The concentration in the indoor air location within the Dyna-Plate facility was found to exceed both the EGLE (5.2 micrograms per cubic meter [$\mu g/m^3$]) and USEPA (5.33 $\mu g/m^3$) criteria for chloroform at a detection of **6.3 $\mu g/m^3$**. This indoor air sample was collected one day prior to the paired SSMP-510 sample due to time constraints and building access. Analytical results from the soil gas sample exhibit a concentration of **5.4 $\mu g/m^3$,** which is lower than that detected in the indoor air, suggesting the source is not from the sub-slab soil gas but rather there is a wide-spread presence of chloroform in this area.

The Dyna-Plate facility operations include metal plating and baking parts for the relief of hydrogen embrittlement. The locations of the impacted indoor air and soil gas samples are next to the oven used for heat treating parts as shown on **Figure 4**. A brief list of chemicals used by the facility was provided on May 13, 2020 and is included in the field documents attachment. No new chemicals were identified in the 2023 visitation. Analytical results from SSMP-510 show that the detected concentrations are in line with historical analytical data. Based upon the difference in concentration between the indoor air and soil gas analytical results, along with considering Dyna-plate operations, the exceedance of chloroform in indoor air may be tied to facility operations. No other exceedances were identified from the indoor air, ambient air, or utility corridor headspace vapors at any other on-site or off-site facility sampled in March 2023.

Summary

The March 2023 vapor sampling event addressed cumulative comments made upon the Final Summary Report (Arcadis 2021) by USEPA to make a protectiveness determination as part of the Five-Year Review (FYR) for the Grand Rapids facility.

The March 2023 samples demonstrated that soil gas concentrations below the building slab did not pose a risk to indoor air or utility corridors in the areas where paired samples were located in the Univar and off-site buildings. Paired sampling of sub-slab soil gas and indoor air at one on-site and three off-site locations further evaluate historical exceedances at select locations during the heating season, when vapor intrusion risk is highest.

The results from the single paired sub-slab soil gas and indoor air sample collected on-site at location SSMP-13 demonstrate no vapor intrusion risk currently present at this portion of the facility. Concentrations at SSMP-13 have historically varied from nominally below to nominally above the site-specific criteria. Surrounding sample locations have yielded historical detections below criteria, indicating that the detections at SSMP-13 are isolated.

The March 2023 additional sampling has further characterized the historical results as presented in the Final Summary Report (Arcadis 2021) and demonstrated that this location is not a vapor intrusion risk.

In addition, the on-site sanitary sewer utility corridor pathway was addressed by evaluating vapor headspace associated with select floor drains with paired indoor air samples. There were no exceedances in either the floor drains or the indoor air samples, demonstrating that the sanitary sewer utility corridor pathway is not a vapor intrusion risk within the Univar facility.

The results from the two paired sub-slab soil gas and indoor air samples collected at the off-site Gilmore buildings indicate that sub-slab soil gas does not present a risk to indoor air quality. Results from the off-site Dyna-Plate buildings sampling indicates an indoor air exceedance that is not a vapor intrusion risk but is likely attributed to facility operations. Comparison of off-site soil gas to historical results, along with the lines of evidence provided in the Final Summary Report (Arcadis 2021), indicate that there is no vapor intrusion risk in the off-site properties that originated from the historical release at the Grand Rapids facility.

Results from this one-time sampling event have addressed recent USEPA comments to both on-site and off-site vapor intrusion risk and have further characterized data provided in the Final Summary Report (Arcadis 2021). No additional vapor intrusion work is currently planned.

References

Arcadis. 2021. Final Summary Report: Vapor Intrusion Pathway Evaluation. Univar Solutions USA, INC. (formerly ChemCentral), Wyoming, Michigan, EPA ID Number: MID980477079. February 5.

Arcadis. 2023. Vapor and Utility Corridor Investigation Work Plan. Univar Solutions USA, Inc. (Formerly ChemCentral), Wyoming, Michigan, EPA ID Number: MID980477079. March 20.

EGLE. 2020. Volatilization to Indoor Air Recommendations for Interim Action Screening Levels and Time-Sensitive Interim Action Screening Levels. Table 2. January.

Attachments:

Table 1 – March 2023 Vapor Sampling
Table 2 – Sub-Slab Monitoring Point Sample Comparison
Figure 1 – March 2023 Vapor Intrusion Sampling Map
Figure 2 – Gilmore Building-3 March 2023 Vapor Sampling
Figure 3 – Gilmore Building-4 March 2023 Vapor Sampling
Figure 4 – Dyna-Plate Building March 2023 Vapor Sampling
Figure 5 – Univar Building-1 March 2023 Vapor Sampling
Laboratory Reports
Data Validation Reports
Field Documentation

Tables

Table 1
March 2023 Vapor Sampling
Univar Solutions USA, Inc. (Formerly ChemCentral)
Wyoming, Michigan

Sample Name:	Nonresidential RIASLs (EGLE 2020) [1]	USEPA Calcuated VISLs [2]	Site-Specific Nonresidential VIAC [3]	USEPA Calculated VISLs [4]	Units	AA-03_UNIVAR_032923	IA-05_UNIVAR-FD-01_032923	FLOORDRAIN-01_032923	IA-06_UNIVAR-FD-02_032923	FLOORDRAIN-02_032923	IA-04_UNIVAR13_032923	SSMP-13_032923
Date Collected:						3/29/2023	3/29/2023	3/29/2023	3/29/2023	3/29/2023	3/29/2023	3/29/2023
Building Location:						Univar						
Applicable Matrix / Matrix Type:	Indoor Air [5]	Indoor Air [5]	Soil Gas	Soil Gas		Indoor Air [5]	Indoor Air [5]	Indoor Air [5]	Indoor Air [5]	Indoor Air [5]	Indoor Air [5]	Soil Gas
Sample Type:	--	--	--	--		Ambient Air	Indoor Air	Headspace Vapor	Indoor Air	Headspace Vapor	Indoor Air	Sub-Slab
Volatile Organics												
Acetone (2-Propanone)	31000 (TS)	--	--	--	µg/m³	**5.7**	**9.7**	**17 [25.7]**	**9.3**	**47.5**	**40.1**	**115 [117]**
Acrolein	--	0.0876	--	2.92	µg/m³	0.46 U	**0.39 J**	1.8 U [1.8 U]	**0.37 J**	1.8 U	**0.76**	1.8 U [1.8 U]
Acrylonitrile	--	1.8	--	60.1	µg/m³	0.43 U	0.43 U	1.7 U [1.7 U]	0.43 U	1.7 U	0.43 U	1.7 U [1.7 U]
1,3-Butadiene	--	4.09	--	136	µg/m³	0.44 U	0.44 U	1.8 U [1.8 U]	0.44 U	1.8 U	0.44 U	1.8 U [1.8 U]
Benzene	15	15.7	--	524	µg/m³	**0.42 J**	**0.32 J**	2.6 U [2.6 U]	**0.38 J**	2.6 U	**0.54 J**	2.6 U [2.6 U]
Bromodichloromethane	--	3.31	--	110	µg/m³	1.3 U	1.3 U	5.4 U [5.4 U]	1.3 U	5.4 U	1.3 U	5.4 U [5.4 U]
Bromoform	--	111	--	3720	µg/m³	2.1 U	2.1 U	8.3 U [8.3 U]	2.1 U	8.3 U	2.1 U	8.3 U [8.3 U]
Bromomethane	--	21.9	--	730	µg/m³	0.78 U	0.78 U	3.1 U [3.1 U]	0.78 U	3.1 U	0.78 U	3.1 U [3.1 U]
Bromoethene (Vinyl Bromide)	--	8.18	--	273	µg/m³	0.87 U	0.87 U	3.5 U [3.5 U]	0.87 U	3.5 U	0.87 U	3.5 U [3.5 U]
Benzyl Chloride	--	2.5	--	83.4	µg/m³	1.0 UJ	1.0 UJ	4.1 U [4.1 U]	1.0 UJ	4.1 U	1.0 U	4.1 U [4.1 U]
n-Butylbenzene	--	--	--	--	µg/m³	1.1 U	1.1 U	4.4 U [4.4 U]	1.1 U	4.4 U	1.1 U	4.4 U [4.4 U]
sec-Butylbenzene	--	--	--	--	µg/m³	1.1 U	1.1 U	4.4 U [4.4 U]	1.1 U	4.4 U	1.1 U	4.4 U [4.4 U]
Carbon Disulfide	--	3070	--	102000	µg/m³	0.62 U	0.62 U	2.5 U [2.5 U]	0.62 U	**3.0**	0.62 U	**1.7 J [2.0 J]**
Chlorobenzene	150	219	--	7300	µg/m³	0.92 U	0.92 U	3.7 U [3.7 U]	0.92 U	3.7 U	0.92 U	3.7 U [3.7 U]
Chloroethane	12000	17500	200000	584000	µg/m³	0.53 U	0.53 U	2.1 U [2.1 U]	0.53 U	2.1 U	0.53 U	2.1 U [2.1 U]
Chloroform	5.2	5.33	--	178	µg/m³	0.98 U	0.98 U	3.9 U [3.9 U]	**1.3**	**3.0 J**	0.98 U	**130 [129]**
Chloromethane	280	394	--	13100	µg/m³	**1.3**	**0.95**	**1.6 J [1.3 J]**	**1.3**	**1.7**	**1.5**	1.7 U [1.7 U]
3-Chloropropene (Allyl Chloride)	--	4.38	--	146	µg/m³	0.63 U	0.63 U	2.5 U [2.5 U]	0.63 U	2.5 U	0.63 U	2.5 U [2.5 U]
Carbon Tetrachloride	21	20.4	--	681	µg/m³	**0.36 J**	1.3 U	5.0 U [5.0 U]	1.3 U	5.0 U	1.3 U	**5.0 [5.2]**
Cyclohexane	--	26300	--	876000	µg/m³	0.69 U	0.69 U	2.8 U [2.8 U]	0.69 U	2.8 U	0.69 U	2.8 U [2.8 U]
1,1-Dichloroethane	75	76.7	1200	2560	µg/m³	0.81 U	0.81 U	3.2 U [3.2 U]	0.81 U	3.2 U	0.81 U	3.2 U [3.2 U]
1,1-Dichloroethene	610	876	10000	29200	µg/m³	0.79 U	0.79 U	3.2 U [3.2 U]	0.79 U	3.2 U	0.79 U	3.2 U [3.2 U]
1,2-Dibromoethane (EDB)	--	0.204	--	6.81	µg/m³	1.5 U	1.5 U	6.1 U [6.1 U]	1.5 U	6.1 U	1.5 U	6.1 U [6.1 U]
1,2-Dichloroethane	--	4.72	--	157	µg/m³	0.81 U	0.81 U	3.2 U [3.2 U]	0.81 U	3.2 U	0.81 U	3.2 U [3.2 U]
1,2-Dichloropropane	12	17.5	--	584	µg/m³	0.92 U	0.92 U	3.7 U [3.7 U]	0.92 U	3.7 U	0.92 U	3.7 U [3.7 U]
1,4-Dioxane	24	24.5	--	818	µg/m³	0.72 U	0.72 U	2.9 U [2.9 U]	0.72 U	2.9 U	0.72 U	2.9 U [2.9 U]
Dichlorodifluoromethane	--	438	--	14600	µg/m³	**2.2**	**1.8**	**2.1 J [2.0 J]**	**2.3**	**2.0 J**	**2.0**	**2.1 J [2.1 J]**
Dibromochloromethane	--	--	--	--	µg/m³	1.7 U	1.7 U	6.8 U [6.8 U]	1.7 U	6.8 U	1.7 U	6.8 U [6.8 U]
trans-1,2-Dichloroethylene	250	175	26000 (SE)	5840	µg/m³	0.79 U	0.79 U	3.2 U [3.2 U]	0.79 U	3.2 U	0.79 U	3.2 U [3.2 U]
cis-1,2-Dichloroethylene	25	175	410	5840	µg/m³	0.79 U	0.79 U	3.2 U [3.2 U]	0.79 U	3.2 U	0.79 U	3.2 U [3.2 U]
cis-1,3-Dichloropropene	--	--	--	--	µg/m³	0.91 U	0.91 U	3.6 U [3.6 U]	0.91 U	3.6 U	0.91 U	3.6 U [3.6 U]
m-Dichlorobenzene	9.2	--	--	--	µg/m³	1.2 U	1.2 U	4.8 U [4.8 U]	1.2 U	4.8 U	1.2 UJ	4.8 U [4.8 U]
o-Dichlorobenzene	--	876	--	29200	µg/m³	1.2 U	1.2 U	4.8 U [4.8 U]	1.2 U	4.8 U	1.2 U	4.8 U [4.8 U]
p-Dichlorobenzene	31	11.1	--	372	µg/m³	1.2 U	1.2 U	4.8 U [4.8 U]	1.2 U	4.8 U	1.2 UJ	4.8 U [4.8 U]
trans-1,3-Dichloropropene	--	--	--	--	µg/m³	0.91 U	0.91 U	3.6 U [3.6 U]	0.91 U	3.6 U	0.91 U	3.6 U [3.6 U]
Di-Isopropyl ether	1400	3070	--	102000	µg/m³	0.83 U	0.83 U	3.3 U [3.3 U]	0.83 U	3.3 U	0.83 U	3.3 U [3.3 U]
Ethanol	19000 (TS)	--	--	--	µg/m³	**3.8**	**4.7**	**25.4 [22.2]**	**34.5**	**18**	**334 J**	**71.6 [85.2]**
Ethylbenzene	48	49.1	800	1640	µg/m³	0.87 U	0.87 U	3.5 U [3.5 U]	0.87 U	3.5 U	0.87 U	3.5 U [3.5 U]
Ethyl Acetate	--	307	--	10200	µg/m³	**4.0**	**6.1**	**26 [113]**	**5.4**	**11**	**14**	**20 J [11 J]**
4-Ethyltoluene	--	--	--	--	µg/m³	0.98 U	**17**	3.9 U [3.9 U]	0.98 U	3.9 U	0.98 U	3.9 U [3.9 U]
Freon 113 (Trichlorotrifluoroethane)	--	21900	--	730000	µg/m³	1.5 UJ	1.5 UJ	6.1 U [6.1 U]	1.5 UJ	6.1 U	1.5 U	6.1 U [6.1 U]
Freon 114	--	--	--	--	µg/m³	1.4 U	1.4 U	5.6 U [5.6 U]	1.4 U	5.6 U	1.4 U	5.6 U [5.6 U]
Heptane	--	1750	--	58400	µg/m³	0.82 U	0.82 U	3.3 U [3.3 U]	0.82 U	3.3 U	**0.49 J**	3.3 U [3.3 U]
Hexachlorobutadiene	--	5.57	--	186	µg/m³	2.1 UJ	2.1 UJ	8.5 U [8.5 U]	2.1 UJ	8.5 U	2.1 U	8.5 U [8.5 U]
Hexane	--	3070	--	102000	µg/m³	0.70 U	0.70 U	2.8 U **[1.9 J]**	0.70 U	2.8 U	**1.6**	2.8 U [2.8 U]
2-Hexanone	--	131	--	4380	µg/m³	0.82 U	0.82 U	3.3 U [3.3 U]	0.82 U	3.3 U	0.82 U	3.3 U [3.3 U]
Isopropylbenzene (Cumene)	--	1750	--	58400	µg/m³	0.98 U	**1.1**	3.9 U [3.9 U]	0.98 U	3.9 U	0.98 U	3.9 U [3.9 U]
Isopropyl Alcohol	--	876	--	29200	µg/m³	**0.61**	**1.7**	**1640 J [265 J]**	**2.9**	**4.2**	**2.9**	**2580 J [1460 J]**
p-Isopropyltoluene	--	--	--	--	µg/m³	1.1 U	**0.71 J**	4.4 U [4.4 U]	1.1 U	4.4 U	**5.0**	4.4 U [4.4 U]
Methylene Chloride	1800	2630	--	87600	µg/m³	**1.2**	**0.97**	2.8 U **[5.6]**	**1.1**	**3.2**	**0.73**	**3.0 [2.9]**
Methyl Ethyl Ketone (2-Butanone)	10000	21900	--	730000	µg/m³	0.59 U	**0.91**	**2.9 [4.1]**	**1.1**	**7.4**	**1.5**	**18 [17]**
Methyl Isobutyl Ketone (4-methyl-2-pentanone)	820 (TS)	13100	--	438000	µg/m³	0.82 U	0.82 U	3.3 U [3.3 U]	0.82 U	3.3 U	0.82 U	**1.6 J** [3.3 U]
Methyl Tert Butyl Ether (MTBE)	460	472	--	15700	µg/m³	0.72 U	0.72 U	2.9 U [2.9 U]	0.72 U	2.9 U	0.72 U	2.9 U [2.9 U]
Methylmethacrylate	--	3070	--	102000	µg/m³	0.82 U	0.82 U	3.3 U [3.3 U]	0.82 U	3.3 U	0.82 U	3.3 U [3.3 U]
Naphthalene	--	3.61	59	120	µg/m³	1.0 U	1.0 U	4.2 U [4.2 U]	1.0 U	4.2 U	1.0 U	**22 J [8.4 J]**
Pentane	--	4380	--	146000	µg/m³	**1.4**	**1.9**	**1.9 J [9.4]**	**1.6**	**2.1 J**	**3.8**	**2.4 [2.1 J]**
n-Propylbenzene	1000	4380	--	146000	µg/m³	0.98 U	**10**	3.9 U [3.9 U]	0.98 U	3.9 U	0.98 U	3.9 U [3.9 U]
Propylene	--	13100	--	438000	µg/m³	**0.69 J**	0.86 U	3.4 U [3.4 U]	**2.9**	3.4 U	0.86 U	3.4 U [3.4 U]
Styrene	--	4380	--	146000	µg/m³	0.85 U	**2.5**	3.4 U [3.4 U]	0.85 U	3.4 U	0.85 U	3.4 U [3.4 U]
1,1,1-Trichloroethane	7000 (TS)	21900	230000 (SE)	730000	µg/m³	1.1 U	1.1 U	4.4 U [4.4 U]	1.1 U	4.4 U	1.1 U	**6.0 [6.0]**
1,1,2,2-Tetrachloroethane	--	2.11	--	70.5	µg/m³	1.4 U	1.4 U	5.5 U [5.5 U]	1.4 U	5.5 U	1.4 U	5.5 U [5.5 U]
1,1,2-Trichloroethane	--	0.876	--	29.2	µg/m³	1.1 U	1.1 U	4.4 U [4.4 U]	1.1 U	4.4 U	1.1 U	4.4 U [4.4 U]
1,2,4-Trichlorobenzene	6.1	8.76	--	292	µg/m³	1.5 U	1.5 U	5.9 U [5.9 U]	1.5 U	5.9 U	**4.5**	5.9 U [5.9 U]
1,2,4-Trimethylbenzene	180	263	3,100	8760	µg/m³	0.98 U	**11**	3.9 U [3.9 U]	0.98 U	3.9 U	**0.59 J**	3.9 U [3.9 U]
1,3,5-Trimethylbenzene	--	263	3,100	8760	µg/m³	0.98 U	**4.9**	3.9 U [3.9 U]	0.98 U	3.9 U	0.98 U	3.9 U [3.9 U]
2,2,4-Trimethylpentane	--	--	--	--	µg/m³	0.93 U	0.93 U	3.7 U [3.7 U]	0.93 U	3.7 U	0.93 U	3.7 U [3.7 U]
Tertiary Butyl Alcohol	--	21900	--	730000	µg/m³	0.61 U	0.61 U	2.4 U [2.4 U]	0.61 U	**3.9**	0.61 U	**3.0 [2.8]**
Tetrachloroethylene	82 (TS)	175	1400 (SE)	5840	µg/m³	0.27 U	**0.50**	**1.7 J [8.8 J]**	0.27 U	**14**	**0.26 J**	**207 [176]**
Tetrahydrofuran	--	8760	--	292000	µg/m³	0.59 U	0.59 U	2.4 U [2.4 U]	0.59 U	**5.0**	0.59 U	2.4 U [2.4 U]
Toluene	7500 (TS)	21900	--	730000	µg/m³	**0.53 J**	**1.2**	3.0 U **[4.1]**	**0.87**	3.0 U	**2.1**	3.0 U [3.0 U]
Trichloroethylene	4.0	8.76	67 (SE)	292	µg/m³	0.21 U	0.21 U	0.86 U [0.86 U]	0.21 U	0.86 U	0.21 U	**52 [49]**
Trichlorofluoromethane	--	--	--	--	µg/m³	**1.6**	**1.2**	4.5 U [4.5 U]	**1.6**	4.5 U	**1.2**	4.5 U [4.5 U]
Vinyl Chloride	27	27.9	450	929	µg/m³	0.51 U	0.51 U	2.0 U [2.0 U]	0.51 U	2.0 U	0.51 U	2.0 U [2.0 U]
Vinyl Acetate	610	876	--	29200	µg/m³	0.70 U	**24**	2.8 U [2.8 U]	0.70 U	2.8 U	**2.4**	2.8 U [2.8 U]
m,p-Xylene	--	--	--	--	µg/m³	0.87 U	**0.74 J**	3.5 U [3.5 U]	0.87 U	3.5 U	**1.3**	3.5 U [3.5 U]
o-Xylene	--	438	--	14600	µg/m³	0.87 U	**2.0**	3.5 U [3.5 U]	0.87 U	3.5 U	**0.48 J**	3.5 U [3.5 U]
Xylenes (total)	670	438	11000	14600	µg/m³	0.87 U	**2.7**	3.5 U [3.5 U]	0.87 U	3.5 U	**1.8**	3.5 U [3.5 U]

See notes on last page

Table 1
March 2023 Vapor Sampling
Univar Solutions USA, Inc. (Formerly ChemCentral)
Wyoming, Michigan

Sample Name:	Nonresidential RIASLs (EGLE 2020) [1]	USEPA Calcuated VISLs [2]	Site-Specific Nonresidential VIAC [3]	USEPA Calculated VISLs [4]	Units	AA-01_GILMORE_032823	IA-02_GILMORE401_032823	SSMP-401_033123	IA-01_GILMORE302R_033123	SSMP-302R_033123
Date Collected:						3/28/2023	3/28/2023	3/31/2023	3/31/2023	3/31/2023
Building Location:						Gilmore				
Applicable Matrix / Matrix Type:	Indoor Air [5]	Indoor Air [5]	Soil Gas	Soil Gas		Indoor Air [5]	Indoor Air [5]	Soil Gas	Indoor Air [5]	Soil Gas
Sample Type:	--	--	--	--		Ambient Air	Indoor Air	Sub-Slab	Indoor Air	Sub-Slab
Volatile Organics										
Acetone (2-Propanone)	31000 (TS)	--	--	--	µg/m³	**88.4**	**176**	**6.9**	**20**	1.9 U
Acrolein	--	0.0876	--	2.92	µg/m³	0.46 U	0.46 U	1.8 U	**0.64**	1.8 U
Acrylonitrile	--	1.8	--	60.1	µg/m³	0.43 U	0.43 U	1.7 U	0.43 U	1.7 U
1,3-Butadiene	--	4.09	--	136	µg/m³	0.44 U	**0.44**	1.8 U	0.44 U	1.8 U
Benzene	15	15.7	--	524	µg/m³	**0.73**	**3.2**	2.6 U	**2.8**	**20**
Bromodichloromethane	--	3.31	--	110	µg/m³	1.3 U	1.3 U	5.4 U	1.3 U	5.4 U
Bromoform	--	111	--	3720	µg/m³	2.1 U	2.1 U	8.3 U	2.1 U	8.3 U
Bromomethane	--	21.9	--	730	µg/m³	0.78 U	0.78 U	3.1 U	0.78 U	3.1 U
Bromoethene (Vinyl Bromide)	--	8.18	--	273	µg/m³	0.87 U	0.87 U	3.5 U	0.87 U	3.5 U
Benzyl Chloride	--	2.5	--	83.4	µg/m³	1.0 UJ	1.0 UJ	4.1 U	1.0 U	4.1 U
n-Butylbenzene	--	--	--	--	µg/m³	1.1 U	1.1 U	4.4 U	1.1 U	4.4 U
sec-Butylbenzene	--	--	--	--	µg/m³	1.1 U	1.1 U	4.4 U	1.1 U	4.4 U
Carbon Disulfide	--	3070	--	102000	µg/m³	0.62 U	0.62 U	2.5 U	0.62 U	2.5 U
Chlorobenzene	150	219	--	7300	µg/m³	0.92 U	0.92 U	3.7 U	0.92 U	3.7 U
Chloroethane	12000	17500	200000	584000	µg/m³	0.53 U	0.53 U	2.1 U	0.53 U	2.1 U
Chloroform	5.2	5.33	--	178	µg/m³	0.98 U	0.98 U	**9.8**	0.98 U	3.9 U
Chloromethane	280	394	--	13100	µg/m³	**1.1**	**1.0**	1.7 U	**1.3**	**1.5 J**
3-Chloropropene (Allyl Chloride)	--	4.38	--	146	µg/m³	0.63 U	0.63 U	2.5 U	0.63 U	2.5 U
Carbon Tetrachloride	21	20.4	--	681	µg/m³	1.3 U	1.3 U	5.0 U	1.3 U	5.0 U
Cyclohexane	--	26300	--	876000	µg/m³	**0.41 J**	**1.4**	2.8 U	**1.6**	**180**
1,1-Dichloroethane	75	76.7	1200	2560	µg/m³	0.81 U	0.81 U	3.2 U	0.81 U	3.2 U
1,1-Dichloroethene	610	876	10000	29200	µg/m³	0.79 U	0.79 U	3.2 U	0.79 U	3.2 U
1,2-Dibromoethane (EDB)	--	0.204	--	6.81	µg/m³	1.5 U	1.5 U	6.1 U	1.5 U	6.1 U
1,2-Dichloroethane	--	4.72	--	157	µg/m³	0.81 U	0.81 U	3.2 U	0.81 U	3.2 U
1,2-Dichloropropane	12	17.5	--	584	µg/m³	0.92 U	0.92 U	3.7 U	0.92 U	3.7 U
1,4-Dioxane	24	24.5	--	818	µg/m³	0.72 U	0.72 U	2.9 U	0.72 U	2.9 U
Dichlorodifluoromethane	--	438	--	14600	µg/m³	**2.1**	**2.1**	**3.0 J**	**2.0**	**2.0 J**
Dibromochloromethane	--	--	--	--	µg/m³	1.7 U	1.7 U	6.8 U	1.7 U	6.8 U
trans-1,2-Dichloroethylene	250	175	26000 (SE)	5840	µg/m³	0.79 U	0.79 U	3.2 U	0.79 U	3.2 U
cis-1,2-Dichloroethylene	25	175	410	5840	µg/m³	0.79 U	0.79 U	3.2 U	0.79 U	3.2 U
cis-1,3-Dichloropropene	--	--	--	--	µg/m³	0.91 U	0.91 U	3.6 U	0.91 U	3.6 U
m-Dichlorobenzene	9.2	--	--	--	µg/m³	1.2 U	1.2 U	4.8 U	1.2 U	4.8 U
o-Dichlorobenzene	--	876	--	29200	µg/m³	1.2 U	1.2 U	4.8 U	1.2 U	4.8 U
p-Dichlorobenzene	31	11.1	--	372	µg/m³	1.2 U	1.2 U	4.8 U	1.2 U	4.8 U
trans-1,3-Dichloropropene	--	--	--	--	µg/m³	0.91 U	0.91 U	3.6 U	0.91 U	3.6 U
Di-Isopropyl ether	1400	3070	--	102000	µg/m³	0.83 U	0.83 U	3.3 U	0.83 U	3.3 U
Ethanol	19000 (TS)	--	--	--	µg/m³	**6.2**	**79.7**	**460 J**	**54.3**	**36.9**
Ethylbenzene	48	49.1	800	1640	µg/m³	**0.91**	**2.7**	3.5 U	**0.83 J**	3.5 U
Ethyl Acetate	--	307	--	10200	µg/m³	**37.4**	**5.4**	**5.4**	**6.1**	2.9 U
4-Ethyltoluene	--	--	--	--	µg/m³	0.98 U	**0.79 J**	3.9 U	0.98 U	3.9 U
Freon 113 (Trichlorotrifluoroethane)	--	21900	--	730000	µg/m³	**0.51 J**	1.5 U	6.1 U	1.5 U	6.1 U
Freon 114	--	--	--	--	µg/m³	1.4 U	1.4 U	5.6 U	1.4 U	5.6 U
Heptane	--	1750	--	58400	µg/m³	**21**	**26**	3.3 U	**2.3**	**144**
Hexachlorobutadiene	--	5.57	--	186	µg/m³	2.1 U	2.1 U	8.5 U	2.1 U	8.5 U
Hexane	--	3070	--	102000	µg/m³	**1.4**	**3.9**	2.8 U	**8.1**	**1000**
2-Hexanone	--	131	--	4380	µg/m³	0.82 U	0.82 U	3.3 U	0.82 U	3.3 U
Isopropylbenzene (Cumene)	--	1750	--	58400	µg/m³	0.98 U	0.98 U	3.9 U	0.98 U	3.9 U
Isopropyl Alcohol	--	876	--	29200	µg/m³	**1.8**	**1.2**	**49.2**	**4.2**	**107**
p-Isopropyltoluene	--	--	--	--	µg/m³	**0.88 J**	**3.7**	4.4 U	1.1 U	4.4 U
Methylene Chloride	1800	2630	--	87600	µg/m³	**1.6**	**1.6**	2.8 U	**0.83**	2.8 U
Methyl Ethyl Ketone (2-Butanone)	10000	21900	--	730000	µg/m³	**2.6**	**5.0**	**1.5 J**	**2.8**	2.4 U
Methyl Isobutyl Ketone (4-methyl-2-pentanone)	820 (TS)	13100	--	438000	µg/m³	0.82 U	**2.1**	3.3 U	0.82 U	3.3 U
Methyl Tert Butyl Ether (MTBE)	460	472	--	15700	µg/m³	0.72 U	0.72 U	2.9 U	0.72 U	2.9 U
Methylmethacrylate	--	3070	--	102000	µg/m³	0.82 U	0.82 U	3.3 U	0.82 U	3.3 U
Naphthalene	--	3.61	59	120	µg/m³	1.0 U	1.0 U	4.2 U	1.0 U	4.2 U
Pentane	--	4380	--	146000	µg/m³	**4.4**	**16**	2.4 U	**23**	**4740**
n-Propylbenzene	1000	4380	--	146000	µg/m³	0.98 U	0.98 U	3.9 U	0.98 U	3.9 U
Propylene	--	13100	--	438000	µg/m³	0.86 U	0.86 U	3.4 U	0.86 U	**6.5**
Styrene	--	4380	--	146000	µg/m³	0.85 U	**0.60 J**	3.4 U	0.85 U	3.4 U
1,1,1-Trichloroethane	7000 (TS)	21900	230000 (SE)	730000	µg/m³	1.1 U	1.1 U	4.4 U	1.1 U	4.4 U
1,1,2,2-Tetrachloroethane	--	2.11	--	70.5	µg/m³	1.4 U	1.4 U	5.5 U	1.4 U	5.5 U
1,1,2-Trichloroethane	--	0.876	--	29.2	µg/m³	1.1 U	1.1 U	4.4 U	1.1 U	4.4 U
1,2,4-Trichlorobenzene	6.1	8.76	--	292	µg/m³	1.5 U	1.5 U	5.9 U	1.5 U	5.9 U
1,2,4-Trimethylbenzene	180	263	3,100	8760	µg/m³	0.98 U	**2.5**	3.9 U	**0.93 J**	3.9 U
1,3,5-Trimethylbenzene	--	263	3,100	8760	µg/m³	0.98 U	**0.64 J**	3.9 U	0.98 U	3.9 U
2,2,4-Trimethylpentane	--	--	--	--	µg/m³	0.93 U	**2.2**	3.7 U	**4.4**	**74.3**
Tertiary Butyl Alcohol	--	21900	--	730000	µg/m³	0.61 U	0.61 U	2.4 U	0.61 U	2.4 U
Tetrachloroethylene	82 (TS)	175	1400 (SE)	5840	µg/m³	0.27 U	**0.35**	**3.1**	**0.35**	**2.2**
Tetrahydrofuran	--	8760	--	292000	µg/m³	0.59 U	0.59 U	**1.3 J**	**0.50 J**	2.4 U
Toluene	7500 (TS)	21900	--	730000	µg/m³	**9.0**	**21**	3.0 U	**6.8**	**8.3**
Trichloroethylene	4.0	8.76	67 (SE)	292	µg/m³	0.21 U	0.21 U	0.86 U	0.21 U	0.86 U
Trichlorofluoromethane	--	--	--	--	µg/m³	**1.3**	**1.3**	**10**	**1.3**	4.5 U
Vinyl Chloride	27	27.9	450	929	µg/m³	0.51 U	0.51 U	2.0 U	0.51 U	2.0 U
Vinyl Acetate	610	876	--	29200	µg/m³	0.70 U	0.70 U	2.8 U	0.70 U	2.8 U
m,p-Xylene	--	--	--	--	µg/m³	**1.5**	**9.1**	3.5 U	**2.6**	**5.6**
o-Xylene	--	438	--	14600	µg/m³	**0.52 J**	**3.0**	3.5 U	**1.0**	3.5 U
Xylenes (total)	670	438	11000	14600	µg/m³	**2.0**	**12**	3.5 U	**3.6**	**5.6**

See notes on last page

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March 2023 Vapor Sampling
Univar Solutions USA, Inc. (Formerly ChemCentral)
Wyoming, Michigan

Sample Name:	Nonresidential RIASLs (EGLE 2020) [1]	USEPA Calcuated VISLs [2]	Site-Specific Nonresidential VIAC [3]	USEPA Calculated VISLs [4]	Units	AA-02_DYNAPLATE_032823	IA-03_DYNAPLATE-510_032823	SSMP-510_032923
Date Collected:						3/28/2023	3/28/2023	3/29/2023
Building Location:						Dynaplate		
Applicable Matrix / Matrix Type:	Indoor Air [5]	Indoor Air [5]	Soil Gas	Soil Gas		Indoor Air [5]	Indoor Air [5]	Soil Gas
Sample Type:	--	--	--	--		Ambient Air	Indoor Air	Sub-Slab
Volatile Organics								
Acetone (2-Propanone)	31000 (TS)	--	--	--	µg/m³	**8.3**	**21**	**41.8**
Acrolein	--	0.0876	--	2.92	µg/m³	0.46 U	**1.4**	**1.5 J**
Acrylonitrile	--	1.8	--	60.1	µg/m³	0.43 U	0.43 U	1.7 U
1,3-Butadiene	--	4.09	--	136	µg/m³	0.44 U	**0.58**	1.8 U
Benzene	15	15.7	--	524	µg/m³	**0.93**	**2.4**	**2.2 J**
Bromodichloromethane	--	3.31	--	110	µg/m³	1.3 U	**1.8**	5.4 U
Bromoform	--	111	--	3720	µg/m³	2.1 U	2.1 U	8.3 U
Bromomethane	--	21.9	--	730	µg/m³	0.78 U	0.78 U	3.1 U
Bromoethene (Vinyl Bromide)	--	8.18	--	273	µg/m³	0.87 U	0.87 U	3.5 U
Benzyl Chloride	--	2.5	--	83.4	µg/m³	1.0 UJ	1.0 UJ	4.1 U
n-Butylbenzene	--	--	--	--	µg/m³	1.1 U	1.1 U	4.4 U
sec-Butylbenzene	--	--	--	--	µg/m³	1.1 U	1.1 U	4.4 U
Carbon Disulfide	--	3070	--	102000	µg/m³	0.62 U	**29**	**17**
Chlorobenzene	150	219	--	7300	µg/m³	0.92 U	0.92 U	3.7 U
Chloroethane	12000	17500	200000	584000	µg/m³	0.53 U	0.53 U	2.1 U
Chloroform	5.2	5.33	--	178	µg/m³	0.98 U	**6.3**	**5.4**
Chloromethane	280	394	--	13100	µg/m³	**1.2**	**1.1**	**1.1 J**
3-Chloropropene (Allyl Chloride)	--	4.38	--	146	µg/m³	0.63 U	0.63 U	2.5 U
Carbon Tetrachloride	21	20.4	--	681	µg/m³	1.3 U	1.3 U	5.0 U
Cyclohexane	--	26300	--	876000	µg/m³	0.69 U	**0.41 J**	2.8 U
1,1-Dichloroethane	75	76.7	1200	2560	µg/m³	0.81 U	0.81 U	3.2 U
1,1-Dichloroethene	610	876	10000	29200	µg/m³	0.79 U	0.79 U	3.2 U
1,2-Dibromoethane (EDB)	--	0.204	--	6.81	µg/m³	1.5 U	1.5 U	6.1 U
1,2-Dichloroethane	--	4.72	--	157	µg/m³	0.81 U	0.81 U	3.2 U
1,2-Dichloropropane	12	17.5	--	584	µg/m³	0.92 U	0.92 U	3.7 U
1,4-Dioxane	24	24.5	--	818	µg/m³	0.72 U	**4.7**	**1.9 J**
Dichlorodifluoromethane	--	438	--	14600	µg/m³	**2.1**	**2.1**	**6.4**
Dibromochloromethane	--	--	--	--	µg/m³	1.7 U	1.7 U	6.8 U
trans-1,2-Dichloroethylene	250	175	26000 (SE)	5840	µg/m³	0.79 U	0.79 U	3.2 U
cis-1,2-Dichloroethylene	25	175	410	5840	µg/m³	0.79 U	0.79 U	3.2 U
cis-1,3-Dichloropropene	--	--	--	--	µg/m³	0.91 U	0.91 U	3.6 U
m-Dichlorobenzene	9.2	--	--	--	µg/m³	1.2 U	1.2 U	4.8 U
o-Dichlorobenzene	--	876	--	29200	µg/m³	1.2 U	1.2 U	4.8 U
p-Dichlorobenzene	31	11.1	--	372	µg/m³	1.2 U	1.2 U	4.8 U
trans-1,3-Dichloropropene	--	--	--	--	µg/m³	0.91 U	0.91 U	3.6 U
Di-Isopropyl ether	1400	3070	--	102000	µg/m³	0.83 U	0.83 U	3.3 U
Ethanol	19000 (TS)	--	--	--	µg/m³	**7.9**	**16**	**81.6**
Ethylbenzene	48	49.1	800	1640	µg/m³	0.87 U	**0.65 J**	3.5 U
Ethyl Acetate	--	307	--	10200	µg/m³	**3.5**	**5.4**	**35**
4-Ethyltoluene	--	--	--	--	µg/m³	0.98 U	0.98 U	3.9 U
Freon 113 (Trichlorotrifluoroethane)	--	21900	--	730000	µg/m³	**0.57 J**	1.5 U	6.1 U
Freon 114	--	--	--	--	µg/m³	1.4 U	1.4 U	5.6 U
Heptane	--	1750	--	58400	µg/m³	0.82 U	**0.53 J**	3.3 U
Hexachlorobutadiene	--	5.57	--	186	µg/m³	2.1 U	2.1 U	8.5 U
Hexane	--	3070	--	102000	µg/m³	**1.3**	**1.7**	**6.0**
2-Hexanone	--	131	--	4380	µg/m³	0.82 U	0.82 U	3.3 U
Isopropylbenzene (Cumene)	--	1750	--	58400	µg/m³	0.98 U	0.98 U	3.9 U
Isopropyl Alcohol	--	876	--	29200	µg/m³	**1.8**	**6.4**	**8.8**
p-Isopropyltoluene	--	--	--	--	µg/m³	1.1 U	**3.6**	4.4 U
Methylene Chloride	1800	2630	--	87600	µg/m³	**1.9**	**3.3**	**2.8**
Methyl Ethyl Ketone (2-Butanone)	10000	21900	--	730000	µg/m³	**2.2**	**2.7**	**5.3**
Methyl Isobutyl Ketone (4-methyl-2-pentanone)	820 (TS)	13100	--	438000	µg/m³	0.82 U	0.82 U	3.3 U
Methyl Tert Butyl Ether (MTBE)	460	472	--	15700	µg/m³	0.72 U	0.72 U	2.9 U
Methylmethacrylate	--	3070	--	102000	µg/m³	0.82 U	0.82 U	3.3 U
Naphthalene	--	3.61	59	120	µg/m³	1.0 U	1.0 U	4.2 U
Pentane	--	4380	--	146000	µg/m³	**8.2**	**10**	**5.3**
n-Propylbenzene	1000	4380	--	146000	µg/m³	0.98 U	0.98 U	3.9 U
Propylene	--	13100	--	438000	µg/m³	0.86 U	0.86 U	**79.0**
Styrene	--	4380	--	146000	µg/m³	0.85 U	0.85 U	3.4 U
1,1,1-Trichloroethane	7000 (TS)	21900	230000 (SE)	730000	µg/m³	1.1 U	1.1 U	4.4 U
1,1,2,2-Tetrachloroethane	--	2.11	--	70.5	µg/m³	1.4 U	1.4 U	5.5 U
1,1,2-Trichloroethane	--	0.876	--	29.2	µg/m³	1.1 U	1.1 U	4.4 U
1,2,4-Trichlorobenzene	6.1	8.76	--	292	µg/m³	1.5 U	1.5 U	5.9 U
1,2,4-Trimethylbenzene	180	263	3,100	8760	µg/m³	0.98 U	**0.48 J**	3.9 U
1,3,5-Trimethylbenzene	--	263	3,100	8760	µg/m³	0.98 U	0.98 U	3.9 U
2,2,4-Trimethylpentane	--	--	--	--	µg/m³	**0.51 J**	**2.1**	**2.3 J**
Tertiary Butyl Alcohol	--	21900	--	730000	µg/m³	0.61 U	**2.1**	2.4 U
Tetrachloroethylene	82 (TS)	175	1400 (SE)	5840	µg/m³	**0.31**	0.27 U	**1.5**
Tetrahydrofuran	--	8760	--	292000	µg/m³	0.59 U	**0.53 J**	2.4 U
Toluene	7500 (TS)	21900	--	730000	µg/m³	**2.2**	**3.5**	**5.3**
Trichloroethylene	4.0	8.76	67 (SE)	292	µg/m³	**1.6**	0.21 U	0.86 U
Trichlorofluoromethane	--	--	--	--	µg/m³	**1.3**	**1.3**	**2.4 J**
Vinyl Chloride	27	27.9	450	929	µg/m³	0.51 U	0.51 U	2.0 U
Vinyl Acetate	610	876	--	29200	µg/m³	0.70 U	0.70 U	2.8 U
m,p-Xylene	--	--	--	--	µg/m³	**1.0**	**2.0**	3.5 U
o-Xylene	--	438	--	14600	µg/m³	0.87 U	**0.65 J**	3.5 U
Xylenes (total)	670	438	11000	14600	µg/m³	**1.0**	**2.6**	3.5 U

See notes on last page

General Notes

Prior to sampling, a helium leak test was completed consistent with EGLE guidance to verify the seal of each sample point. All sampling points passed helium leak testing. Samples were analyzed at SGS Accutest Laboratories for volatile organic compounds via USEPA Method TO-15.

Shading indicates analyte exceeds EGLE RIASLs and Calcuated USEPA VISLs.

-- = No criteria

µg/m^3 = micrograms per cubic meter

AA = Ambient Air

EGLE = Michigan Department of Environment, Great Lakes, and Energy

FD = Floor Drain

IA = Indoor Air

J = result is an estimated value

RIASLs = Recommended Interim Action Screening Levels

SSMP = sub-slab monitoring point

U = result is below laboratory reporting limit.

UJ = The compound was not detected above the reported sample quantitation limit. However the reported limit is approximate and may or may not represent the actual limit of quantitation.

USEPA = United States Environmental Protection Agency

VIAC = Volatilization to Indoor Air Criteria

VISLs = Vapor Intrusion Screening Levels

Footnotes

(1) Non-ResidentialRecommended Interim Action Screening Levels as available from EGLE guidance document on Volatilization To Indoor Air Recommendations for Interim Action Screening Levels and Time-Sensitive Interim Action Screening Levels Decemeber 2020. Criteria applies for a 12-hour exposure day. Criteria applied to Indoor Air, Ambient Air, and Sanitary Sewer Headspace Vapors.

(2) USEPA Calculated VISLs from USEPA online VISL calculator using standard variables, a Target Hazard Quotient of 1 and a Target Cancer Risk of 1E-5. Criteria applied to Indoor Air, Ambient Air, and Sanitary Sewer Headspace Vapors.

(3) This site-specific criteria, provided by EGLE on August 24, 2017, are applicable for a nonresidential structure (less than 50,000 square feet) with a slab-on-grade and the depth to groundwater submitted for this facility. Criteria are applicable for all depths. Criteria applied to sub-slab soil gas samples.

(4) USEPA Calculated VISLs from USEPA online VISL calculator using standard variables, a Target Hazard Quotient of 1 and a Target Cancer Risk of 1E-5. Criteria applied sub-slab soil gas samples.

(5) 'Indoor air' category applies to indoor air, ambient air, and headspace vapor.

(TS) - Time Sensitive RISAL criteria is applicable to criteria only.
(SE) Site-specific criteria based on single event exposure; therefore, sampling methods should reflect shorter exposure scenarios.

Table 2
Sub-Slab Monitoring Point Sample Comparison
Univar Solutions USA, Inc. (Formerly ChemCentral)
Wyoming, Michigan

ARCADIS

Sample Location:	Site-Specific Nonresidential VIAC for Soil Gas [1]	USEPA Calculated VISLs for Soil Gas [2]	Units	SSMP-13							
Sample Name:				SSMP-13 (072318)	SSMP-13 (103018)	SSMP-13 (020419)	SSMP-13 (042219)	SSMP-13_ (081919)	SSMP-13_111419	SSMP-13_021720	SSMP-13_032923
Date Collected:				7/23/2018	10/30/2018	2/4/2019	4/22/2019	8/19/2019	11/14/2019	2/17/2020	3/29/2023
Building Location:				Univar							
Sample Type:				Sub-Slab	Sub-Slab	Sub-Slab	Sub-Slab	Sub-Slab	Sub-Slab	Sub-Slab	Sub-Slab
Volatile Organics											
Acetone (2-Propanone)	--	--	µg/m³	**197**	**242 [261]**	**102**	**187**	**181 [186]**	**155 [163]**	**130 D**	**115 [117]**
Acrolein	--	2.92	µg/m³	11 U	11 U [11 U]	11 U	11 U	1.8 U [1.8 U]	11 U [11 U]	2.3 U	1.8 U [1.8 U]
Acrylonitrile	--	60.1	µg/m³	11 U	11 U [11 U]	11 U	11 U	1.7 U [1.7 U]	11 U [11 U]	2.2 U	1.7 U [1.7 U]
1,3-Butadiene	--	136	µg/m³	22 U	22 U [22 U]	22 U	22 U	1.8 U [1.8 U]	22 U [22 U]	4.4 U	1.8 U [1.8 U]
Benzene	--	524	µg/m³	**1.2 J**	**1.9 J [2.1 J]**	**2.5 J**	**1.4 J**	**2.4 J [2.0 J]**	**0.89 J [0.93 J]**	**0.83 J**	2.6 U [2.6 U]
Bromodichloromethane	--	110	µg/m³	33 U	33 U [33 U]	33 U	33 U	5.4 U [5.4 U]	33 U [33 U]	6.7 U	5.4 U [5.4 U]
Bromoform	--	3720	µg/m³	52 U	52 U [52 U]	52 U	52 U	8.3 U [8.3 U]	52 U [52 U]	10 U	8.3 U [8.3 U]
Bromomethane	--	730	µg/m³	19 U	19 U [19 U]	19 U	19 U	3.1 U [3.1 U]	19 U [19 U]	3.9 U	3.1 U [3.1 U]
Bromoethene (Vinyl Bromide)	--	273	µg/m³	22 U	22 U [22 U]	22 U	22 U	3.5 U [3.5 U]	22 U [22 U]	4.4 U	3.5 U [3.5 U]
Benzyl Chloride	--	83.4	µg/m³	26 U	26 U [26 U]	26 UB	**0.52 J**	4.1 U [4.1 U]	26 U [26 U]	5.2 U	4.1 U [4.1 U]
n-Butylbenzene	--	--	µg/m³	27 U	27 U [27 U]	27 U	27 U	4.4 U [4.4 U]	27 U [27 U]	5.5 U	4.4 U [4.4 U]
sec-Butylbenzene	--	--	µg/m³	27 U	27 U [27 U]	27 U	27 U	4.4 U [4.4 U]	27 U [27 U]	5.5 U	4.4 U [4.4 U]
Carbon Disulfide	--	102000	µg/m³	**3.7 J**	16 UB [16 UB]	**1.6 J**	**3.4 J**	**4.4 [4.0]**	**3.7 J [4.0 J]**	**1.6 J**	**1.7 J [2.0 J]**
Chlorobenzene	--	7300	µg/m³	23 U	23 U [23 U]	23 U	23 U	3.7 U [3.7 U]	23 U [23 U]	4.6 U	3.7 U [3.7 U]
Chloroethane	200000	584000	µg/m³	13 U	13 U [13 U]	13 U	13 U	2.1 U [2.1 U]	13 U [13 U]	2.6 U	2.1 U [2.1 U]
Chloroform	--	178	µg/m³	**4.9 J**	**4.9 J [4.5 J]**	**2.3 J**	**3.6 J**	**3.7 J [3.3 J]**	**4 J [4 J]**	**1.9 J**	**130 [129]**
Chloromethane	--	13100	µg/m³	10 U	10 U [10 U]	10 U	10 U	1.7 U [1.7 U]	10 U [10 U]	**0.29 J**	1.7 U [1.7 U]
3-Chloropropene (Allyl Chloride)	--	146	µg/m³	31 U	31 U [31 U]	31 U	31 U	2.5 U [2.5 U]	31 U [31 U]	6.3 U	2.5 U [2.5 U]
Carbon Tetrachloride	--	681	µg/m³	**6 J**	**4.3 J [5.3 J]**	**4.4 J**	**5.5 J**	**6.9 [6.3]**	**6.3 J [6.9 J]**	**5.7 J**	**5.0 [5.2]**
Cyclohexane	--	876000	µg/m³	**2.9 J**	**1.5 J [3 J]**	**1.7 J**	**2.8 J**	**2.4 J [3.3]**	17 U [17 U]	**0.38 J**	2.8 U [2.8 U]
1,1-Dichloroethane	1200	2560	µg/m³	20 U	20 U [20 U]	20 U	20 U	3.2 U [3.2 U]	20 U [20 U]	4 U	3.2 U [3.2 U]
1,1-Dichloroethene	10000	29200	µg/m³	20 U	20 U [20 U]	20 U	20 U	3.2 U [3.2 U]	20 U [20 U]	4 U	3.2 U [3.2 U]
1,2-Dibromoethane (EDB)	--	6.81	µg/m³	38 U	38 U [38 U]	38 U	38 U	6.1 U [6.1 U]	38 U [38 U]	7.7 U	6.1 U [6.1 U]
1,2-Dichloroethane	--	157	µg/m³	20 U	20 U [20 U]	20 U	20 U	3.2 U [3.2 U]	20 U [20 U]	4 U	3.2 U [3.2 U]
1,2-Dichloropropane	--	584	µg/m³	23 U	23 U [23 U]	23 U	23 U	3.7 U [3.7 U]	23 U [23 U]	4.6 U	3.7 U [3.7 U]
1,4-Dioxane	--	818	µg/m³	18 U	18 U [18 U]	18 UB	18 U	2.9 U [2.9 U]	18 U [18 U]	**0.35 J**	2.9 U [2.9 U]
Dichlorodifluoromethane	--	14600	µg/m³	**2.2 J**	**2.4 J [2.5 J]**	**2.4 J**	**2.2J**	**2.3 J [4.0 U]**	**2.9 J [3.2 J]**	**2.5 J**	**2.1 J [2.1 J]**
Dibromochlorome hane	--	--	µg/m³	43 U	43 U [43 U]	43 U	43U	6.8 U [6.8 U]	43 U [43 U]	8.5 U	6.8 U [6.8 U]
trans-1,2-Dichloroethylene	26000 (SE)	5840	µg/m³	20 U	20 U [20 U]	20 U	20 U	3.2 U [3.2 U]	20 U [20 U]	4 U	3.2 U [3.2 U]
cis-1,2-Dichloroethylene	410	5840	µg/m³	20 U	20 U [20 U]	20 U	20 U	3.2 U [3.2 U]	20 U [20 U]	4 U	3.2 U [3.2 U]
cis-1,3-Dichloropropene	--	--	µg/m³	23 U	23 U [23 U]	23 U	23 U	3.6 U [3.6 U]	23 U [23 U]	4.5 U	3.6 U [3.6 U]
m-Dichlorobenzene	--	--	µg/m³	30 U	**2.4 J [2.1 J]**	30 U	30 U	4.8 U [4.8 U]	30 U [30 U]	6 U	4.8 U [4.8 U]
o-Dichlorobenzene	--	29200	µg/m³	30 U	30 U [30 U]	30 U	30 U	4.8 U [4.8 U]	30 U [30 U]	6 U	4.8 U [4.8 U]
p-Dichlorobenzene	--	372	µg/m³	30 U	30 U [30 U]	30 U	30 U	4.8 U [4.8 U]	30 U [30 U]	6 U	4.8 U [4.8 U]
trans-1,3-Dichloropropene	--	--	µg/m³	23 U	23 U [23 U]	23 U	23 U	3.6 U [3.6 U]	23 U [23 U]	4.5 U	3.6 U [3.6 U]
Di-Isopropyl e her	--	102000	µg/m³	42 U	42 U [42 U]	42 U	42 U	3.3 U [3.3 U]	42 U [42 U]	8.3 U	3.3 U [3.3 U]
Ethanol	--	--	µg/m³	**290**	**133 [146]**	**143**	**128**	**126 [104]**	**95.2 [99.9]**	**79.8 D**	**71.6 [85.2]**
Ethylbenzene	800	1640	µg/m³	**1.5 J**	**1.4 J [1.4 J]**	**1.1 J**	**1.5 J**	**7.8 [7.4]**	**3.1 J [2.9 J]**	**0.23 J**	3.5 U [3.5 U]
Ethyl Acetate	--	10200	µg/m³	18 U	18 U [18 U]	**4.0 J**	18 U	**28 [18]**	18 U [18 U]	3.6 U	**20 J [11 J]**
4-Ethyltoluene	--	--	µg/m³	49 U	49 U [49 U]	**4.2 J**	**1.8 J**	**3.9 U [2.0 J]**	49 U [49 U]	9.8 U	3.9 U [3.9 U]
Freon 113 (Trichlorotrifluoroethane)	--	730000	µg/m³	27 U	38 U [38 U]	38 U	38 U	6.1 U [6.1 U]	38 U [38 U]	7.7 U	6.1 U [6.1 U]
Freon 114	--	--	µg/m³	35 U	35 U [35 U]	35 U	35 U	5.6 U [5.6 U]	35 U [35 U]	7 U	5.6 U [5.6 U]
Heptane	--	58400	µg/m³	**1.3 J**	**6.6 J [7.4 J]**	**6.6 J**	**2.1 J**	**3.6 [7.8]**	**1.1 J [1.3 J]**	**0.61 J**	3.3 U [3.3 U]
Hexachlorobutadiene	--	186	µg/m³	53 U	53 U [53 U]	**1.6 J**	53 U	8.5 U [8.5 U]	53 U [53 U]	11 U	8.5 U [8.5 U]
Hexane	--	102000	µg/m³	18 U	**0.88 J [0.85 J]**	18 U	**2.0 J**	**6.3 [6.0]**	18 U [18 U]	**0.46 J**	2.8 U [2.8 U]
2-Hexanone	--	4380	µg/m³	**1.3 J**	20 U [20 U]	20 UB	**1.8 J**	3.3 UJ [3.3 U]	**1.8 J [1.6 J]**	**0.53 J**	3.3 U [3.3 U]
Isopropylbenzene (Cumene)	--	58400	µg/m³	25 U	25 U [25 U]	25 U	25 U	**2.8 J [2.6 J]**	25 U [25 U]	4.9 U	3.9 U [3.9 U]
Isopropyl Alcohol	--	29200	µg/m³	**23 J**	**163 [129]**	**91.3**	**27.2**	**27.5 [24]**	**13 J [13 J]**	**31.4**	**2580 J [1460 J]**
p-Isopropyltoluene	--	--	µg/m³	27 U	27 U [27 U]	27 U	27U	4.4 U [4.4 U]	27 U [27 U]	5.5 U	4.4 U [4.4 U]
Methylene Chloride	--	87600	µg/m³	**5.9 J**	17 UB [17 UB]	17 U	17U	**3.2 [3.8]**	17 U [17 U]	3.5 U	**3.0 [2.9]**
Methyl Ethyl Ketone (2-Butanone)	--	730000	µg/m³	**26**	**19 [21]**	**15**	**28**	**29 [28]**	**22 [20]**	**16**	**18 [17]**
Methyl Isobutyl Ketone (4-methyl-2-pentanone)	--	438000	µg/m³	**2.1 J**	**2.0 J [2 J]**	20 UB	**1.5 J**	3.3 UJ [3.3 UJ]	20 U [20 U]	**1.1 J**	**1.6 J** [3.3 U]
Methyl Tert Butyl Ether (MTBE)	--	15700	µg/m³	**2.7 J**	**1.7 J [1.9 J]**	18 U	**0.94 J**	2.9 U [2.9 U]	18 U [18 U]	**0.18 J**	2.9 U [2.9 U]
Methylmethacrylate	--	102000	µg/m³	20 U	20 U [20 U]	20 U	20 U	3.3 U [3.3 UJ]	20 U [20 U]	4.1 U	3.3 U [3.3 U]
Naphthalene	59	120	µg/m³	26 U	**1.5 J [1.4 J]**	26 U	26 U	4.2 UJ [4.2 U]	26 U [26 U]	5.2 U	**22 J [8.4 J]**
Pentane	--	146000	µg/m³	**1.3 J**	**2.6 J [2.1 J]**	**1.2 J**	**1.9 J**	**7.1 [5.6]**	15 U [15 U]	**0.80 J**	**2.4 [2.1 J]**
n-Propylbenzene	--	146000	µg/m³	25 U	25 U [25 U]	**2.5 J**	**1.4 J**	**2.5 J [2.4 J]**	25 U [25 U]	4.9 U	3.9 U [3.9 U]
Propylene	--	438000	µg/m³	**2.4 J**	**4.1 J [8.8]**	**9.8**	**3.1 J**	3.4 U [3.4 U]	**5.7 J [6.9 J]**	**4.5**	3.4 U [3.4 U]
Styrene	--	146000	µg/m³	21 U	**1.3 J [21 U]**	**1.1 J**	21 U	**1.8 J [3.4 U]**	21 U [21 U]	**0.28 J**	3.4 U [3.4 U]
1,1,1-Trichloroethane	230000 (SE)	730000	µg/m³	**6 J**	**5.2 J [6 J]**	**4.7 J**	**5.5 J**	**6 [5.1]**	**5.5 J [5.5 J]**	**4.5 J**	**6.0 [6.0]**
1,1,2,2-Tetrachloroethane	--	70.5	µg/m³	34U	34 U [34 U]	34 U	34 U	5.5 U [5.5 U]	34 U [34 U]	6.9 U	5.5 U [5.5 U]
1,1,2-Trichloroethane	--	29.2	µg/m³	38 U	27 U [27 U]	27 U	27 U	4.4 U [4.4 U]	27 U [27 U]	5.5 U	4.4 U [4.4 U]
1,2,4-Trichlorobenzene	--	292	µg/m³	37 U	37 U [37 U]	37 U	37 U	5.9 UJ [5.9 U]	37 U [37 U]	7.4 U	5.9 U [5.9 U]
1,2,4-Trimethylbenzene	3,100	8760	µg/m³	**2.5 J**	**1.5 J [1.4 J]**	**2.6 J**	**3.4 J**	**11 [12]**	**0.98 J [0.93 J]**	**0.35 J**	3.9 U [3.9 U]
1,3,5-Trimethylbenzene	3,100	8760	µg/m³	**0.74 J**	25 U [25 U]	**1.5 J**	**1.1 J**	**3.1 J [3.2 J]**	25 U [25 U]	4.9 U	3.9 U [3.9 U]
2,2,4-Trimethylpentane	--	--	µg/m³	23 U	23 U [23 U]	23 U	23 U	3.7 U [3.7 U]	23 U [23 U]	4.7 U	3.7 U [3.7 U]
Tertiary Butyl Alcohol	--	730000	µg/m³	**2.6 J**	30 UB [30 UB]	**4.9 J**	**3.3 J**	**9.1 [7.3]**	**4.5 J [4.2 J]**	**1.9 J**	**3.0 [2.8]**
Tetrachloroethylene	1400 (SE)	5840	µg/m³	**294**	**82.1 [92.2]**	**106**	**507**	**224 [192]**	**212 [214]**	**102**	**207 [176]**
Tetrahydrofuran	--	292000	µg/m³	15 U	**3.5 J [3.5 J]**	**7.4 J**	15 U	**2.4 U [2.5]**	15 U [15 U]	**0.62 J**	2.4 U [2.4 U]
Toluene	--	730000	µg/m³	**8.3 J**	**8.7 J [7.5 J]**	**5.7 J**	**3.8 J**	**25 [20]**	**12 J [12 J]**	**2.5 J**	3.0 U [3.0 U]
Trichloroe hylene	67 (SE)	292	µg/m³	**98.9**	**35 [49]**	**41**	**102**	**80.6 [65.6]**	**61.3 [62.3]**	**50**	**52 [49]**
Trichlorofluoromethane	--	--	µg/m³	28 U	28 U [28 U]	28 U	**1.4J**	**2.5 J [2.8 J]**	28 U [28 U]	**1.3 J**	4.5 U [4.5 U]
Vinyl Chloride	450	929	µg/m³	13 U	13 U [13 U]	13 U	13 U	**2.0 U [2.0 U]**	13 U [13 U]	2.6 U	2.0 U [2.0 U]
Vinyl Acetate	--	#REF!	µg/m³	**9.8 J**	**45.4 [68.6]**	**84.4**	**1.1 J**	**5.6 [2.8 U]**	18 U [18 U]	**1.5 J**	2.8 U [2.8 U]
m,p-Xylene	--	--	µg/m³	**4.8 J**	**4.3 J [3.9 J]**	**2.5 J**	**5.6 J**	**31 [30]**	**6.5 J [6.5 J]**	**0.69 J**	3.5 U [3.5 U]
o-Xylene	--	14600	µg/m³	**2.6 J**	**1.9 J [1.9 J]**	**1.3 J**	**1.7 J**	**13 [13]**	**4 J [3.7 J]**	**0.43 J**	3.5 U [3.5 U]
Xylenes (total)	11000	14600	µg/m³	**7.4 J**	**6.1 J [5.6 J]**	**3.8 J**	**7.4 J**	**44.3 [43.9]**	**11 J [10 J]**	**1.1 J**	3.5 U [3.5 U]

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Table 2
Sub-Slab Monitoring Point Sample Comparison
Univar Solutions USA, Inc. (Formerly ChemCentral)
Wyoming, Michigan

ARCADIS

Sample Location:	Site-Specific Nonresidential VIAC for Soil Gas [1]	USEPA Calculated VISLs for Soil Gas [2]	Units	SSMP-302				
Sample Name:				SSMP-302 (042319)	SSMP-302 (081919)	SSMP-302_111419	SSMP-302_021720	SSMP-302R_033123
Date Collected:				4/23/2019	8/19/2019	11/14/2019	2/17/2020	3/31/2023
Building Location:				Gilmore				
Sample Type:				Sub-Slab	Sub-Slab	Sub-Slab	Sub-Slab	Sub-Slab
Volatile Organics								
Acetone (2-Propanone)	--	--	µg/m³	19 U	570 U	620 U	760 U	1.9 U
Acrolein	--	2.92	µg/m³	18 U	550 U	300 U	370 U	1.8 U
Acrylonitrile	--	60.1	µg/m³	17 U	520 U	280 U	350 U	1.7 U
1,3-Butadiene	--	136	µg/m³	18 U	530 U	580 U	710 U	1.8 U
Benzene	--	524	µg/m³	**2250**	**5300**	**891**	**530**	**20**
Bromodichloromethane	--	110	µg/m³	54 U	1600 U	870 U	1100 U	5.4 U
Bromoform	--	3720	µg/m³	83 U	2500 U	1300 U	1700 U	8.3 U
Bromomethane	--	730	µg/m³	31 U	930 U	500 U	620 U	3.1 U
Bromoethene (Vinyl Bromide)	--	273	µg/m³	31 U	930 U	500 U	620 U	3.5 U
Benzyl Chloride	--	83.4	µg/m³	41 U	1200 U	670 U	820 U	4.1 U
n-Butylbenzene	--	--	µg/m³	44 U	1300 U	710 U	880 U	4.4 U
sec-Butylbenzene	--	--	µg/m³	44 U	1300 U	710 U	880 U	4.4 U
Carbon Disulfide	--	102000	µg/m³	25 U	750 U	400 U	500 U	2.5 U
Chlorobenzene	--	7300	µg/m³	37 U	1100 U	600 U	740 U	3.7 U
Chloroethane	200000	584000	µg/m³	21 U	630 U	340 U	420 U	2.1 U
Chloroform	--	178	µg/m³	39 U	1200 U	630 U	780 U	3.9 U
Chloromethane	--	13100	µg/m³	17 U	500 U	270 U	330 U	**1.5 J**
3-Chloropropene (Allyl Chloride)	--	146	µg/m³	25 U	750 U	810 U	1000 U	2.5 U
Carbon Tetrachloride	--	681	µg/m³	50 U	1500 U	820 U	1000 U	5.0 U
Cyclohexane	--	876000	µg/m³	**154000**	**136000**	**16500**	**17500**	**180**
1,1-Dichloroethane	1200	2560	µg/m³	32 U	970 U	530 U	650 U	3.2 U
1,1-Dichloroethene	10000	29200	µg/m³	32 U	950 U	520 U	630 U	3.2 U
1,2-Dibromoethane (EDB)	--	6.81	µg/m³	61 U	1800 U	1000 U	1200 U	6.1 U
1,2-Dichloroethane	--	157	µg/m³	32 U	970 U	530 U	650 U	3.2 U
1,2-Dichloropropane	--	584	µg/m³	37 U	1100 U	600 U	740 U	3.7 U
1,4-Dioxane	--	818	µg/m³	29 U	860 U	470 U	580 U	2.9 U
Dichlorodifluoromethane	--	14600	µg/m³	40 U	1200 U	640 U	790 U	**2.0 J**
Dibromochlorome hane	--	--	µg/m³	68 U	2000 U	1100 U	1400 U	6.8 U
trans-1,2-Dichloroethylene	26000 (SE)	5840	µg/m³	32 U	950 U	520 U	630 U	3.2 U
cis-1,2-Dichloroethylene	410	5840	µg/m³	32 U	950 U	520 U	630 U	3.2 U
cis-1,3-Dichloropropene	--	--	µg/m³	36 U	1100 U	590 U	730 U	3.6 U
m-Dichlorobenzene	--	--	µg/m³	48 U	1400 U	780 U	960 U	4.8 U
o-Dichlorobenzene	--	29200	µg/m³	48 U	1400 U	780 U	960 U	4.8 U
p-Dichlorobenzene	--	372	µg/m³	48 U	1400 U	780 U	960 U	4.8 U
trans-1,3-Dichloropropene	--	--	µg/m³	36 U	1100 U	590 U	730 U	3.6 U
Di-Isopropyl e her	--	102000	µg/m³	33 U	1000 U	1100 U	1300 U	3.3 U
Ethanol	--	--	µg/m³	38 U	1100 U	490 U	600 U	**36.9**
Ethylbenzene	800	1640	µg/m³	35 U	1000 U	560 U	690 U	3.5 U
Ethyl Acetate	--	10200	µg/m³	35 U	1000 U	560 U	690 U	2.9 U
4-Ethyltoluene	--	--	µg/m³	39 U	1200 U	1300 U	1600 U	3.9 U
Freon 113 (Trichlorotrifluoroethane)	--	730000	µg/m³	61 U	1800 U	1000 U	1200 U	6.1 U
Freon 114	--	--	µg/m³	56 U	1700 U	910 U	1100 U	5.6 U
Heptane	--	58400	µg/m³	**5450**	**43400**	**1350**	**1480**	**144**
Hexachlorobutadiene	--	186	µg/m³	85 U	2600 U	1400 U	1700 U	8.5 U
Hexane	--	102000	µg/m³	**359000**	**342000**	**21700 D**	**37400 D**	**1000**
2-Hexanone	--	4380	µg/m³	33 U	980 U	530 U	650 U	3.3 U
Isopropylbenzene (Cumene)	--	58400	µg/m³	39 U	1200 U	640 U	790 U	3.9 U
Isopropyl Alcohol	--	29200	µg/m³	20 U	590 U	640 U	790 U	**107**
p-Isopropyltoluene	--	--	µg/m³	44 U	1300 U	710 U	880 U	4.4 U
Methylene Chloride	--	87600	µg/m³	28 U	830 U	450 U	560 U	2.8 U
Methyl Ethyl Ketone (2-Butanone)	--	730000	µg/m³	24 U	710 U	380 U	470 U	2.4 U
Methyl Isobutyl Ketone (4-methyl-2-pentanone)	--	438000	µg/m³	33 U	980 U	530 U	660 U	3.3 U
Methyl Tert Butyl Ether (MTBE)	--	15700	µg/m³	29 U	870 U	470 U	580 U	2.9 U
Methylmethacrylate	--	102000	µg/m³	33 U	980 U	530 U	650 U	3.3 U
Naphthalene	59	120	µg/m³	42 U	1300 U	680 U	840 U	4.2 U
Pentane	--	146000	µg/m³	**754000**	**1300000**	**120000 D**	**175000 D**	**4740**
n-Propylbenzene	--	146000	µg/m³	39 U	1200 U	640 U	790 U	3.9 U
Propylene	--	438000	µg/m³	34 U	1000 U	220 U	270 U	**6.5**
Styrene	--	146000	µg/m³	34 U	1000 U	550 U	680 U	3.4 U
1,1,1-Trichloroethane	230000 (SE)	730000	µg/m³	44 U	1300 U	710 U	870 U	4.4 U
1,1,2,2-Tetrachloroethane	--	70.5	µg/m³	55 U	1600 U	890 U	1100 U	5.5 U
1,1,2-Trichloroethane	--	29.2	µg/m³	44 U	1300 U	710 U	870 U	4.4 U
1,2,4-Trichlorobenzene	--	292	µg/m³	59 U	1800 U	970 U	1200 U	5.9 U
1,2,4-Trimethylbenzene	3,100	8760	µg/m³	39 U	1200 U	640 U	790 U	3.9 U
1,3,5-Trimethylbenzene	3,100	8760	µg/m³	39 U	1200 U	640 U	790 U	3.9 U
2,2,4-Trimethylpentane	--	--	µg/m³	**55100**	**87800**	**14400**	**10800**	**74.3**
Tertiary Butyl Alcohol	--	730000	µg/m³	24 U	730 U	790 U	970 U	2.4 U
Tetrachloroethylene	1400 (SE)	5840	µg/m³	11 U	330 U	**138 J**	**56 J**	**2.2**
Tetrahydrofuran	--	292000	µg/m³	24 U	710 U	380 U	470 U	2.4 U
Toluene	--	730000	µg/m³	**27 J**	900 U	**62.6 J**	**22 J**	**8.3**
Trichloroe hylene	67 (SE)	292	µg/m³	8.6 U	260 U	700 U	**207 J**	0.86 U
Trichlorofluoromethane	--	--	µg/m³	45 U	1300 U	730 U	900 U	4.5 U
Vinyl Chloride	450	929	µg/m³	20 U	610 U	330 U	410 U	2.0 U
Vinyl Acetate	--	#REF!	µg/m³	28 U	840 U	460 U	560 U	2.8 U
m,p-Xylene	--	--	µg/m³	35 U	1000 U	560 U	690 U	**5.6**
o-Xylene	--	14600	µg/m³	35 U	1000 U	**66.5 J**	690 U	3.5 U
Xylenes (total)	11000	14600	µg/m³	35 U	1000 U	**99.5 J**	**17 J**	**5.6**

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Table 2
Sub-Slab Monitoring Point Sample Comparison
Univar Solutions USA, Inc. (Formerly ChemCentral)
Wyoming, Michigan

ARCADIS

Sample Location:	Site-Specific Nonresidential VIAC for Soil Gas [1]	USEPA Calculated VISLs for Soil Gas [2]	Units	SSMP-510					
Sample Name:				SSMP-510 (020619)	SSMP-510 (042419)	SSMP-510 (082019)	SSMP-510_111319	SSMP-510_021720	SSMP-510_032923
Date Collected:				2/6/2019	4/24/2019	8/20/2019	11/13/2019	2/17/2020	3/29/2023
Building Location:				Dynaplate					
Sample Type:				Sub-Slab	Sub-Slab	Sub-Slab	Sub-Slab	Sub-Slab	Sub-Slab
Volatile Organics									
Acetone (2-Propanone)	--	--	µg/m³	**22**	**87.4 [86.7]**	1.9 U	**5.5 J**	12 U	**41.8**
Acrolein	--	2.92	µg/m³	1.8 U	**1.8 U [2.1]**	1.8 U	4.6 U	5.7 U	1.5 J
Acrylonitrile	--	60.1	µg/m³	1.7 U	1.7 U [1.7 U]	1.7 U	4.3 U	5.4 U	1.7 U
1,3-Butadiene	--	136	µg/m³	1.8 U	1.8 U [1.8 U]	1.8 U	8.8 U	11 U	1.8 U
Benzene	--	524	µg/m³	2.6 U	2.6 U [2.6 U]	**6.1**	**0.21 J**	**8.9**	**2.2 J**
Bromodichloromethane	--	110	µg/m³	5.4 U	5.4 U [5.4 U]	5.4 U	13 U	17 U	5.4 U
Bromoform	--	3720	µg/m³	8.3 U	8.3 U [8.3 U]	8.3 U	21 U	26 U	8.3 U
Bromomethane	--	730	µg/m³	3.1 U	3.1 U [3.1 U]	3.1 U	7.8 U	9.7 U	3.1 U
Bromoethene (Vinyl Bromide)	--	273	µg/m³	3.5 U	3.5 U [3.5 U]	3.5 U	8.7 U	11 U	3.5 U
Benzyl Chloride	--	83.4	µg/m³	4.1 U	4.1 U [4.1 U]	4.1 U	10 U	13 U	4.1 U
n-Butylbenzene	--	--	µg/m³	4.4 U	4.4 U [4.4 U]	4.4 U	11 U	14 U	4.4 U
sec-Butylbenzene	--	--	µg/m³	4.4 U	4.4 U [4.4 U]	4.4 U	11 U	14 U	4.4 U
Carbon Disulfide	--	102000	µg/m³	2.5 U	2.5 U [2.5 U]	**4**	6.2 U	7.8 U	17
Chlorobenzene	--	7300	µg/m³	3.7 U	3.7 U [3.7 U]	3.7 U	9.2 U	12 U	3.7 U
Chloroethane	200000	584000	µg/m³	2.1 U	2.1 U [2.1 U]	2.1 U	5.3 U	6.6 U	2.1 U
Chloroform	--	178	µg/m³	3.9 U	3.9 U [3.9 U]	**4.8**	9.8 U	12 U	5.4
Chloromethane	--	13100	µg/m³	1.7 U	**1.7 U [0.89 J]**	1.7 U	4.1 U	5.2 U	**1.1 J**
3-Chloropropene (Allyl Chloride)	--	146	µg/m³	2.5 U	2.5 U [2.5 U]	2.5 U	13 U	16 U	2.5 U
Carbon Tetrachloride	--	681	µg/m³	5.0 U	5.0 U [5.0 U]	**4.3 J**	13 U	16 U	5.0 U
Cyclohexane	--	876000	µg/m³	2.8 U	**3.2 [3.8]**	**106**	6.9 U	**159**	**2.8 U**
1,1-Dichloroethane	1200	2560	µg/m³	3.2 U	3.2 U [3.2 U]	3.2 U	8.1 U	10 U	3.2 U
1,1-Dichloroethene	10000	29200	µg/m³	3.2 U	3.2 U [3.2 U]	3.2 U	7.9 U	9.9 U	3.2 U
1,2-Dibromoethane (EDB)	--	6.81	µg/m³	6.1 U	6.1 U [6.1 U]	6.1 U	15 U	19 U	6.1 U
1,2-Dichloroethane	--	157	µg/m³	3.2 U	3.2 U [3.2 U]	3.2 U	8.1 U	10 U	3.2 U
1,2-Dichloropropane	--	584	µg/m³	3.7 U	**3.7 U [2.1 J]**	3.7 U	9.2 U	12 U	3.7 U
1,4-Dioxane	--	818	µg/m³	2.9 U	2.9 U [2.9 U]	2.9 U	7.2 U	9 U	1.9 J
Dichlorodifluoromethane	--	14600	µg/m³	**18**	**15 [12]**	**5.4**	**14**	**11 J**	**6.4**
Dibromochlorome hane	--	--	µg/m³	6.8 U	6.8 U [6.8 U]	6.8 U	17 U	21 U	6.8 U
trans-1,2-Dichloroethylene	26000 (SE)	5840	µg/m³	3.2 U	3.2 U [3.2 U]	3.2 U	7.9 U	9.9 U	3.2 U
cis-1,2-Dichloroethylene	410	5840	µg/m³	3.2 U	3.2 U [3.2 U]	3.2 U	7.9 U	9.9 U	3.2 U
cis-1,3-Dichloropropene	--	--	µg/m³	3.6 U	3.6 U [3.6 U]	3.6 U	9.1 U	11 U	3.6 U
m-Dichlorobenzene	--	--	µg/m³	4.8 U	4.8 U [4.8 U]	4.8 U	12 U	15 U	4.8 U
o-Dichlorobenzene	--	29200	µg/m³	4.8 U	4.8 U [4.8 U]	4.8 U	12 U	15 U	4.8 U
p-Dichlorobenzene	--	372	µg/m³	4.8 U	4.8 U [4.8 U]	4.8 U	12 U	15 U	4.8 U
trans-1,3-Dichloropropene	--	--	µg/m³	3.6 U	3.6 U [3.6 U]	3.6 U	9.1 U	11 U	3.6 U
Di-Isopropyl e her	--	102000	µg/m³	3.3 U	3.3 U [3.3 U]	3.3 U	17 U	21 U	3.3 U
Ethanol	--	--	µg/m³	**67.1**	**41.3 [35]**	**11**	**2.1 J**	**2.8 J**	**81.6**
Ethylbenzene	800	1640	µg/m³	**2.7 J**	**4.3 [4.8]**	**17**	8.7 U	**0.61 J**	3.5 U
Ethyl Acetate	--	10200	µg/m³	**14**	**17 J [32 J]**	2.9 U	7.2 U	9 U	35
4-Ethyltoluene	--	--	µg/m³	3.9 U	3.9 U [3.9 U]	**3.5 J**	20 U	25 U	3.9 U
Freon 113 (Trichlorotrifluoroethane)	--	730000	µg/m³	6.1 U	6.1 U [6.1 U]	6.1 U	15 U	19 U	6.1 U
Freon 114	--	--	µg/m³	5.6 U	5.6 U [5.6 U]	5.6 U	14 U	17 U	5.6 U
Heptane	--	58400	µg/m³	3.3 U	**3.5 [3.9]**	**298**	8.2 U	**59.0**	**3.3 U**
Hexachlorobutadiene	--	186	µg/m³	8.5 U	8.5 U [8.5 U]	8.5 U	21 U	27 U	8.5 U
Hexane	--	102000	µg/m³	2.8 U	**5.6 [6]**	**113**	7 U	**225**	**6**
2-Hexanone	--	4380	µg/m³	3.3 U	3.3 U [3.3 U]	3.3 U	**1.5 J**	10 U	3.3 U
Isopropylbenzene (Cumene)	--	58400	µg/m³	3.9 U	3.9 U [3.9 U]	**3.6 J**	9.8 U	12 U	3.9 U
Isopropyl Alcohol	--	29200	µg/m³	**25.3**	**116 [189]**	**3.9**	**2.1 J**	**5.6 J**	**8.8**
p-Isopropyltoluene	--	--	µg/m³	4.4 U	4.4 U [4.4 U]	4.4 U	11 U	14 U	4.4 U
Methylene Chloride	--	87600	µg/m³	**4.5**	**2.9 J [7.6 J]**	**3.8**	6.9 U	8.7 U	2.8
Methyl Ethyl Ketone (2-Butanone)	--	730000	µg/m³	**3.5**	**122 [104]**	**15**	**1.4 J**	**0.56 J**	5.3
Methyl Isobutyl Ketone (4-methyl-2-pentanone)	--	438000	µg/m³	3.3 U	3.3 U [3.3 U]	3.3 UJ	8.2 U	10 U	3.3 U
Methyl Tert Butyl Ether (MTBE)	--	15700	µg/m³	2.9 U	2.9 U [2.9 U]	2.9 U	7.2 U	9 U	2.9 U
Methylmethacrylate	--	102000	µg/m³	3.3 U	3.3 U [3.3 U]	3.3 UJ	8.2 U	10 U	3.3 U
Naphthalene	59	120	µg/m³	4.2 U	4.2 U [4.2 U]	4.2 U	10 U	13 U	4.2 U
Pentane	--	146000	µg/m³	**5.6**	**2.0 J [14]**	**31.8**	5.9 U	**234**	**5.3**
n-Propylbenzene	--	146000	µg/m³	3.9 U	3.9 U [3.9 U]	**3.3 J**	9.8 U	12 U	3.9 U
Propylene	--	438000	µg/m³	3.4 U	3.4 U [3.4 U]	3.4 U	**0.4 J**	4.3 U	**79**
Styrene	--	146000	µg/m³	3.4 U	**2.3 J [3.5]**	3.4 U	8.5 U	**0.51 J**	3.4 U
1,1,1-Trichloroethane	230000 (SE)	730000	µg/m³	4.4 U	4.4 U [4.4 U]	4.4 U	11 U	14 U	4.4 U
1,1,2,2-Tetrachloroethane	--	70.5	µg/m³	5.5 U	5.5 U [5.5 U]	5.5 U	14 U	17 U	5.5 U
1,1,2-Trichloroethane	--	29.2	µg/m³	4.4 U	4.4 U [4.4 U]	4.4 U	11 U	14 U	4.4 U
1,2,4-Trichlorobenzene	--	292	µg/m³	5.9 U	5.9 U [5.9 U]	5.9 U	15 U	19 U	5.9 U
1,2,4-Trimethylbenzene	3,100	8760	µg/m³	3.9 U	**12 [11]**	**24**	9.8 U	12 U	3.9 U
1,3,5-Trimethylbenzene	3,100	8760	µg/m³	3.9 U	3.9 U [3.9 U]	**12**	9.8 U	12 U	3.9 U
2,2,4-Trimethylpentane	--	--	µg/m³	3.7 U	3.7 U [3.7 U]	**141**	9.3 U	**133**	**2.3 J**
Tertiary Butyl Alcohol	--	730000	µg/m³	2.4 U	**2.4 UJ [4.2 J]**	2.4 U	12 U	15 U	2.4 U
Tetrachloroethylene	1400 (SE)	5840	µg/m³	**11**	**16 J [6.8 J]**	**28**	**7.5 J**	**16 J**	**1.5**
Tetrahydrofuran	--	292000	µg/m³	2.4 U	2.4 U [2.4 U]	2.4 U	5.9 U	7.4 U	2.4 U
Toluene	--	730000	µg/m³	**5.3**	**101 [138]**	**12**	**0.41 J**	**2.0 J**	**5.3**
Trichloroe hylene	67 (SE)	292	µg/m³	**20**	**0.97 [1.2]**	**116**	11 U	**1.0 J**	0.86 U
Trichlorofluoromethane	--	--	µg/m³	**6.2**	**5.6 [5]**	**7.9**	**5.6 J**	**4.6 J**	2.4 J
Vinyl Chloride	450	929	µg/m³	2.0 U	2.0 U [2.0 U]	2.0 U	5.1 U	6.4 U	2.0 U
Vinyl Acetate	--	#REF!	µg/m³	2.8 U	2.8 U [2.8 U]	2.8 U	7 U	8.8 U	2.8 U
m,p-Xylene	--	--	µg/m³	**12**	**18 [17]**	**56**	8.7 U	**4.0 J**	**3.5 U**
o-Xylene	--	14600	µg/m³	**4.3**	**5.6 [5.6]**	**17**	8.7 U	**4.1 J**	3.5 U
Xylenes (total)	11000	14600	µg/m³	**16**	**23 [23]**	**73**	**0.48 J**	**8.3 J**	**3.5 U**

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Table 2
Sub-Slab Monitoring Point Sample Comparison
Univar Solutions USA, Inc. (Formerly ChemCentral)
Wyoming, Michigan

ARCADIS

Sample Location:	Site-Specific Nonresidential VIAC for Soil Gas [1]	USEPA Calculated VISLs for Soil Gas [2]	Units	SSMP-401					
Sample Name:				SSMP-401 (110118)	SSMP-401 (042319)	SSMP-401 (081919)	SSMP-401_111419	SSMP-401_021720	SSMP-401_033123
Date Collected:				11/1/2018	4/23/2019	8/19/2019	11/14/2019	2/17/2020	3/31/2023
Building Location:				Gilmore					
Sample Type:				Sub-Slab	Sub-Slab	Sub-Slab	Sub-Slab	Sub-Slab	Sub-Slab
Volatile Organics									
Acetone (2-Propanone)	--	--	µg/m³	**168**	**24.9**	**123**	**3.8 J**	24 U	**6.9**
Acrolein	--	2.92	µg/m³	3.7 U	1.8 U	**18**	4.6 U	11 U	1.8 U
Acrylonitrile	--	60.1	µg/m³	3.5 U	1.7 U	1.7 U	4.3 U	11 U	1.7 U
1,3-Butadiene	--	136	µg/m³	3.5 U	1.8 U	1.8 U	8.8 U	22 U	1.8 U
Benzene	--	524	µg/m³	5.1 U	2.6 U	**3.1**	**1.8 J**	**17**	2.6 U
Bromodichloromethane	--	110	µg/m³	11 U	5.4 U	5.4 U	13 U	33 U	5.4 U
Bromoform	--	3720	µg/m³	17 U	8.3 U	**17**	21 U	52 U	8.3 U
Bromomethane	--	730	µg/m³	6.2 U	3.1 U	**18**	7.8 U	19 U	3.1 U
Bromoethene (Vinyl Bromide)	--	273	µg/m³	7.0 U	3.5 U	**2.1 J**	8.7 U	22 U	3.5 U
Benzyl Chloride	--	83.4	µg/m³	8.2 U	4.1 U	4.1 U	10 U	26 U	4.1 U
n-Butylbenzene	--	--	µg/m³	8.8 U	4.4 U	4.4 U	11 U	27 U	4.4 U
sec-Butylbenzene	--	--	µg/m³	8.8 U	4.4 U	4.4 U	11 U	27 U	4.4 U
Carbon Disulfide	--	102000	µg/m³	5.0 U	2.5 U	**2.6**	**0.93 J**	16 U	2.5 U
Chlorobenzene	--	7300	µg/m³	7.4 U	3.7 U	3.7 U	9.2 U	23 U	3.7 U
Chloroethane	200000	584000	µg/m³	4.2 U	2.1 U	2.1 U	5.3 U	13 U	2.1 U
Chloroform	--	178	µg/m³	7.8 U	**7.3**	**4.2**	**13**	**8.3 J**	**9.8**
Chloromethane	--	13100	µg/m³	3.3 U	1.7 U	**2**	4.1 U	10 U	1.7 U
3-Chloropropene (Allyl Chloride)	--	146	µg/m³	5.0 U	2.5 U	2.5 U	13 U	31 U	2.5 U
Carbon Tetrachloride	--	681	µg/m³	10 U	5.0 U	5.0 U	13 U	31 U	5.0 U
Cyclohexane	--	876000	µg/m³	**15**	**2.3 J**	**5.9**	**0.69 J**	**312**	2.8 U
1,1-Dichloroethane	1200	2560	µg/m³	6.5 U	3.2 U	3.2 U	8.1 U	20 U	3.2 U
1,1-Dichloroethene	10000	29200	µg/m³	6.3 U	3.2 U	3.2 U	7.9 U	20 U	3.2 U
1,2-Dibromoethane (EDB)	--	6.81	µg/m³	12 U	6.1 U	**104**	15 U	38 U	6.1 U
1,2-Dichloroethane	--	157	µg/m³	6.5 U	3.2 U	**16**	8.1 U	20 U	3.2 U
1,2-Dichloropropane	--	584	µg/m³	7.4 U	3.7 U	3.7 U	9.2 U	23 U	3.7 U
1,4-Dioxane	--	818	µg/m³	5.8 U	2.9 U	2.9 U	7.2 U	18 U	2.9 U
Dichlorodifluoromethane	--	14600	µg/m³	**8.9**	**7.9**	**3.6 J**	**8.4 J**	**6.9 J**	**3.0 J**
Dibromochloromethane	--	--	µg/m³	14 U	6.8 U	6.8 U	17 U	43 U	6.8 U
trans-1,2-Dichloroethylene	26000 (SE)	5840	µg/m³	6.3 U	3.2 U	3.2 U	7.9 U	20 U	3.2 U
cis-1,2-Dichloroethylene	410	5840	µg/m³	6.3 U	3.2 U	3.2 U	7.9 U	20 U	3.2 U
cis-1,3-Dichloropropene	--	--	µg/m³	7.3 U	3.6 U	3.6 U	9.1 U	23 U	3.6 U
m-Dichlorobenzene	--	--	µg/m³	9.6 U	4.8 U	4.8 U	12 U	30 U	4.8 U
o-Dichlorobenzene	--	29200	µg/m³	9.6 U	4.8 U	4.8 U	12 U	30 U	4.8 U
p-Dichlorobenzene	--	372	µg/m³	9.6 U	4.8 U	4.8 U	12 U	30 U	4.8 U
trans-1,3-Dichloropropene	--	--	µg/m³	7.3 U	3.6 U	3.6 U	9.1 U	23 U	3.6 U
Di-Isopropyl ether	--	102000	µg/m³	6.7 U	3.3 U	3.3 U	17 U	42 U	3.3 U
E hanol	--	--	µg/m³	**29.2**	**94.0**	**66.3**	**28.6**	**3.2 J**	**460 J**
E hylbenzene	800	1640	µg/m³	**9.1**	**15**	**20**	**0.91 J**	22 U	3.5 U
E hyl Acetate	--	10200	µg/m³	**52.2**	**6.5**	**23**	7.2 U	18 U	**5.4**
4-Ethyltoluene	--	--	µg/m³	7.9 U	3.9 U	**2.4 J**	20 U	49 U	3.9 U
Freon 113 (Trichlorotrifluoroethane)	--	730000	µg/m³	**30**	**16**	**16**	**40**	**24 J**	6.1 U
Freon 114	--	--	µg/m³	**5.6**	**2.6**	**4**	**195**	**11 J**	5.6 U
Heptane	--	58400	µg/m³	**8.6**	**1.9 J**	**8.2**	**0.82 J**	**111**	3.3 U
Hexachlorobutadiene	--	186	µg/m³	17 U	8.5 U	8.5 U	21 U	53 U	8.5 U
Hexane	--	102000	µg/m³	**19**	**1.8 J**	**17**	**2.6 J**	**469**	2.8 U
2-Hexanone	--	4380	µg/m³	6.5 U	3.3 U	3.3 U	8.2 U	20 U	3.3 U
Isopropylbenzene (Cumene)	--	58400	µg/m³	7.9 U	**4.3**	**2.6 J**	9.8 U	25 U	3.9 U
Isopropyl Alcohol	--	29200	µg/m³	**148**	**3760 J**	**6.1**	**3.9 J**	**4.2 J**	**49.2**
p-Isopropyltoluene	--	--	µg/m³	8.8 U	4.4 U	4.4 U	11 U	27 U	4.4 U
Methylene Chloride	--	87600	µg/m³	**67.7**	**3.2**	**3.4**	**2.8 J**	17 U	2.8 U
Methyl Ethyl Ketone (2-Butanone)	--	730000	µg/m³	**1,030 J**	**4.1**	**23**	**1.9 J**	15 U	**1.5 J**
Methyl Isobutyl Ketone (4-methyl-2-pentanone)	--	438000	µg/m³	6.6 U	3.3 U	**7.8**	8.2 U	20 U	3.3 U
Methyl Tert Butyl Ether (MTBE)	--	15700	µg/m³	5.8 U	2.9 U	2.9 U	7.2 U	18 U	2.9 U
Methylmethacrylate	--	102000	µg/m³	6.6 U	3.3 U	3.3 U	8.2 U	20 U	3.3 U
Naph halene	59	120	µg/m³	8.4 U	4.2 U	4.2 U	10 U	26 U	4.2 U
Pentane	--	146000	µg/m³	**6.5**	**273**	**26**	**4.1 J**	**424**	2.4 U
n-Propylbenzene	--	146000	µg/m³	7.9 U	3.9 U	**2.5 J**	9.8 U	25 U	3.9 U
Propylene	--	438000	µg/m³	6.9 U	**3.4**	**31.6**	**0.74 J**	8.6 U	3.4 U
Styrene	--	146000	µg/m³	6.8 U	3.4 U	**1.8 J**	8.5 U	21 U	3.4 U
1,1,1-Trichloroethane	230000 (SE)	730000	µg/m³	8.7 U	4.4 U	4.4 U	11 U	27 U	4.4 U
1,1,2,2-Tetrachloroethane	--	70.5	µg/m³	11 U	5.5 U	5.5 U	14 U	34 U	5.5 U
1,1,2-Trichloroethane	--	29.2	µg/m³	8.7 U	4.4 U	4.4 U	11 U	27 U	4.4 U
1,2,4-Trichlorobenzene	--	292	µg/m³	12 U	5.9 U	5.9 U	15 U	37 U	5.9 U
1,2,4-Trimethylbenzene	3,100	8760	µg/m³	7.9 U	**8.4**	**16**	**0.74 J**	25 U	3.9 U
1,3,5-Trimethylbenzene	3,100	8760	µg/m³	7.9 U	3.9 U	**4.5**	9.8 U	25 U	3.9 U
2,2,4-Trimethylpentane	--	--	µg/m³	7.5 U	3.7 U	**13**	**3.5 J**	**258**	3.7 U
Tertiary Butyl Alcohol	--	730000	µg/m³	4.9 U	2.4 U	2.4 U	**2.7 J**	30 U	2.4 U
Tetrachloroethylene	1400 (SE)	5840	µg/m³	**5.6**	**2.6**	**4**	**195**	**11 J**	**3.1**
Tetrahydrofuran	--	292000	µg/m³	4.7 U	**2.7**	**5.9**	5.9 U	15 U	**1.3 J**
Toluene	--	730000	µg/m³	**95.3**	**9.4**	**28**	**6 J**	**3.6 J**	3.0 U
Trichloroethylene	67 (SE)	292	µg/m³	1.7 U	**3.6**	**80.6**	**1 J**	**1.1 J**	0.86 U
Trichlorofluoromethane	--	--	µg/m³	**30**	**16**	**16**	**40**	**24 J**	**10**
Vinyl Chloride	450	929	µg/m³	4.1 U	2.0 U	**0.97 J**	5.1 U	13 U	2.0 U
Vinyl Acetate	--	#REF!	µg/m³	5.6 U	2.8 U	2.8 U	7 U	18 U	2.8 U
m,p-Xylene	--	--	µg/m³	**39**	**50.0**	**103.0**	**2.5 J**	**2.2 J**	3.5 U
o-Xylene	--	14600	µg/m³	**11**	**21**	**23**	**1 J**	**1.7 J**	3.5 U
Xylenes (total)	11000	14600	µg/m³	**50.4**	**70.4**	**126**	**3.5 J**	**4.0 J**	3.5 U

See Notes on Last Page

Table 2
Sub-Slab Monitoring Point Sample Comparison
Univar Solutions USA, Inc. (Formerly ChemCentral)
Wyoming, Michigan

General Notes
Prior to sampling, a helium leak test was completed consistent with EGLE guidance to verify the seal of each sample point. All sampling points passed helium leak testing. Samples were analyzed at SGS Accutest Laboratories for volatile organic compounds via USEPA Method TO-15.
Shading indicates analyte exceeds either the site-specific criteria provided by EGLE or the calucated USEPA Commercial Vapor Intrusion Screening Levels
-- = No criteria
µg/m^3 = micrograms per cubic meter
EGLE = Michigan Department of Environment, Great Lakes, and Energy
J = result is an estimated value
SSMP = sub-slab monitoring point
U = result is below laboratory reporting limit
UB = The compound was considered non-detect at the listed value due to associated blank contamination
UJ = The compound was not detected above the reported sample quantitation limit. However the reported limit is approximate and may or may not represent the actual limit of quantitation.
USEPA = United States Environmental Protection Agency
VISLs =Vapor Intrusion Screening Levels

Footnotes
(1) This site-specific criteria, provided by EGLE on August 24, 2017, are applicable for a nonresidential structure (less than 50,000 square feet) with a slab-on-grade and the depth to groundwater submitted for this facility. Criteria are applicable for all depths. Criteria applied to sub-slab soil gas samples.

(2) USEPA Calculated VISLs from USEPA online VISL calculator using standard variables, a Target Hazard Quotient of 1 and a Target Cancer Risk of 1E-5. Criteria applied sub-slab soil gas samples.

(SE) Site-specific criteria based on single event exposure; therefore, sampling methods should reflect shorter exposure scenarios.

Figures

CITY: Lansing DIV: ENV DB: DRA PIC: M.MILLER PM: E.KOZAK TM: M.SAMP TR: E.KOZAK PROJECT NUMBER: 30164040 COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet
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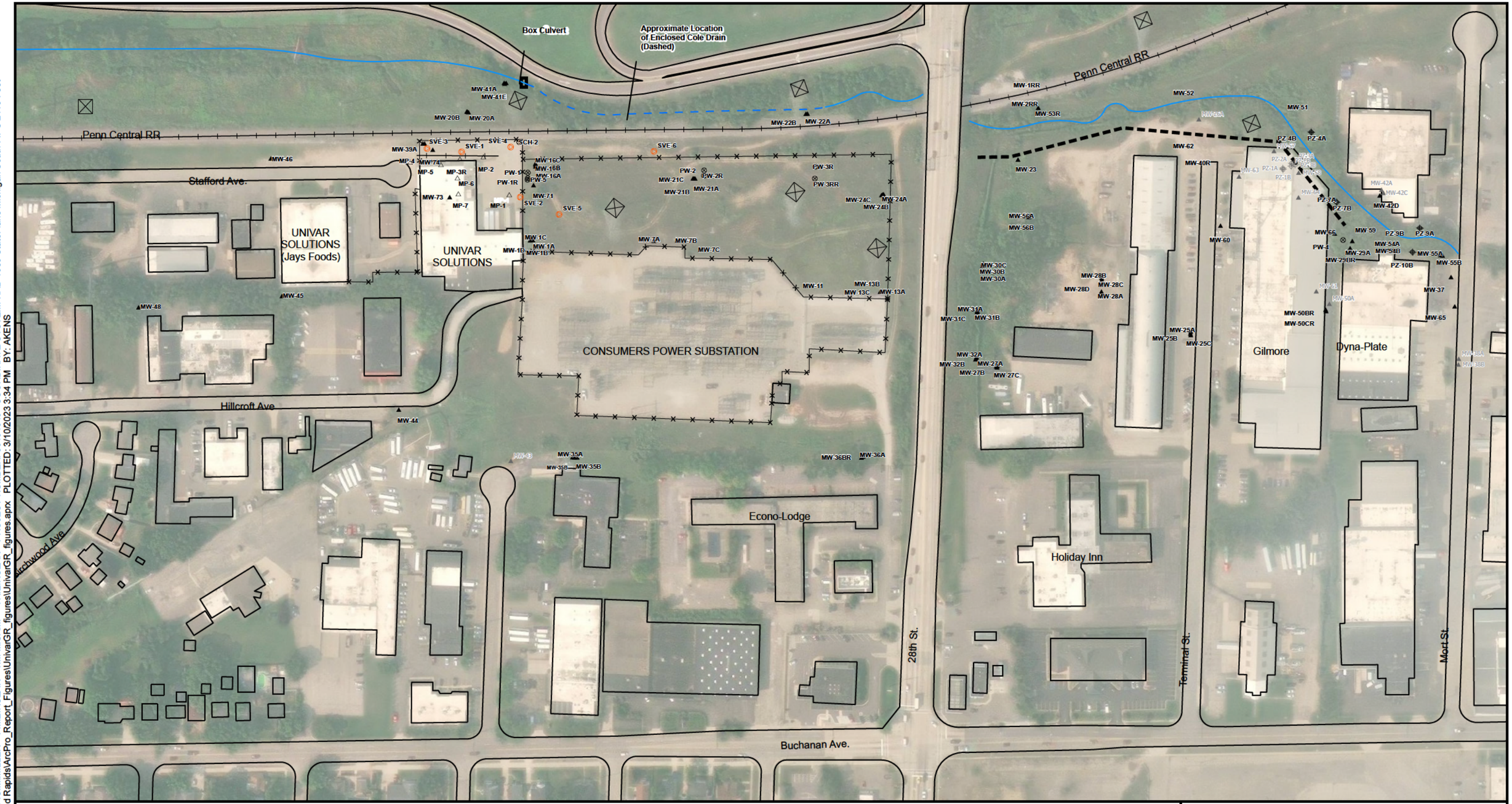
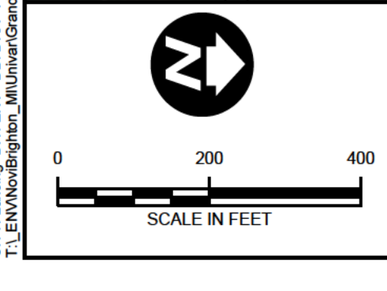




Legend

- MONITORING WELL (MW)
- PURGE WELL (PW)
- MONITORING POINT (MP)
- ABANDONED MONITORING WELL
- NORTH UNDERDRAIN
- FENCE
- PIEZOMETER (PZ)
- ABANDONED PIEZOMETER
- SOIL VAPOR POINT (SVE)
- ELECTRICAL TOWER
- COLE DRAIN
- RAILROAD

VAPOR SAMPLING LOCATION DOES NOT EXCEED FOR ANY ASSOCIATED CRITERIA AS DESCRIBED IN THE NOTES AND ON TABLE 1.

VAPOR SAMPLING LOCATIONS EXCEEDS FOR ONE OR MORE OF ANY ASSOCIATED CRITERIA AS DESCRIBED IN THE NOTES AND ON TABLE 1.

NOTES:

1. VAPOR SAMPLING LOCATIONS APPROXIMATE.
2. SUB-SLAB LOCATIONS ARE COMPARED TO THE 2017 EGLE PROVIDED SITE-SPECIFIC NON-RESIDENTIAL VIAC FOR SOIL GAS AND USEPA CALCULATED VISLs.
3. AMBIENT AIR, INDOOR AIR, AND HEADSPACE VAPOR SAMPLES ARE COMPARED TO EGLE NON-RESIDENTIAL RIASLs (2020) AND USEPA VISLs.
4. CRITERIA EXCEEDANCES ARE SHADED. SEE TABLE 1 FOR DETAILS ON SCREENING CRITERIA.
5. ALL ANALYTICAL DATA ARE LISTED IN MICROGRAMS PER CUBIC METER ($\mu g/m^3$).

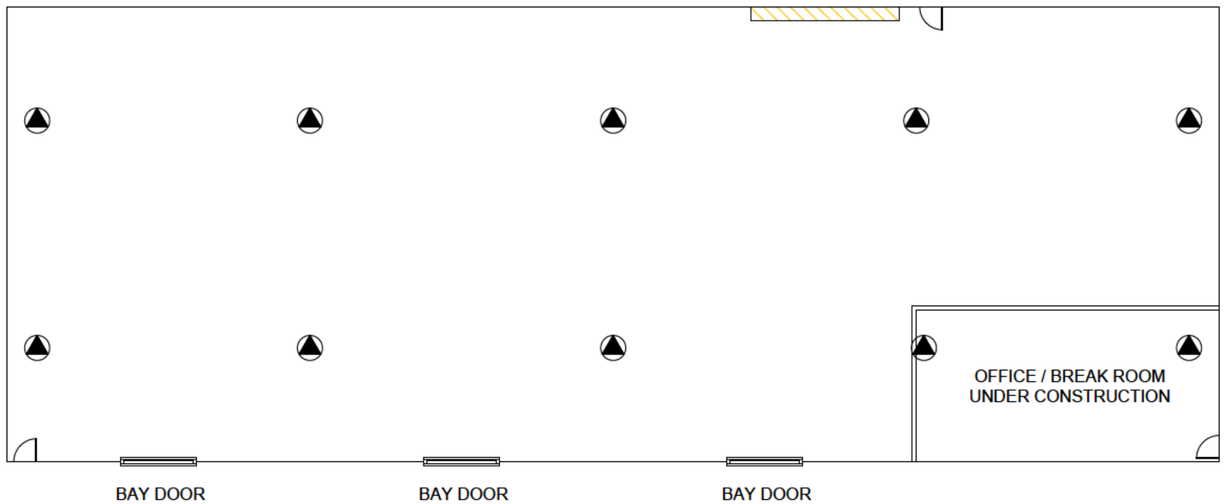
EGLE - ENVIRONMENTAL GREAT LAKES AND ENERGY
RIASL - RECOMMENDED INTERIM ACTION SCREENING LEVELS
USEPA - UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
VIAC - VOLATILIZATION TO INDOOR AIR CRITERIA
VISLs - VAPOR INTRUSION SCREENING LEVELS

UNIVAR SOLUTIONS USA, INC.
(FORMERLY CHEMCENTRAL)
2940 STAFFORD AVENUE SW
WYOMING, MI

MARCH 2023 VAPOR INTRUSION SAMPLING MAP

ARCADIS

FIGURE 1



PAIRED INDOOR AIR AND SUB-SLAB SAMPLE FIRST QUARTER 2023

LEGEND:

- STORAGE RACKS OR DRUM/TOTE STAGING AREA
- BOILER/FURNACE AREA
- ROOF DRAIN
- PIT FOR KO TANK
- BR — BATHROOM ASSUME SEWER CONNECTIONS THROUGH SLAB
- WATER LINE THROUGH FLOOR
- FLOOR DRAIN
- PARTIAL WALL, CORRUGATED
- OVERHEAD DOOR
- SUB-SLAB MONITORING POINT
- FLOOR VENTS
- ABANDONED FLOOR DRAIN
- ABANDONED STORM DRAINS
- WATER LINE (APPROXIMATE)
- GAS LINE (APPROXIMATE)
- SEWER LINE (APPROXIMATE)
- ELECTRICAL LINES
- POTABLE WATER LINE
- ELECTRICAL CONDUIT

VAPOR SAMPLE DOES NOT EXCEED ANY APPLICABLE CRITERIA. SEE TABLE 1 FOR MORE DETAILS.

0 20' 40'

GRAPHIC SCALE

NOTES:

1. ALL ROOF DRAINS PENETRATE THE FLOOR.
2. ALL ELECTRICAL CONNECTIONS PENETRATE THE FLOOR.
3. DAMAGE TO THE FLOOR IN A FEW LOCATIONS.
4. SUB-SLAB MONITORING POINT LOCATIONS ARE APPROXIMATE.

GILMORE USA, INC.

[redacted]

GILMORE BUILDING-3
MARCH VAPOR SAMPLING

ARCADIS

FIGURE
2

CITY:SYRACUSE DIV/GROUP:IEST.IMDV/CAD DB:R.PETRIE-G.STEINBERGER LD:(OH) PIC:M.MILLER PM:E.KOZAK TM: M.SAMP TR:E.KOZAK PROJECT NUMBER: 30164040 LYR:(On)*ON*;*OFF*;*REF*
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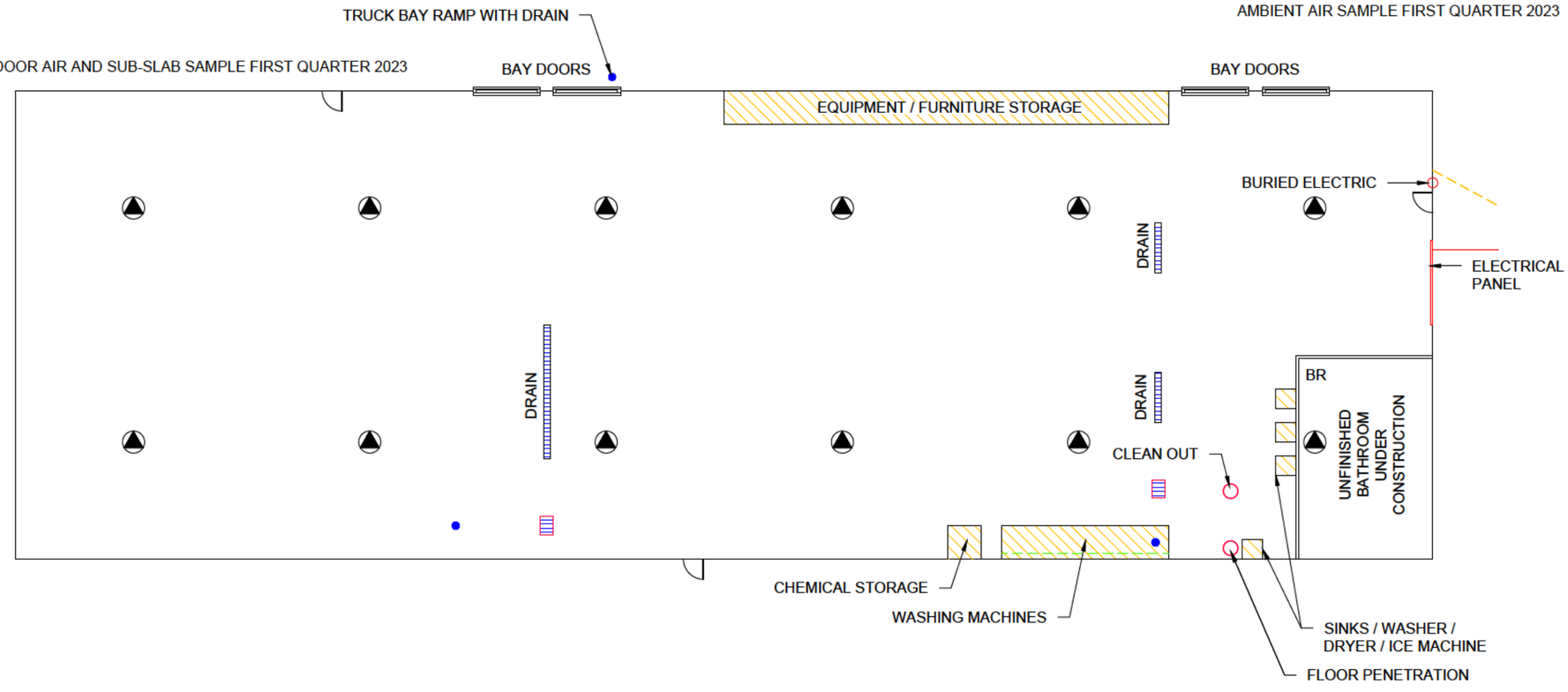
Plant Master 2017 with Terminal St



LEGEND:

- STORAGE RACKS OR DRUM/TOTE STAGING AREA
- BOILER/FURNACE AREA
- ROOF DRAIN
- PIT FOR KO TANK
- BR — BATHROOM ASSUME SEWER CONNECTIONS THROUGH SLAB
- WATER LINE THROUGH FLOOR
- FLOOR DRAIN
- PARTIAL WALL, CORRUGATED
- OVERHEAD DOOR
- SUB-SLAB MONITORING POINT
- FLOOR VENTS
- ABANDONED FLOOR DRAIN
- ABANDONED STORM DRAINS
- WATER LINE (APPROXIMATE)
- GAS LINE (APPROXIMATE)
- SEWER LINE (APPROXIMATE)
- ELECTRICAL LINES
- POTABLE WATER LINE
- ELECTRICAL CONDUIT

VAPOR SAMPLE DOES NOT EXCEED ANY APPLICABLE CRITERIA. SEE TABLE 1 FOR MORE DETAILS.

0 20' 40'

GRAPHIC SCALE

NOTES:

1. ALL ROOF DRAINS PENETRATE THE FLOOR.
2. ALL ELECTRICAL CONNECTIONS PENETRATE THE FLOOR.
3. MORE DRAINS MAY BE PRESENT UNDER CARS.
4. SUB-SLAB MONITORING POINT LOCATIONS ARE APPROXIMATE.

[redacted] MI

GILMORE BUILDING-4
MARCH VAPOR SAMPLING

ARCADIS

FIGURE 3

CITY:SYRACUSE DIV/GROUP:EST/MDV/CAD DB:R.PETRIE,G.STEINBERGER LD:(Opt) PP/C:M.MILLER PM:E.KOZAK TM: M.SAMP TR:E.KOZAK PROJECT NUMBER: 30164040 LYR:(Opt)ON=*;OFF=*REF*
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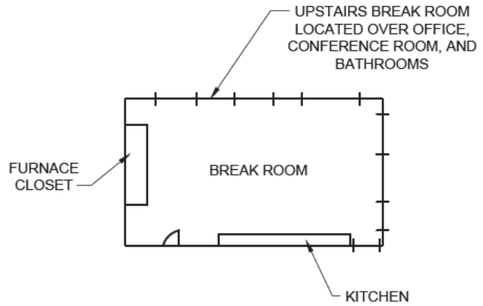
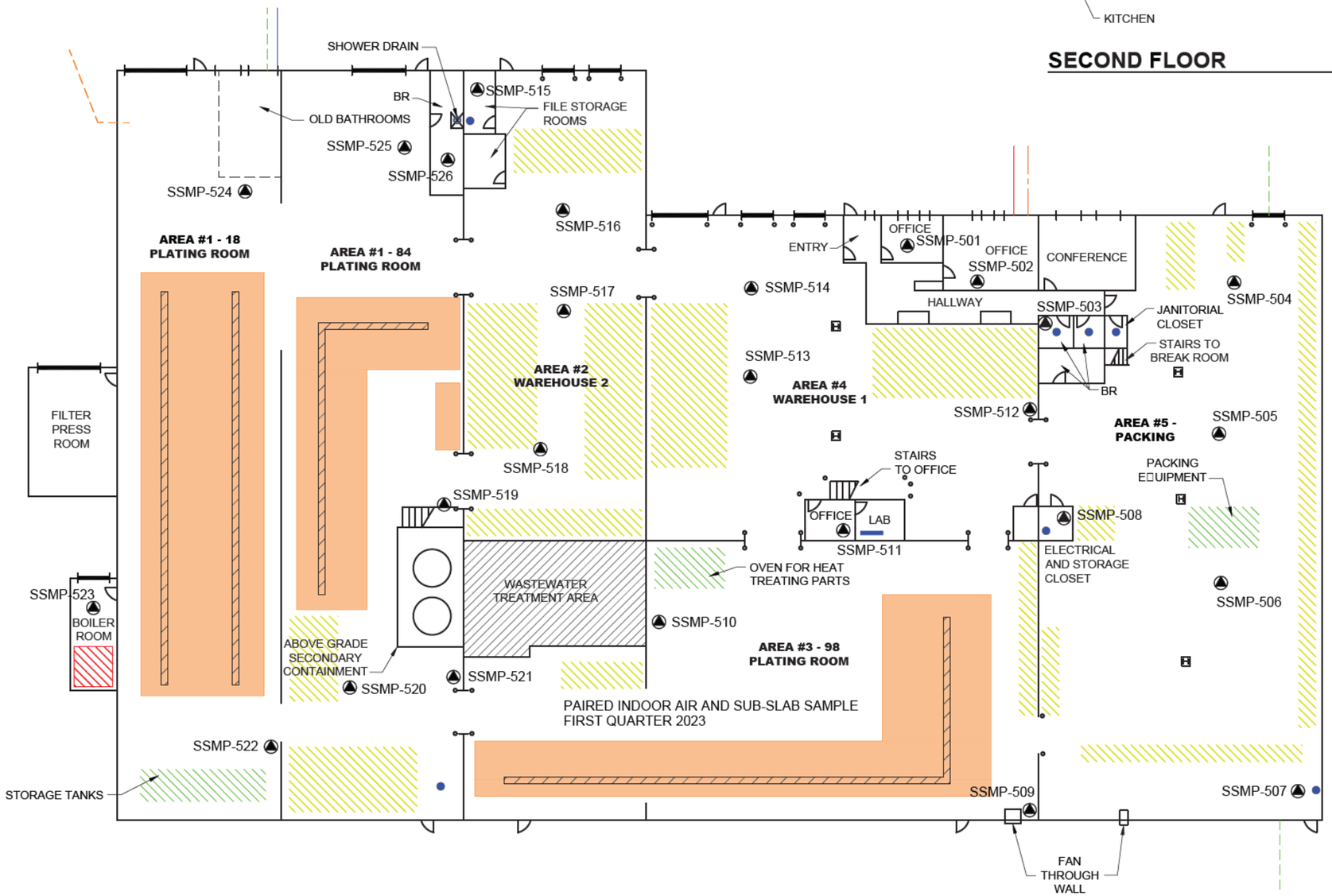
Plant Master 2017 with Terminal St

AMBIENT AIR SAMPLE FIRST QUARTER 2023



SECOND FLOOR



MAIN FLOOR

LEGEND

- PLATING LINES
- E□UIPMENT AND/OR STORAGE TANKS
- SHELVING, TOTE AND PALLET STORAGE
- RECESSED SECONDARY CONTAINMENT AREA
- BOILER AREA
- FLUID DRIP COLLECTION TRENCH
- SUB-SLAB MONITORING POINT
- ROOF/FLOOR DRAIN
- BUILDING COLUMN WITH BOLLARDS
- OVERHEAD DOOR
- GAS LINE (APPROXIMATE)
- WATER LINE (APPROXIMATE)
- SEWER LINE (APPROXIMATE)
- ELECTRIC LINE (APPROXIMATE)
- COMMUNICATION LINE (APPROXIMATE)

BR BATHROOM - ASSUME SEWER CONNECTIONS THROUGH SLAB

VAPOR SAMPLE DOES NOT EXCEED ANY APPLICABLE CRITERIA. SEE TABLE 1 FOR MORE DETAILS.

VAPOR SAMPLE DOES EXCEEDS APPLICABLE CRITERIA. SEE TABLE 1 FOR MORE DETAILS.

0 30 60

SCALE IN FEET

UNIVAR SOLUTIONS USA, INC.
(FORMERLY CHEMCENTRAL)
2940 STAFFORD AVENUE SW
WYOMING, MI

DYNA-PLATE BUILDING
MARCH VAPOR SAMPLING

ARCADIS

FIGURE 4

CITY:(Re:d) DIV/GROUP:(Re:d) DB:(Re:d) LD:(Opt) PIC:(PIC:M.MILLER PM:E.KOZAK TM: M.SAMP TR:E.KOZAK PROJECT NUMBER: 30164040(OptION=";OFF='REF'
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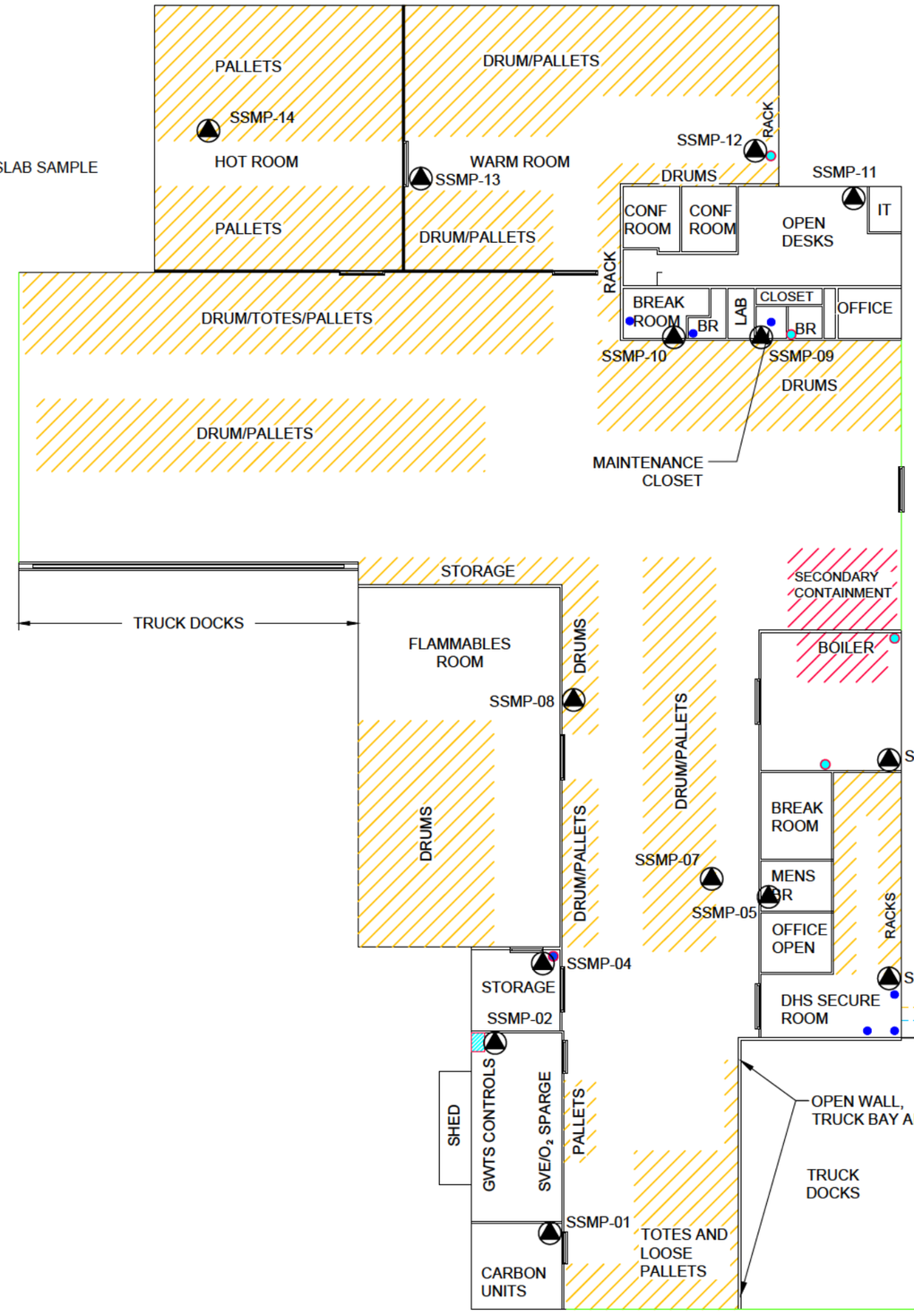

PAIRED FLOOR DRAIN AND INDOOR AIR SAMPLE FIRST QUARTER 2023

FLOORDRAIN-01

PAIRED FLOOR DRAIN AND INDOOR AIR SAMPLE FIRST QUARTER 2023

FLOORDRAIN-02

LEGEND:

- STORAGE RACKS OR DRUM/TOTE STAGING AREA
- ROOF DRAIN
- PIT FOR KO TANK
- BR — BATHROOM ASSUME SEWER CONNECTIONS THROUGH SLAB
- WATER LINE THROUGH FLOOR
- FLOOR DRAIN
- PARTIAL WALL, CORRUGATED
- OVERHEAD DOOR
- SUB-SLAB MONITORING POINT
- WATER LINE (APPROXIMATE)
- GAS LINE (APPROXIMATE)
- SEWER LINE (APPROXIMATE)
- INDOOR AIR SAMPLING LOCATION

VAPOR SAMPLE DOES NOT EXCEED ANY APPLICABLE CRITERIA. SEE TABLE 1 FOR MORE DETAILS.

NOTES:

1. ALL ROOF DRAINS PENETRATE THE FLOOR.
2. SUB-SLAB MONITORING POINT LOCATIONS ARE APPROXIMATE.

0 30' 60'

GRAPHIC SCALE

UNIVAR SOLUTIONS USA, INC.
(FORMERLY CHEMCENTRAL)
2940 STAFFORD AVENUE SW
WYOMING, MI

UNIVAR BUILDING-1
MARCH VAPOR SAMPLING

ARCADIS

FIGURE 5

CITY:SYRACUSE DIV/GROUP:IEST/MDV/CAD DB:R.PETRIE,G.STEINBERGER LD:(Opt) PIC:M.MILLER PM:E.KOZAK TM: M.SAMP TR:E.KOZAK PROJECT NUMBER: 30164040 LYR:(Opt)ON=*;OFF=*REF*
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XREFS: IMAGES:
X-Template - GM
X-Template

Laboratory Reports

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

UNIVAR

AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

30164040

SGS Job Number: JD62956

Sampling Date: 03/29/23

Report to:

Arcadis
28550 Cabot Drive Suite 500
Novi, MI 48377
Kaitlyn.Hunt@arcadis.com; Erin.Kozak@Arcadis.com;
marina.samp@arcadis.com; Christina.weaver@arcadis.com
ATTN: Erin Kozak

Total number of pages in report: 94

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

David Chastain
General Manager

Client Service contact: Beth Stopen 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA(68-00408), RI, SC, TX, UT, VA, WV

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Please share your ideas about
how we can serve you better at:
EHS.US.CustomerCare@sgs.com

Sections: 1 2 3 4 5 6

Table of Contents

SGS North America Inc.

Sample Summary

UNIVAR

Job No: JD62956

AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI
Project No: 30164040

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
JD62956-1	03/29/23	14:20	SF	03/29/23	AIR	Ambient Air Comp.	AA-03_UNIVAR_032923
JD62956-2	03/29/23	14:10	SF	03/29/23	AIR	Indoor Air Comp.	IA-05_UNIVAR-FD-01_032923
JD62956-3	03/29/23	14:00	SF	03/29/23	AIR	Indoor Air Comp.	IA-06_UNIVAR-FD-02_032923
JD62956-4	03/29/23	14:05	SF	03/29/23	AIR	Indoor Air Comp.	IA-04_UNIVAR13_032923

This report contains results reported as ND = Not detected. The following applies:
Organics ND = Not detected above the MDL

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: UNIVAR **Job No:** JD62956

Site: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, **Report Date** 4/12/2023 11:29:43 A

On 03/29/2023, 4 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at SGS North America Inc. An SGS Job Number of JD62956 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

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

MS Volatiles By Method TO-15

Matrix: AIR **Batch ID:** V3W3154

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD62956-4DUP were used as the QC samples indicated.
- Sample(s) JD62956-4 have compounds reported with "E" qualifiers indicating estimated value exceeding calibration range.
- The blank spike (BS) recovery(s) of m-Dichlorobenzene, p-Dichlorobenzene are outside control limits.
- JD62956-4 for m-Dichlorobenzene: Associated CCV outside of control limits high, sample was ND. This compound in blank spike is outside in house QC limits bias high.
- V3W3154-BS for p-Dichlorobenzene: High percent recovery and no associated positive reported in the QC batch.
- V3W3154-BS for m-Dichlorobenzene: High percent recovery and no associated positive reported in the QC batch.
- JD62956-4 for p-Dichlorobenzene: Associated CCV outside of control limits high, sample was ND. This compound in blank spike is outside in house QC limits bias high.

Matrix: AIR **Batch ID:** V7W65

- All samples were analyzed within the recommended method holding time.
- Sample(s) JD62486-1DUP were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- The blank spike (BS) recovery(s) of Freon 113, Hexachlorobutadiene, Benzyl Chloride are outside control limits.
- The duplicate RPD(s) for Pentane are outside control limits for sample JD62486-1DUP. RPD acceptable due to low DUP and sample concentrations.
- JD62956-1 for Freon 113: Associated CCV outside of control limits high, sample was ND. This compound in blank spike is outside in house QC limits bias high.
- V7W65-BS for Freon 113: High percent recovery and no associated positive reported in the QC batch.
- V7W65-BS for Benzyl Chloride: Outside in house control limits.
- JD62956-1 for Hexachlorobutadiene: Associated CCV outside of control limits high, sample was ND. This compound in blank spike is outside in house QC limits bias high.
- JD62956-1 for Benzyl Chloride: Associated CCV outside of control limits low. This compound in blank spike is outside in house QC limits bias low.
- JD62956-2 for Freon 113: Associated CCV outside of control limits high, sample was ND. This compound in blank spike is outside in house QC limits bias high.
- JD62956-2 for Hexachlorobutadiene: Associated CCV outside of control limits high, sample was ND. This compound in blank spike is outside in house QC limits bias high.
- JD62956-2 for Benzyl Chloride: Associated CCV outside of control limits low. This compound in blank spike is outside in house QC limits bias low.
- JD62956-3 for Freon 113: Associated CCV outside of control limits high, sample was ND. This compound in blank spike is outside in house QC limits bias high.

MS Volatiles By Method TO-15

Matrix: AIR **Batch ID:** V7W65

- JD62956-3 for Hexachlorobutadiene: Associated CCV outside of control limits high, sample was ND. This compound in blank spike is outside in house QC limits bias high.
- JD62956-3 for Benzyl Chloride: Associated CCV outside of control limits low. This compound in blank spike is outside in house QC limits bias low.
- V7W65-BS for Hexachlorobutadiene: High percent recovery and no associated positive reported in the QC batch.

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

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

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

Summary of Hits

Job Number: JD62956
Account: UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI
Collected: 03/29/23

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JD62956-1	**AA-03_UNIVAR_032923**					
Acetone (2-Propanone)		2.4	0.20	0.15	ppbv	TO-15
Benzene		0.13 J	0.20	0.062	ppbv	TO-15
Chloromethane		0.61	0.20	0.090	ppbv	TO-15
Carbon tetrachloride		0.057 J	0.20	0.040	ppbv	TO-15
Dichlorodifluoromethane		0.45	0.20	0.032	ppbv	TO-15
Ethanol		2.0	0.50	0.39	ppbv	TO-15
Ethyl Acetate		1.1	0.20	0.10	ppbv	TO-15
Isopropyl Alcohol		0.25	0.20	0.14	ppbv	TO-15
Methylene chloride		0.35	0.20	0.056	ppbv	TO-15
Pentane		0.46	0.20	0.14	ppbv	TO-15
Propylene		0.40 J	0.50	0.14	ppbv	TO-15
Toluene		0.14 J	0.20	0.057	ppbv	TO-15
Trichlorofluoromethane		0.28	0.20	0.036	ppbv	TO-15
Acetone (2-Propanone)		5.7	0.48	0.36	ug/m3	TO-15
Benzene		0.42 J	0.64	0.20	ug/m3	TO-15
Chloromethane		1.3	0.41	0.19	ug/m3	TO-15
Carbon tetrachloride		0.36 J	1.3	0.25	ug/m3	TO-15
Dichlorodifluoromethane		2.2	0.99	0.16	ug/m3	TO-15
Ethanol		3.8	0.94	0.73	ug/m3	TO-15
Ethyl Acetate		4.0	0.72	0.36	ug/m3	TO-15
Isopropyl Alcohol		0.61	0.49	0.34	ug/m3	TO-15
Methylene chloride		1.2	0.69	0.19	ug/m3	TO-15
Pentane		1.4	0.59	0.41	ug/m3	TO-15
Propylene		0.69 J	0.86	0.24	ug/m3	TO-15
Toluene		0.53 J	0.75	0.21	ug/m3	TO-15
Trichlorofluoromethane		1.6	1.1	0.20	ug/m3	TO-15
JD62956-2	**IA-05_UNIVAR-FD-01_032923**					
Acetone (2-Propanone)		4.1	0.20	0.15	ppbv	TO-15
Acrolein		0.17 J	0.20	0.088	ppbv	TO-15
Benzene		0.10 J	0.20	0.062	ppbv	TO-15
Chloromethane		0.46	0.20	0.090	ppbv	TO-15
Dichlorodifluoromethane		0.36	0.20	0.032	ppbv	TO-15
Ethanol		2.5	0.50	0.39	ppbv	TO-15
Ethyl Acetate		1.7	0.20	0.10	ppbv	TO-15
4-Ethyltoluene		3.4	0.20	0.095	ppbv	TO-15
Isopropylbenzene		0.23	0.20	0.064	ppbv	TO-15
Isopropyl Alcohol		0.70	0.20	0.14	ppbv	TO-15
p-Isopropyltoluene		0.13 J	0.20	0.080	ppbv	TO-15
Methylene chloride		0.28	0.20	0.056	ppbv	TO-15
Methyl ethyl ketone		0.31	0.20	0.11	ppbv	TO-15
Pentane		0.66	0.20	0.14	ppbv	TO-15

Summary of Hits

Job Number: JD62956
Account: UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI
Collected: 03/29/23

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
n-Propylbenzene		2.1	0.20	0.091	ppbv	TO-15
Styrene		0.59	0.20	0.12	ppbv	TO-15
1,2,4-Trimethylbenzene		2.2	0.20	0.087	ppbv	TO-15
1,3,5-Trimethylbenzene		1.0	0.20	0.080	ppbv	TO-15
Tetrachloroethylene		0.074	0.040	0.014	ppbv	TO-15
Toluene		0.33	0.20	0.057	ppbv	TO-15
Trichlorofluoromethane		0.21	0.20	0.036	ppbv	TO-15
Vinyl Acetate		6.7	0.20	0.11	ppbv	TO-15
m,p-Xylene		0.17 J	0.20	0.14	ppbv	TO-15
o-Xylene		0.46	0.20	0.077	ppbv	TO-15
Xylenes (total)		0.63	0.20	0.077	ppbv	TO-15
Acetone (2-Propanone)		9.7	0.48	0.36	ug/m3	TO-15
Acrolein		0.39 J	0.46	0.20	ug/m3	TO-15
Benzene		0.32 J	0.64	0.20	ug/m3	TO-15
Chloromethane		0.95	0.41	0.19	ug/m3	TO-15
Dichlorodifluoromethane		1.8	0.99	0.16	ug/m3	TO-15
Ethanol		4.7	0.94	0.73	ug/m3	TO-15
Ethyl Acetate		6.1	0.72	0.36	ug/m3	TO-15
4-Ethyltoluene		17	0.98	0.47	ug/m3	TO-15
Isopropylbenzene		1.1	0.98	0.31	ug/m3	TO-15
Isopropyl Alcohol		1.7	0.49	0.34	ug/m3	TO-15
p-Isopropyltoluene		0.71 J	1.1	0.44	ug/m3	TO-15
Methylene chloride		0.97	0.69	0.19	ug/m3	TO-15
Methyl ethyl ketone		0.91	0.59	0.32	ug/m3	TO-15
Pentane		1.9	0.59	0.41	ug/m3	TO-15
n-Propylbenzene		10	0.98	0.45	ug/m3	TO-15
Styrene		2.5	0.85	0.51	ug/m3	TO-15
1,2,4-Trimethylbenzene		11	0.98	0.43	ug/m3	TO-15
1,3,5-Trimethylbenzene		4.9	0.98	0.39	ug/m3	TO-15
Tetrachloroethylene		0.50	0.27	0.095	ug/m3	TO-15
Toluene		1.2	0.75	0.21	ug/m3	TO-15
Trichlorofluoromethane		1.2	1.1	0.20	ug/m3	TO-15
Vinyl Acetate		24	0.70	0.39	ug/m3	TO-15
m,p-Xylene		0.74 J	0.87	0.61	ug/m3	TO-15
o-Xylene		2.0	0.87	0.33	ug/m3	TO-15
Xylenes (total)		2.7	0.87	0.33	ug/m3	TO-15
JD62956-3	**IA-06_UNIVAR-FD-02_032923**					
Acetone (2-Propanone)		3.9	0.20	0.15	ppbv	TO-15
Acrolein		0.16 J	0.20	0.088	ppbv	TO-15
Benzene		0.12 J	0.20	0.062	ppbv	TO-15
Chloroform		0.27	0.20	0.037	ppbv	TO-15
Chloromethane		0.61	0.20	0.090	ppbv	TO-15
Dichlorodifluoromethane		0.46	0.20	0.032	ppbv	TO-15

Summary of Hits

Job Number: JD62956
Account: UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI
Collected: 03/29/23

Lab Sample ID / Client Sample ID / Analyte	Result/ Qual	RL	MDL	Units	Method
Ethanol	18.3	0.50	0.39	ppbv	TO-15
Ethyl Acetate	1.5	0.20	0.10	ppbv	TO-15
Isopropyl Alcohol	1.2	0.20	0.14	ppbv	TO-15
Methylene chloride	0.31	0.20	0.056	ppbv	TO-15
Methyl ethyl ketone	0.36	0.20	0.11	ppbv	TO-15
Pentane	0.55	0.20	0.14	ppbv	TO-15
Propylene	1.7	0.50	0.14	ppbv	TO-15
Toluene	0.23	0.20	0.057	ppbv	TO-15
Trichlorofluoromethane	0.28	0.20	0.036	ppbv	TO-15
Acetone (2-Propanone)	9.3	0.48	0.36	ug/m3	TO-15
Acrolein	0.37 J	0.46	0.20	ug/m3	TO-15
Benzene	0.38 J	0.64	0.20	ug/m3	TO-15
Chloroform	1.3	0.98	0.18	ug/m3	TO-15
Chloromethane	1.3	0.41	0.19	ug/m3	TO-15
Dichlorodifluoromethane	2.3	0.99	0.16	ug/m3	TO-15
Ethanol	34.5	0.94	0.73	ug/m3	TO-15
Ethyl Acetate	5.4	0.72	0.36	ug/m3	TO-15
Isopropyl Alcohol	2.9	0.49	0.34	ug/m3	TO-15
Methylene chloride	1.1	0.69	0.19	ug/m3	TO-15
Methyl ethyl ketone	1.1	0.59	0.32	ug/m3	TO-15
Pentane	1.6	0.59	0.41	ug/m3	TO-15
Propylene	2.9	0.86	0.24	ug/m3	TO-15
Toluene	0.87	0.75	0.21	ug/m3	TO-15
Trichlorofluoromethane	1.6	1.1	0.20	ug/m3	TO-15
JD62956-4 IA-04_UNIVAR13_032923					
Acetone (2-Propanone)	16.9	0.20	0.15	ppbv	TO-15
Acrolein	0.33	0.20	0.088	ppbv	TO-15
Benzene	0.17 J	0.20	0.062	ppbv	TO-15
Chloromethane	0.72	0.20	0.090	ppbv	TO-15
Dichlorodifluoromethane	0.41	0.20	0.032	ppbv	TO-15
Ethanol	177 E	0.50	0.39	ppbv	TO-15
Ethyl Acetate	4.0	0.20	0.10	ppbv	TO-15
Heptane	0.12 J	0.20	0.092	ppbv	TO-15
Hexane	0.46	0.20	0.11	ppbv	TO-15
Isopropyl Alcohol	1.2	0.20	0.14	ppbv	TO-15
p-Isopropyltoluene	0.92	0.20	0.080	ppbv	TO-15
Methylene chloride	0.21	0.20	0.056	ppbv	TO-15
Methyl ethyl ketone	0.52	0.20	0.11	ppbv	TO-15
Pentane	1.3	0.20	0.14	ppbv	TO-15
1,2,4-Trichlorobenzene	0.60	0.20	0.12	ppbv	TO-15
1,2,4-Trimethylbenzene	0.12 J	0.20	0.087	ppbv	TO-15
Tetrachloroethylene	0.039 J	0.040	0.014	ppbv	TO-15
Toluene	0.57	0.20	0.057	ppbv	TO-15

Summary of Hits

Job Number: JD62956
Account: UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI
Collected: 03/29/23

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Trichlorofluoromethane		0.22	0.20	0.036	ppbv	TO-15
Vinyl Acetate		0.67	0.20	0.11	ppbv	TO-15
m,p-Xylene		0.31	0.20	0.14	ppbv	TO-15
o-Xylene		0.11 J	0.20	0.077	ppbv	TO-15
Xylenes (total)		0.41	0.20	0.077	ppbv	TO-15
Acetone (2-Propanone)		40.1	0.48	0.36	ug/m3	TO-15
Acrolein		0.76	0.46	0.20	ug/m3	TO-15
Benzene		0.54 J	0.64	0.20	ug/m3	TO-15
Chloromethane		1.5	0.41	0.19	ug/m3	TO-15
Dichlorodifluoromethane		2.0	0.99	0.16	ug/m3	TO-15
Ethanol		334 E	0.94	0.73	ug/m3	TO-15
Ethyl Acetate		14	0.72	0.36	ug/m3	TO-15
Heptane		0.49 J	0.82	0.38	ug/m3	TO-15
Hexane		1.6	0.70	0.39	ug/m3	TO-15
Isopropyl Alcohol		2.9	0.49	0.34	ug/m3	TO-15
p-Isopropyltoluene		5.0	1.1	0.44	ug/m3	TO-15
Methylene chloride		0.73	0.69	0.19	ug/m3	TO-15
Methyl ethyl ketone		1.5	0.59	0.32	ug/m3	TO-15
Pentane		3.8	0.59	0.41	ug/m3	TO-15
1,2,4-Trichlorobenzene		4.5	1.5	0.89	ug/m3	TO-15
1,2,4-Trimethylbenzene		0.59 J	0.98	0.43	ug/m3	TO-15
Tetrachloroethylene		0.26 J	0.27	0.095	ug/m3	TO-15
Toluene		2.1	0.75	0.21	ug/m3	TO-15
Trichlorofluoromethane		1.2	1.1	0.20	ug/m3	TO-15
Vinyl Acetate		2.4	0.70	0.39	ug/m3	TO-15
m,p-Xylene		1.3	0.87	0.61	ug/m3	TO-15
o-Xylene		0.48 J	0.87	0.33	ug/m3	TO-15
Xylenes (total)		1.8	0.87	0.33	ug/m3	TO-15

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: AA-03_UNIVAR_032923
Lab Sample ID: JD62956-1 **Date Sampled:** 03/29/23
Matrix: AIR - Ambient Air Comp. Summa ID: A1611 **Date Received:** 03/29/23
Method: TO-15 **Percent Solids:** n/a
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	7W01431.D	1	04/07/23 00:01	TCH	n/a	n/a	V7W65
Run #2							

	Initial Volume
Run #1	400 ml
Run #2	

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
67-64-1	58.08	Acetone (2-Propanone)	2.4	0.20	0.15	ppbv		5.7	0.48	0.36	ug/m3
107-02-8	56	Acrolein	ND	0.20	0.088	ppbv		ND	0.46	0.20	ug/m3
107-13-1	53	Acrylonitrile	ND	0.20	0.091	ppbv		ND	0.43	0.20	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.20	0.084	ppbv		ND	0.44	0.19	ug/m3
71-43-2	78.11	Benzene	0.13	0.20	0.062	ppbv	J	0.42	0.64	0.20	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.20	0.030	ppbv		ND	1.3	0.20	ug/m3
75-25-2	252.8	Bromoform	ND	0.20	0.071	ppbv		ND	2.1	0.73	ug/m3
74-83-9	94.94	Bromomethane	ND	0.20	0.069	ppbv		ND	0.78	0.27	ug/m3
593-60-2	106.9	Bromoethene	ND	0.20	0.061	ppbv		ND	0.87	0.27	ug/m3
100-44-7	126	Benzyl Chloride [a]	ND	0.20	0.13	ppbv		ND	1.0	0.67	ug/m3
104-51-8	134	n-Butylbenzene	ND	0.20	0.11	ppbv		ND	1.1	0.60	ug/m3
135-98-8	134	sec-Butylbenzene	ND	0.20	0.081	ppbv		ND	1.1	0.44	ug/m3
75-15-0	76.14	Carbon disulfide	ND	0.20	0.045	ppbv		ND	0.62	0.14	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.20	0.074	ppbv		ND	0.92	0.34	ug/m3
75-00-3	64.52	Chloroethane	ND	0.20	0.068	ppbv		ND	0.53	0.18	ug/m3
67-66-3	119.4	Chloroform	ND	0.20	0.037	ppbv		ND	0.98	0.18	ug/m3
74-87-3	50.49	Chloromethane	0.61	0.20	0.090	ppbv		1.3	0.41	0.19	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.20	0.083	ppbv		ND	0.63	0.26	ug/m3
56-23-5	153.8	Carbon tetrachloride	0.057	0.20	0.040	ppbv	J	0.36	1.3	0.25	ug/m3
110-82-7	84.16	Cyclohexane	ND	0.20	0.11	ppbv		ND	0.69	0.38	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	0.057	ppbv		ND	0.81	0.23	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	0.059	ppbv		ND	0.79	0.23	ug/m3
106-93-4	187.9	1,2-Dibromoethane (EDB)	ND	0.20	0.097	ppbv		ND	1.5	0.75	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	0.070	ppbv		ND	0.81	0.28	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.20	0.062	ppbv		ND	0.92	0.29	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.20	0.12	ppbv		ND	0.72	0.43	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.45	0.20	0.032	ppbv		2.2	0.99	0.16	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.20	0.052	ppbv		ND	1.7	0.44	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	0.069	ppbv		ND	0.79	0.27	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	0.077	ppbv		ND	0.79	0.31	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.20	0.062	ppbv		ND	0.91	0.28	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.20	0.040	ppbv		ND	1.2	0.24	ug/m3

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AA-03_UNIVAR_032923		
Lab Sample ID:	JD62956-1	**Date Sampled:**	03/29/23
Matrix:	AIR - Ambient Air Comp. Summa ID: A1611	**Date Received:**	03/29/23
Method:	TO-15	**Percent Solids:**	n/a
Project:	AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
95-50-1	147	o-Dichlorobenzene	ND	0.20	0.15	ppbv		ND	1.2	0.90	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.20	0.19	ppbv		ND	1.2	1.1	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.20	0.10	ppbv		ND	0.91	0.45	ug/m3
108-20-3	102	Di-Isopropyl ether	ND	0.20	0.082	ppbv		ND	0.83	0.34	ug/m3
64-17-5	46.07	Ethanol	2.0	0.50	0.39	ppbv		3.8	0.94	0.73	ug/m3
100-41-4	106.2	Ethylbenzene	ND	0.20	0.061	ppbv		ND	0.87	0.26	ug/m3
141-78-6	88	Ethyl Acetate	1.1	0.20	0.10	ppbv		4.0	0.72	0.36	ug/m3
622-96-8	120.19	4-Ethyltoluene	ND	0.20	0.095	ppbv		ND	0.98	0.47	ug/m3
76-13-1	187.4	Freon 113 [b]	ND	0.20	0.031	ppbv		ND	1.5	0.24	ug/m3
76-14-2	170.9	Freon 114	ND	0.20	0.050	ppbv		ND	1.4	0.35	ug/m3
142-82-5	100.2	Heptane	ND	0.20	0.092	ppbv		ND	0.82	0.38	ug/m3
87-68-3	260.8	Hexachlorobutadiene [b]	ND	0.20	0.062	ppbv		ND	2.1	0.66	ug/m3
110-54-3	86.18	Hexane	ND	0.20	0.11	ppbv		ND	0.70	0.39	ug/m3
591-78-6	100	2-Hexanone	ND	0.20	0.15	ppbv		ND	0.82	0.61	ug/m3
98-82-8	120	Isopropylbenzene	ND	0.20	0.064	ppbv		ND	0.98	0.31	ug/m3
67-63-0	60.1	Isopropyl Alcohol	0.25	0.20	0.14	ppbv		0.61	0.49	0.34	ug/m3
99-87-6	134	p-Isopropyltoluene	ND	0.20	0.080	ppbv		ND	1.1	0.44	ug/m3
75-09-2	84.94	Methylene chloride	0.35	0.20	0.056	ppbv		1.2	0.69	0.19	ug/m3
78-93-3	72.11	Methyl ethyl ketone	ND	0.20	0.11	ppbv		ND	0.59	0.32	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.20	0.073	ppbv		ND	0.82	0.30	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.20	0.080	ppbv		ND	0.72	0.29	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.20	0.070	ppbv		ND	0.82	0.29	ug/m3
91-20-3	128.17	Naphthalene	ND	0.20	0.13	ppbv		ND	1.0	0.68	ug/m3
109-66-0	72	Pentane	0.46	0.20	0.14	ppbv		1.4	0.59	0.41	ug/m3
103-65-1	120	n-Propylbenzene	ND	0.20	0.091	ppbv		ND	0.98	0.45	ug/m3
115-07-1	42	Propylene	0.40	0.50	0.14	ppbv	J	0.69	0.86	0.24	ug/m3
100-42-5	104.1	Styrene	ND	0.20	0.12	ppbv		ND	0.85	0.51	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.20	0.037	ppbv		ND	1.1	0.20	ug/m3
79-34-5	167.85	1,1,2,2-Tetrachloroethane	ND	0.20	0.048	ppbv		ND	1.4	0.33	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	0.038	ppbv		ND	1.1	0.21	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.20	0.12	ppbv		ND	1.5	0.89	ug/m3
95-63-6	120.19	1,2,4-Trimethylbenzene	ND	0.20	0.087	ppbv		ND	0.98	0.43	ug/m3
108-67-8	120.19	1,3,5-Trimethylbenzene	ND	0.20	0.080	ppbv		ND	0.98	0.39	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	0.20	0.095	ppbv		ND	0.93	0.44	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	0.20	0.093	ppbv		ND	0.61	0.28	ug/m3
127-18-4	165.8	Tetrachloroethylene	ND	0.040	0.014	ppbv		ND	0.27	0.095	ug/m3
109-99-9	72.11	Tetrahydrofuran	ND	0.20	0.090	ppbv		ND	0.59	0.27	ug/m3
108-88-3	92.14	Toluene	0.14	0.20	0.057	ppbv	J	0.53	0.75	0.21	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	0.10	ug/m3
75-69-4	137.4	Trichlorofluoromethane	0.28	0.20	0.036	ppbv		1.6	1.1	0.20	ug/m3

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AA-03_UNIVAR_032923		
Lab Sample ID:	JD62956-1	**Date Sampled:**	03/29/23
Matrix:	AIR - Ambient Air Comp. Summa ID: A1611	**Date Received:**	03/29/23
Method:	TO-15	**Percent Solids:**	n/a
Project:	AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
75-01-4	62.5	Vinyl chloride	ND	0.20	0.069	ppbv		ND	0.51	0.18	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.20	0.11	ppbv		ND	0.70	0.39	ug/m3
	106.2	m,p-Xylene	ND	0.20	0.14	ppbv		ND	0.87	0.61	ug/m3
95-47-6	106.2	o-Xylene	ND	0.20	0.077	ppbv		ND	0.87	0.33	ug/m3
1330-20-7	106.2	Xylenes (total)	ND	0.20	0.077	ppbv		ND	0.87	0.33	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	90%		65-128%

(a) Associated CCV outside of control limits low. This compound in blank spike is outside in house QC limits bias low.
(b) Associated CCV outside of control limits high, sample was ND. This compound in blank spike is outside in house QC limits bias high.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	IA-05_UNIVAR-FD-01_032923		
Lab Sample ID:	JD62956-2	**Date Sampled:**	03/29/23
Matrix:	AIR - Indoor Air Comp. Summa ID: A1609	**Date Received:**	03/29/23
Method:	TO-15	**Percent Solids:**	n/a
Project:	AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	7W01432.D	1.3	04/07/23 00:42	TCH	n/a	n/a	V7W65
Run #2							

	Initial Volume
Run #1	520 ml
Run #2	

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
67-64-1	58.08	Acetone (2-Propanone)	4.1	0.20	0.15	ppbv		9.7	0.48	0.36	ug/m3
107-02-8	56	Acrolein	0.17	0.20	0.088	ppbv	J	0.39	0.46	0.20	ug/m3
107-13-1	53	Acrylonitrile	ND	0.20	0.091	ppbv		ND	0.43	0.20	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.20	0.084	ppbv		ND	0.44	0.19	ug/m3
71-43-2	78.11	Benzene	0.10	0.20	0.062	ppbv	J	0.32	0.64	0.20	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.20	0.030	ppbv		ND	1.3	0.20	ug/m3
75-25-2	252.8	Bromoform	ND	0.20	0.071	ppbv		ND	2.1	0.73	ug/m3
74-83-9	94.94	Bromomethane	ND	0.20	0.069	ppbv		ND	0.78	0.27	ug/m3
593-60-2	106.9	Bromoethene	ND	0.20	0.061	ppbv		ND	0.87	0.27	ug/m3
100-44-7	126	Benzyl Chloride [a]	ND	0.20	0.13	ppbv		ND	1.0	0.67	ug/m3
104-51-8	134	n-Butylbenzene	ND	0.20	0.11	ppbv		ND	1.1	0.60	ug/m3
135-98-8	134	sec-Butylbenzene	ND	0.20	0.081	ppbv		ND	1.1	0.44	ug/m3
75-15-0	76.14	Carbon disulfide	ND	0.20	0.045	ppbv		ND	0.62	0.14	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.20	0.074	ppbv		ND	0.92	0.34	ug/m3
75-00-3	64.52	Chloroethane	ND	0.20	0.068	ppbv		ND	0.53	0.18	ug/m3
67-66-3	119.4	Chloroform	ND	0.20	0.037	ppbv		ND	0.98	0.18	ug/m3
74-87-3	50.49	Chloromethane	0.46	0.20	0.090	ppbv		0.95	0.41	0.19	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.20	0.083	ppbv		ND	0.63	0.26	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.20	0.040	ppbv		ND	1.3	0.25	ug/m3
110-82-7	84.16	Cyclohexane	ND	0.20	0.11	ppbv		ND	0.69	0.38	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	0.057	ppbv		ND	0.81	0.23	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	0.059	ppbv		ND	0.79	0.23	ug/m3
106-93-4	187.9	1,2-Dibromoethane (EDB)	ND	0.20	0.097	ppbv		ND	1.5	0.75	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	0.070	ppbv		ND	0.81	0.28	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.20	0.062	ppbv		ND	0.92	0.29	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.20	0.12	ppbv		ND	0.72	0.43	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.36	0.20	0.032	ppbv		1.8	0.99	0.16	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.20	0.052	ppbv		ND	1.7	0.44	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	0.069	ppbv		ND	0.79	0.27	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	0.077	ppbv		ND	0.79	0.31	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.20	0.062	ppbv		ND	0.91	0.28	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.20	0.040	ppbv		ND	1.2	0.24	ug/m3

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	IA-05_UNIVAR-FD-01_032923		
Lab Sample ID:	JD62956-2	**Date Sampled:**	03/29/23
Matrix:	AIR - Indoor Air Comp. Summa ID: A1609	**Date Received:**	03/29/23
Method:	TO-15	**Percent Solids:**	n/a
Project:	AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
95-50-1	147	o-Dichlorobenzene	ND	0.20	0.15	ppbv		ND	1.2	0.90	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.20	0.19	ppbv		ND	1.2	1.1	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.20	0.10	ppbv		ND	0.91	0.45	ug/m3
108-20-3	102	Di-Isopropyl ether	ND	0.20	0.082	ppbv		ND	0.83	0.34	ug/m3
64-17-5	46.07	Ethanol	2.5	0.50	0.39	ppbv		4.7	0.94	0.73	ug/m3
100-41-4	106.2	Ethylbenzene	ND	0.20	0.061	ppbv		ND	0.87	0.26	ug/m3
141-78-6	88	Ethyl Acetate	1.7	0.20	0.10	ppbv		6.1	0.72	0.36	ug/m3
622-96-8	120.19	4-Ethyltoluene	3.4	0.20	0.095	ppbv		17	0.98	0.47	ug/m3
76-13-1	187.4	Freon 113 [b]	ND	0.20	0.031	ppbv		ND	1.5	0.24	ug/m3
76-14-2	170.9	Freon 114	ND	0.20	0.050	ppbv		ND	1.4	0.35	ug/m3
142-82-5	100.2	Heptane	ND	0.20	0.092	ppbv		ND	0.82	0.38	ug/m3
87-68-3	260.8	Hexachlorobutadiene [b]	ND	0.20	0.062	ppbv		ND	2.1	0.66	ug/m3
110-54-3	86.18	Hexane	ND	0.20	0.11	ppbv		ND	0.70	0.39	ug/m3
591-78-6	100	2-Hexanone	ND	0.20	0.15	ppbv		ND	0.82	0.61	ug/m3
98-82-8	120	Isopropylbenzene	0.23	0.20	0.064	ppbv		1.1	0.98	0.31	ug/m3
67-63-0	60.1	Isopropyl Alcohol	0.70	0.20	0.14	ppbv		1.7	0.49	0.34	ug/m3
99-87-6	134	p-Isopropyltoluene	0.13	0.20	0.080	ppbv	J	0.71	1.1	0.44	ug/m3
75-09-2	84.94	Methylene chloride	0.28	0.20	0.056	ppbv		0.97	0.69	0.19	ug/m3
78-93-3	72.11	Methyl ethyl ketone	0.31	0.20	0.11	ppbv		0.91	0.59	0.32	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.20	0.073	ppbv		ND	0.82	0.30	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.20	0.080	ppbv		ND	0.72	0.29	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.20	0.070	ppbv		ND	0.82	0.29	ug/m3
91-20-3	128.17	Naphthalene	ND	0.20	0.13	ppbv		ND	1.0	0.68	ug/m3
109-66-0	72	Pentane	0.66	0.20	0.14	ppbv		1.9	0.59	0.41	ug/m3
103-65-1	120	n-Propylbenzene	2.1	0.20	0.091	ppbv		10	0.98	0.45	ug/m3
115-07-1	42	Propylene	ND	0.50	0.14	ppbv		ND	0.86	0.24	ug/m3
100-42-5	104.1	Styrene	0.59	0.20	0.12	ppbv		2.5	0.85	0.51	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.20	0.037	ppbv		ND	1.1	0.20	ug/m3
79-34-5	167.85	1,1,2,2-Tetrachloroethane	ND	0.20	0.048	ppbv		ND	1.4	0.33	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	0.038	ppbv		ND	1.1	0.21	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.20	0.12	ppbv		ND	1.5	0.89	ug/m3
95-63-6	120.19	1,2,4-Trimethylbenzene	2.2	0.20	0.087	ppbv		11	0.98	0.43	ug/m3
108-67-8	120.19	1,3,5-Trimethylbenzene	1.0	0.20	0.080	ppbv		4.9	0.98	0.39	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	0.20	0.095	ppbv		ND	0.93	0.44	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	0.20	0.093	ppbv		ND	0.61	0.28	ug/m3
127-18-4	165.8	Tetrachloroethylene	0.074	0.040	0.014	ppbv		0.50	0.27	0.095	ug/m3
109-99-9	72.11	Tetrahydrofuran	ND	0.20	0.090	ppbv		ND	0.59	0.27	ug/m3
108-88-3	92.14	Toluene	0.33	0.20	0.057	ppbv		1.2	0.75	0.21	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	0.10	ug/m3
75-69-4	137.4	Trichlorofluoromethane	0.21	0.20	0.036	ppbv		1.2	1.1	0.20	ug/m3

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	IA-05_UNIVAR-FD-01_032923		
Lab Sample ID:	JD62956-2	**Date Sampled:**	03/29/23
Matrix:	AIR - Indoor Air Comp. Summa ID: A1609	**Date Received:**	03/29/23
Method:	TO-15	**Percent Solids:**	n/a
Project:	AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
75-01-4	62.5	Vinyl chloride	ND	0.20	0.069	ppbv		ND	0.51	0.18	ug/m3
108-05-4	86	Vinyl Acetate	6.7	0.20	0.11	ppbv		24	0.70	0.39	ug/m3
	106.2	m,p-Xylene	0.17	0.20	0.14	ppbv	J	0.74	0.87	0.61	ug/m3
95-47-6	106.2	o-Xylene	0.46	0.20	0.077	ppbv		2.0	0.87	0.33	ug/m3
1330-20-7	106.2	Xylenes (total)	0.63	0.20	0.077	ppbv		2.7	0.87	0.33	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	92%		65-128%

(a) Associated CCV outside of control limits low. This compound in blank spike is outside in house QC limits bias low.
(b) Associated CCV outside of control limits high, sample was ND. This compound in blank spike is outside in house QC limits bias high.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	IA-06_UNIVAR-FD-02_032923		
Lab Sample ID:	JD62956-3	**Date Sampled:**	03/29/23
Matrix:	AIR - Indoor Air Comp. Summa ID: A231	**Date Received:**	03/29/23
Method:	TO-15	**Percent Solids:**	n/a
Project:	AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	7W01433.D	1.6	04/07/23 01:26	TCH	n/a	n/a	V7W65
Run #2							

	Initial Volume
Run #1	640 ml
Run #2	

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
67-64-1	58.08	Acetone (2-Propanone)	3.9	0.20	0.15	ppbv		9.3	0.48	0.36	ug/m3
107-02-8	56	Acrolein	0.16	0.20	0.088	ppbv	J	0.37	0.46	0.20	ug/m3
107-13-1	53	Acrylonitrile	ND	0.20	0.091	ppbv		ND	0.43	0.20	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.20	0.084	ppbv		ND	0.44	0.19	ug/m3
71-43-2	78.11	Benzene	0.12	0.20	0.062	ppbv	J	0.38	0.64	0.20	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.20	0.030	ppbv		ND	1.3	0.20	ug/m3
75-25-2	252.8	Bromoform	ND	0.20	0.071	ppbv		ND	2.1	0.73	ug/m3
74-83-9	94.94	Bromomethane	ND	0.20	0.069	ppbv		ND	0.78	0.27	ug/m3
593-60-2	106.9	Bromoethene	ND	0.20	0.061	ppbv		ND	0.87	0.27	ug/m3
100-44-7	126	Benzyl Chloride [a]	ND	0.20	0.13	ppbv		ND	1.0	0.67	ug/m3
104-51-8	134	n-Butylbenzene	ND	0.20	0.11	ppbv		ND	1.1	0.60	ug/m3
135-98-8	134	sec-Butylbenzene	ND	0.20	0.081	ppbv		ND	1.1	0.44	ug/m3
75-15-0	76.14	Carbon disulfide	ND	0.20	0.045	ppbv		ND	0.62	0.14	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.20	0.074	ppbv		ND	0.92	0.34	ug/m3
75-00-3	64.52	Chloroethane	ND	0.20	0.068	ppbv		ND	0.53	0.18	ug/m3
67-66-3	119.4	Chloroform	0.27	0.20	0.037	ppbv		1.3	0.98	0.18	ug/m3
74-87-3	50.49	Chloromethane	0.61	0.20	0.090	ppbv		1.3	0.41	0.19	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.20	0.083	ppbv		ND	0.63	0.26	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.20	0.040	ppbv		ND	1.3	0.25	ug/m3
110-82-7	84.16	Cyclohexane	ND	0.20	0.11	ppbv		ND	0.69	0.38	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	0.057	ppbv		ND	0.81	0.23	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	0.059	ppbv		ND	0.79	0.23	ug/m3
106-93-4	187.9	1,2-Dibromoethane (EDB)	ND	0.20	0.097	ppbv		ND	1.5	0.75	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	0.070	ppbv		ND	0.81	0.28	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.20	0.062	ppbv		ND	0.92	0.29	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.20	0.12	ppbv		ND	0.72	0.43	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.46	0.20	0.032	ppbv		2.3	0.99	0.16	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.20	0.052	ppbv		ND	1.7	0.44	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	0.069	ppbv		ND	0.79	0.27	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	0.077	ppbv		ND	0.79	0.31	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.20	0.062	ppbv		ND	0.91	0.28	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.20	0.040	ppbv		ND	1.2	0.24	ug/m3

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: IA-06_UNIVAR-FD-02_032923
Lab Sample ID: JD62956-3 **Date Sampled:** 03/29/23
Matrix: AIR - Indoor Air Comp. Summa ID: A231 **Date Received:** 03/29/23
Method: TO-15 **Percent Solids:** n/a
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
95-50-1	147	o-Dichlorobenzene	ND	0.20	0.15	ppbv		ND	1.2	0.90	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.20	0.19	ppbv		ND	1.2	1.1	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.20	0.10	ppbv		ND	0.91	0.45	ug/m3
108-20-3	102	Di-Isopropyl ether	ND	0.20	0.082	ppbv		ND	0.83	0.34	ug/m3
64-17-5	46.07	Ethanol	18.3	0.50	0.39	ppbv		34.5	0.94	0.73	ug/m3
100-41-4	106.2	Ethylbenzene	ND	0.20	0.061	ppbv		ND	0.87	0.26	ug/m3
141-78-6	88	Ethyl Acetate	1.5	0.20	0.10	ppbv		5.4	0.72	0.36	ug/m3
622-96-8	120.19	4-Ethyltoluene	ND	0.20	0.095	ppbv		ND	0.98	0.47	ug/m3
76-13-1	187.4	Freon 113 [b]	ND	0.20	0.031	ppbv		ND	1.5	0.24	ug/m3
76-14-2	170.9	Freon 114	ND	0.20	0.050	ppbv		ND	1.4	0.35	ug/m3
142-82-5	100.2	Heptane	ND	0.20	0.092	ppbv		ND	0.82	0.38	ug/m3
87-68-3	260.8	Hexachlorobutadiene [b]	ND	0.20	0.062	ppbv		ND	2.1	0.66	ug/m3
110-54-3	86.18	Hexane	ND	0.20	0.11	ppbv		ND	0.70	0.39	ug/m3
591-78-6	100	2-Hexanone	ND	0.20	0.15	ppbv		ND	0.82	0.61	ug/m3
98-82-8	120	Isopropylbenzene	ND	0.20	0.064	ppbv		ND	0.98	0.31	ug/m3
67-63-0	60.1	Isopropyl Alcohol	1.2	0.20	0.14	ppbv		2.9	0.49	0.34	ug/m3
99-87-6	134	p-Isopropyltoluene	ND	0.20	0.080	ppbv		ND	1.1	0.44	ug/m3
75-09-2	84.94	Methylene chloride	0.31	0.20	0.056	ppbv		1.1	0.69	0.19	ug/m3
78-93-3	72.11	Methyl ethyl ketone	0.36	0.20	0.11	ppbv		1.1	0.59	0.32	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.20	0.073	ppbv		ND	0.82	0.30	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.20	0.080	ppbv		ND	0.72	0.29	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.20	0.070	ppbv		ND	0.82	0.29	ug/m3
91-20-3	128.17	Naphthalene	ND	0.20	0.13	ppbv		ND	1.0	0.68	ug/m3
109-66-0	72	Pentane	0.55	0.20	0.14	ppbv		1.6	0.59	0.41	ug/m3
103-65-1	120	n-Propylbenzene	ND	0.20	0.091	ppbv		ND	0.98	0.45	ug/m3
115-07-1	42	Propylene	1.7	0.50	0.14	ppbv		2.9	0.86	0.24	ug/m3
100-42-5	104.1	Styrene	ND	0.20	0.12	ppbv		ND	0.85	0.51	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.20	0.037	ppbv		ND	1.1	0.20	ug/m3
79-34-5	167.85	1,1,2,2-Tetrachloroethane	ND	0.20	0.048	ppbv		ND	1.4	0.33	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	0.038	ppbv		ND	1.1	0.21	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.20	0.12	ppbv		ND	1.5	0.89	ug/m3
95-63-6	120.19	1,2,4-Trimethylbenzene	ND	0.20	0.087	ppbv		ND	0.98	0.43	ug/m3
108-67-8	120.19	1,3,5-Trimethylbenzene	ND	0.20	0.080	ppbv		ND	0.98	0.39	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	0.20	0.095	ppbv		ND	0.93	0.44	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	0.20	0.093	ppbv		ND	0.61	0.28	ug/m3
127-18-4	165.8	Tetrachloroethylene	ND	0.040	0.014	ppbv		ND	0.27	0.095	ug/m3
109-99-9	72.11	Tetrahydrofuran	ND	0.20	0.090	ppbv		ND	0.59	0.27	ug/m3
108-88-3	92.14	Toluene	0.23	0.20	0.057	ppbv		0.87	0.75	0.21	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	0.10	ug/m3
75-69-4	137.4	Trichlorofluoromethane	0.28	0.20	0.036	ppbv		1.6	1.1	0.20	ug/m3

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	IA-06_UNIVAR-FD-02_032923		
Lab Sample ID:	JD62956-3	**Date Sampled:**	03/29/23
Matrix:	AIR - Indoor Air Comp. Summa ID: A231	**Date Received:**	03/29/23
Method:	TO-15	**Percent Solids:**	n/a
Project:	AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
75-01-4	62.5	Vinyl chloride	ND	0.20	0.069	ppbv		ND	0.51	0.18	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.20	0.11	ppbv		ND	0.70	0.39	ug/m3
	106.2	m,p-Xylene	ND	0.20	0.14	ppbv		ND	0.87	0.61	ug/m3
95-47-6	106.2	o-Xylene	ND	0.20	0.077	ppbv		ND	0.87	0.33	ug/m3
1330-20-7	106.2	Xylenes (total)	ND	0.20	0.077	ppbv		ND	0.87	0.33	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	92%		65-128%

(a) Associated CCV outside of control limits low. This compound in blank spike is outside in house QC limits bias low.
(b) Associated CCV outside of control limits high, sample was ND. This compound in blank spike is outside in house QC limits bias high.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	IA-04_UNIVAR13_032923		
Lab Sample ID:	JD62956-4	**Date Sampled:**	03/29/23
Matrix:	AIR - Indoor Air Comp. Summa ID: A1069	**Date Received:**	03/29/23
Method:	TO-15	**Percent Solids:**	n/a
Project:	AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3W79979.D	1.6	04/08/23 15:22	TCH	n/a	n/a	V3W3154
Run #2							

	Initial Volume
Run #1	640 ml
Run #2	

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
67-64-1	58.08	Acetone (2-Propanone)	16.9	0.20	0.15	ppbv		40.1	0.48	0.36	ug/m3
107-02-8	56	Acrolein	0.33	0.20	0.088	ppbv		0.76	0.46	0.20	ug/m3
107-13-1	53	Acrylonitrile	ND	0.20	0.091	ppbv		ND	0.43	0.20	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.20	0.084	ppbv		ND	0.44	0.19	ug/m3
71-43-2	78.11	Benzene	0.17	0.20	0.062	ppbv	J	0.54	0.64	0.20	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.20	0.030	ppbv		ND	1.3	0.20	ug/m3
75-25-2	252.8	Bromoform	ND	0.20	0.071	ppbv		ND	2.1	0.73	ug/m3
74-83-9	94.94	Bromomethane	ND	0.20	0.069	ppbv		ND	0.78	0.27	ug/m3
593-60-2	106.9	Bromoethene	ND	0.20	0.061	ppbv		ND	0.87	0.27	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.20	0.13	ppbv		ND	1.0	0.67	ug/m3
104-51-8	134	n-Butylbenzene	ND	0.20	0.11	ppbv		ND	1.1	0.60	ug/m3
135-98-8	134	sec-Butylbenzene	ND	0.20	0.081	ppbv		ND	1.1	0.44	ug/m3
75-15-0	76.14	Carbon disulfide	ND	0.20	0.045	ppbv		ND	0.62	0.14	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.20	0.074	ppbv		ND	0.92	0.34	ug/m3
75-00-3	64.52	Chloroethane	ND	0.20	0.068	ppbv		ND	0.53	0.18	ug/m3
67-66-3	119.4	Chloroform	ND	0.20	0.037	ppbv		ND	0.98	0.18	ug/m3
74-87-3	50.49	Chloromethane	0.72	0.20	0.090	ppbv		1.5	0.41	0.19	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.20	0.083	ppbv		ND	0.63	0.26	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.20	0.040	ppbv		ND	1.3	0.25	ug/m3
110-82-7	84.16	Cyclohexane	ND	0.20	0.11	ppbv		ND	0.69	0.38	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	0.057	ppbv		ND	0.81	0.23	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	0.059	ppbv		ND	0.79	0.23	ug/m3
106-93-4	187.9	1,2-Dibromoethane (EDB)	ND	0.20	0.097	ppbv		ND	1.5	0.75	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	0.070	ppbv		ND	0.81	0.28	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.20	0.062	ppbv		ND	0.92	0.29	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.20	0.12	ppbv		ND	0.72	0.43	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.41	0.20	0.032	ppbv		2.0	0.99	0.16	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.20	0.052	ppbv		ND	1.7	0.44	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	0.069	ppbv		ND	0.79	0.27	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	0.077	ppbv		ND	0.79	0.31	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.20	0.062	ppbv		ND	0.91	0.28	ug/m3
541-73-1	147	m-Dichlorobenzene [a]	ND	0.20	0.040	ppbv		ND	1.2	0.24	ug/m3

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: IA-04_UNIVAR13_032923
Lab Sample ID: JD62956-4 **Date Sampled:** 03/29/23
Matrix: AIR - Indoor Air Comp. Summa ID: A1069 **Date Received:** 03/29/23
Method: TO-15 **Percent Solids:** n/a
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
95-50-1	147	o-Dichlorobenzene	ND	0.20	0.15	ppbv		ND	1.2	0.90	ug/m3
106-46-7	147	p-Dichlorobenzene [a]	ND	0.20	0.19	ppbv		ND	1.2	1.1	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.20	0.10	ppbv		ND	0.91	0.45	ug/m3
108-20-3	102	Di-Isopropyl ether	ND	0.20	0.082	ppbv		ND	0.83	0.34	ug/m3
64-17-5	46.07	Ethanol	177	0.50	0.39	ppbv	E	334	0.94	0.73	ug/m3
100-41-4	106.2	Ethylbenzene	ND	0.20	0.061	ppbv		ND	0.87	0.26	ug/m3
141-78-6	88	Ethyl Acetate	4.0	0.20	0.10	ppbv		14	0.72	0.36	ug/m3
622-96-8	120.19	4-Ethyltoluene	ND	0.20	0.095	ppbv		ND	0.98	0.47	ug/m3
76-13-1	187.4	Freon 113	ND	0.20	0.031	ppbv		ND	1.5	0.24	ug/m3
76-14-2	170.9	Freon 114	ND	0.20	0.050	ppbv		ND	1.4	0.35	ug/m3
142-82-5	100.2	Heptane	0.12	0.20	0.092	ppbv	J	0.49	0.82	0.38	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.20	0.062	ppbv		ND	2.1	0.66	ug/m3
110-54-3	86.18	Hexane	0.46	0.20	0.11	ppbv		1.6	0.70	0.39	ug/m3
591-78-6	100	2-Hexanone	ND	0.20	0.15	ppbv		ND	0.82	0.61	ug/m3
98-82-8	120	Isopropylbenzene	ND	0.20	0.064	ppbv		ND	0.98	0.31	ug/m3
67-63-0	60.1	Isopropyl Alcohol	1.2	0.20	0.14	ppbv		2.9	0.49	0.34	ug/m3
99-87-6	134	p-Isopropyltoluene	0.92	0.20	0.080	ppbv		5.0	1.1	0.44	ug/m3
75-09-2	84.94	Methylene chloride	0.21	0.20	0.056	ppbv		0.73	0.69	0.19	ug/m3
78-93-3	72.11	Methyl ethyl ketone	0.52	0.20	0.11	ppbv		1.5	0.59	0.32	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.20	0.073	ppbv		ND	0.82	0.30	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.20	0.080	ppbv		ND	0.72	0.29	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.20	0.070	ppbv		ND	0.82	0.29	ug/m3
91-20-3	128.17	Naphthalene	ND	0.20	0.13	ppbv		ND	1.0	0.68	ug/m3
109-66-0	72	Pentane	1.3	0.20	0.14	ppbv		3.8	0.59	0.41	ug/m3
103-65-1	120	n-Propylbenzene	ND	0.20	0.091	ppbv		ND	0.98	0.45	ug/m3
115-07-1	42	Propylene	ND	0.50	0.14	ppbv		ND	0.86	0.24	ug/m3
100-42-5	104.1	Styrene	ND	0.20	0.12	ppbv		ND	0.85	0.51	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.20	0.037	ppbv		ND	1.1	0.20	ug/m3
79-34-5	167.85	1,1,2,2-Tetrachloroethane	ND	0.20	0.048	ppbv		ND	1.4	0.33	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	0.038	ppbv		ND	1.1	0.21	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	0.60	0.20	0.12	ppbv		4.5	1.5	0.89	ug/m3
95-63-6	120.19	1,2,4-Trimethylbenzene	0.12	0.20	0.087	ppbv	J	0.59	0.98	0.43	ug/m3
108-67-8	120.19	1,3,5-Trimethylbenzene	ND	0.20	0.080	ppbv		ND	0.98	0.39	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	0.20	0.095	ppbv		ND	0.93	0.44	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	0.20	0.093	ppbv		ND	0.61	0.28	ug/m3
127-18-4	165.8	Tetrachloroethylene	0.039	0.040	0.014	ppbv	J	0.26	0.27	0.095	ug/m3
109-99-9	72.11	Tetrahydrofuran	ND	0.20	0.090	ppbv		ND	0.59	0.27	ug/m3
108-88-3	92.14	Toluene	0.57	0.20	0.057	ppbv		2.1	0.75	0.21	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	0.10	ug/m3
75-69-4	137.4	Trichlorofluoromethane	0.22	0.20	0.036	ppbv		1.2	1.1	0.20	ug/m3

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	IA-04_UNIVAR13_032923		
Lab Sample ID:	JD62956-4	**Date Sampled:**	03/29/23
Matrix:	AIR - Indoor Air Comp. Summa ID: A1069	**Date Received:**	03/29/23
Method:	TO-15	**Percent Solids:**	n/a
Project:	AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
75-01-4	62.5	Vinyl chloride	ND	0.20	0.069	ppbv		ND	0.51	0.18	ug/m3
108-05-4	86	Vinyl Acetate	0.67	0.20	0.11	ppbv		2.4	0.70	0.39	ug/m3
	106.2	m,p-Xylene	0.31	0.20	0.14	ppbv		1.3	0.87	0.61	ug/m3
95-47-6	106.2	o-Xylene	0.11	0.20	0.077	ppbv	J	0.48	0.87	0.33	ug/m3
1330-20-7	106.2	Xylenes (total)	0.41	0.20	0.077	ppbv		1.8	0.87	0.33	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	105%		65-128%

(a) Associated CCV outside of control limits high, sample was ND. This compound in blank spike is outside in house QC limits bias high.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Summa Canister and Flow Controller Log

Air

CHAIN OF CUSTODY - AIR

PAGE 1 OF 1

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX 732-329-3499
www.sgs.com/ehsusa

FED-EX Tracking #:
Bottle Order Control #: BW-031323-14
SGS Quote #:
SGS Job #: JD62956

Client / Reporting Information

Company Name: Arcadis
Address: 28550 Cabot Dr Suite #500
City: Novi State: MI Zip: 48377
Project Contact: Christina Weaver E-mail: christina.weaver@arcadis.com
Phone #: 248-832-0008
Sampler(s) Name(s): Scott Filipiak, Lottie Jay

Project Information

Project Name: Univar Grand Rapids
Street: 2940 Stafford Ave SW
City: Wyoming State: MI
Project #: 30164040
Client Purchase Order #:

Weather Parameters

Temperature (Fahrenheit) Start: Maximum: Stop: Minimum:
Atmoshpheric Pressure (inches of Hg) Start: Maximum: Stop: Minimum:
Other weather comment:

Lab Sample #	Field ID / Point of Collection	Air Type: Ind (I) Soil Vap (SV) Amb (A)	Air Type: Res (R) Non-Res (NR)	Sampling Equipment Info: Canister Serial #	Sampling Equipment Info: Canister Size 6L or 1L	Sampling Equipment Info: Flow Controller Serial #	Start Sampling Information: Date	Start: Time (24hr clock)	Start: Canister Pressure ("Hg)	Start: Interior Temp (F)	Start: Sampler Init.	Stop Sampling Information: Date	Stop: Time (24hr clock)	Stop: Canister Pressure ("Hg)	Stop: Interior Temp (F)	Stop: Sampler Init.	Requested Analysis: TO-15
1	AA-03_Univar_032923	SV	NR	A1611	6L	FC 1140	3/29/23	0659	30.0	36	SF	3/29/23	1420	8	34	SF	X
2	IA-05_Univar-FD-01_032923	SV		A1069	6L	FC108	3/29/23	0703	29.0	65	SF	3/29/23	1410	8	65	SF	X
3	IA-06_Univar-FD-02_032923	SV		A231	6L	FC773	3/29/23	0705	28.0	65	SF	3/29/23	1400	8	65	SF	X
4	IA-04_Univar3_032923	SV		A1609	6L	FC830	3/29/23	0708	30.0	65	SF	3/29/23	1405	8	74	SF	X

Turnaround Time (Business days)
15 Business Days
10 Business Days
5 Business Days
3 Business Days *
2 Business Days *
1 Business Day *
Other
Approved By:
Date:
* Approval needed for 1-3 Business Day TAT

Data Deliverable Information
All NJDEP TO-15 is mandatory Full T1
Comm A
Comm B
Reduced T2
Full T1
Other:
DKQP reporting

Comments / Remarks
COC from Samples on 3/28/23 also to be tested for TO-15
Univar 4.4
Sample inventory is verified upon receipt in the Laboratory

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Laboratory: 1	Date / Time: 3/24/23 1130	Received By: 1	Relinquished By: 2 Lottie Jay	Date / Time: 3/29/23 1500	Received By: 2
Relinquished by: 3	Date / Time:	Received By: 3	Relinquished By: 4	Date / Time:	Received By: 4
Relinquished by: 5	Date / Time:	Received By: 5	Custody Seal #		

http://www.sgs.com/en/terms-and-conditions

Initial Assessment 03-21-23
Label Verification:

EHSA-QAC-0022-01-FORM-Dayton-Air COC
Rev.date:1/15/2021

JD62956: Chain of Custody
Page 1 of 2

SGS Sample Receipt Summary

Job Number: JD62956 **Client:** ARCADIS **Project:** AGMMIS: UNIVAR GRAND RAPIDS, 2940

Date / Time Received: 3/29/2023 3:00:00 PM **Delivery Method:** DROP-OFF **Airbill #'s:**

Cooler Temps (Raw Measured) °C:

Cooler Temps (Corrected) °C:

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☐		☐
2. Cooler temp verification:	N/A		
3. Cooler media:	N/A		
4. No. Coolers:	N/A		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	☑
2. Trip Blank listed on COC:	☐		☐	☑
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Test Strip Lot #s: pH 1-12: 231619 pH 12+: 203117A Other: (Specify)

Comments

SM089-03
Rev. Date 12/7/17

Summa Canister and Flow Controller Log

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI
Received: 03/29/23

SUMMA CANISTERS

Shipping							Receiving					
Summa ID	L	Vac " Hg	Date Out	By	SCC Batch	SCC FileID	Sample Number	Date In	By	Vac " Hg	Pres psig	Final psig	Dil Fact
A1611	6	29.4	03/22/23	ML	CP12084	8W00248.D	JD62956-1	03/31/23	DG	6.5			1
A1609	6	29.4	03/22/23	ML	CP11981	6W27219.D	JD62956-2	03/31/23	DG	9		1.3	1.56
A231	6	29.4	03/22/23	ML	CP12095	7W00413.D	JD62956-3	03/31/23	DG	10		1	1.6
A1069	6	29.4	03/22/23	ML	CP11947	6W26980.D	JD62956-4	03/31/23	DG	10		1	1.6

FLOW CONTROLLERS / OTHER

Shipping					Receiving				
Flow Crtl ID	Date Out	By	cc/ min	Time hrs.	Date In	By	cc/ min	Flow RPD	Equipment Type
FC108	03/22/23	ML	10.4	8	03/31/23	DG	9.5	9	Flow Controller
FC773	03/22/23	ML	10.5	8	03/31/23	DG	10	4.9	Flow Controller
FC830	03/22/23	ML	10.3	8	03/31/23	DG	10.3	0	Flow Controller
FC1140	03/22/23	ML	10.5	8	03/31/23	DG	10.4	1	Flow Controller

SGS Bottle Order(s):
BW-031323-145

Prep Date	Room Temp(F)	Bar Pres "Hg
03/22/23	70	29.92

MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V7W65-MB	7W01422.D	1	04/06/23	TCH	n/a	n/a	V7W65

The QC reported here applies to the following samples: **Method:** TO-15

JD62956-1, JD62956-2, JD62956-3

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
67-64-1	Acetone (2-Propanone)	ND	0.20	0.15	ppbv		ND	0.48	ug/m3
107-02-8	Acrolein	ND	0.20	0.088	ppbv		ND	0.46	ug/m3
107-13-1	Acrylonitrile	ND	0.20	0.091	ppbv		ND	0.43	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	0.084	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	0.062	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	0.030	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	0.071	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	0.069	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
104-51-8	n-Butylbenzene	ND	0.20	0.11	ppbv		ND	1.1	ug/m3
135-98-8	sec-Butylbenzene	ND	0.20	0.081	ppbv		ND	1.1	ug/m3
75-15-0	Carbon disulfide	ND	0.20	0.045	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	0.074	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	0.068	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	0.037	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	0.090	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	0.083	ppbv		ND	0.63	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	0.040	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	0.11	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	0.057	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.059	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane (EDB)	ND	0.20	0.097	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	0.070	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	0.062	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	0.12	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	0.032	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	0.052	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.069	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.077	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	0.062	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	0.040	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	0.15	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	0.19	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	0.10	ppbv		ND	0.91	ug/m3
108-20-3	Di-Isopropyl ether	ND	0.20	0.082	ppbv		ND	0.83	ug/m3

Method Blank Summary

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V7W65-MB	7W01422.D	1	04/06/23	TCH	n/a	n/a	V7W65

The QC reported here applies to the following samples: **Method:** TO-15

JD62956-1, JD62956-2, JD62956-3

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
64-17-5	Ethanol	ND	0.50	0.39	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	0.10	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	0.095	ppbv		ND	0.98	ug/m3
76-13-1	Freon 113	ND	0.20	0.031	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	0.050	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	0.092	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	0.062	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	0.15	ppbv		ND	0.82	ug/m3
98-82-8	Isopropylbenzene	ND	0.20	0.064	ppbv		ND	0.98	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	0.14	ppbv		ND	0.49	ug/m3
99-87-6	p-Isopropyltoluene	ND	0.20	0.080	ppbv		ND	1.1	ug/m3
75-09-2	Methylene chloride	ND	0.20	0.056	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	0.11	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	0.073	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	0.080	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	0.070	ppbv		ND	0.82	ug/m3
91-20-3	Naphthalene	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
109-66-0	Pentane	ND	0.20	0.14	ppbv		ND	0.59	ug/m3
103-65-1	n-Propylbenzene	ND	0.20	0.091	ppbv		ND	0.98	ug/m3
115-07-1	Propylene	ND	0.50	0.14	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	0.12	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.037	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.048	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.038	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	0.12	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	0.087	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	0.080	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	0.095	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	0.093	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	0.014	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	0.090	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	0.057	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	0.036	ppbv		ND	1.1	ug/m3

Method Blank Summary

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V7W65-MB	7W01422.D	1	04/06/23	TCH	n/a	n/a	V7W65

The QC reported here applies to the following samples: **Method:** TO-15

JD62956-1, JD62956-2, JD62956-3

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
75-01-4	Vinyl chloride	ND	0.20	0.069	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	0.14	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	0.077	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	0.077	ppbv		ND	0.87	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	91%	65-128%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
124-38-9	Carbon dioxide	1.73	6.7	ppbv	JN
	Total TIC, Volatile		0	ppbv	

Method Blank Summary

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W3154-MB	3W79978.D	1	04/08/23	TCH	n/a	n/a	V3W3154

The QC reported here applies to the following samples: **Method:** TO-15

JD62956-4

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
67-64-1	Acetone (2-Propanone)	ND	0.20	0.15	ppbv		ND	0.48	ug/m3
107-02-8	Acrolein	ND	0.20	0.088	ppbv		ND	0.46	ug/m3
107-13-1	Acrylonitrile	ND	0.20	0.091	ppbv		ND	0.43	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	0.084	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	0.062	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	0.030	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	0.071	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	0.069	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
104-51-8	n-Butylbenzene	ND	0.20	0.11	ppbv		ND	1.1	ug/m3
135-98-8	sec-Butylbenzene	ND	0.20	0.081	ppbv		ND	1.1	ug/m3
75-15-0	Carbon disulfide	ND	0.20	0.045	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	0.074	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	0.068	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	0.037	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	0.090	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	0.083	ppbv		ND	0.63	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	0.040	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	0.11	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	0.057	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.059	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane (EDB)	ND	0.20	0.097	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	0.070	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	0.062	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	0.12	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	0.032	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	0.052	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.069	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.077	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	0.062	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	0.040	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	0.15	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	0.19	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	0.10	ppbv		ND	0.91	ug/m3
108-20-3	Di-Isopropyl ether	ND	0.20	0.082	ppbv		ND	0.83	ug/m3

Method Blank Summary

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W3154-MB	3W79978.D	1	04/08/23	TCH	n/a	n/a	V3W3154

The QC reported here applies to the following samples: **Method:** TO-15

JD62956-4

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
64-17-5	Ethanol	ND	0.50	0.39	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	0.10	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	0.095	ppbv		ND	0.98	ug/m3
76-13-1	Freon 113	ND	0.20	0.031	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	0.050	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	0.092	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	0.062	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	0.15	ppbv		ND	0.82	ug/m3
98-82-8	Isopropylbenzene	ND	0.20	0.064	ppbv		ND	0.98	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	0.14	ppbv		ND	0.49	ug/m3
99-87-6	p-Isopropyltoluene	ND	0.20	0.080	ppbv		ND	1.1	ug/m3
75-09-2	Methylene chloride	ND	0.20	0.056	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	0.11	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	0.073	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	0.080	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	0.070	ppbv		ND	0.82	ug/m3
91-20-3	Naphthalene	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
109-66-0	Pentane	ND	0.20	0.14	ppbv		ND	0.59	ug/m3
103-65-1	n-Propylbenzene	ND	0.20	0.091	ppbv		ND	0.98	ug/m3
115-07-1	Propylene	ND	0.50	0.14	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	0.12	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.037	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.048	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.038	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	0.12	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	0.087	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	0.080	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	0.095	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	0.093	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	0.014	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	0.090	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	0.057	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	0.036	ppbv		ND	1.1	ug/m3

Method Blank Summary

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W3154-MB	3W79978.D	1	04/08/23	TCH	n/a	n/a	V3W3154

The QC reported here applies to the following samples: **Method:** TO-15

JD62956-4

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
75-01-4	Vinyl chloride	ND	0.20	0.069	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	0.14	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	0.077	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	0.077	ppbv		ND	0.87	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	93%	65-128%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
124-38-9	Carbon dioxide	4.09	19	ppbv	JN
13183-70-5	System artifact	24.45	.36	ppbv	JN
	Total TIC, Volatile			ppbv	

Method Blank Summary

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W1141-MB	6W26949.D	1	11/07/22	TCH	n/a	n/a	V6W1141

The QC reported here applies to the following samples: **Method:** TO-15

V6W1141-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
67-64-1	Acetone (2-Propanone)	ND	0.20	0.15	ppbv		ND	0.48	ug/m3
107-02-8	Acrolein	ND	0.20	0.088	ppbv		ND	0.46	ug/m3
107-13-1	Acrylonitrile	ND	0.20	0.091	ppbv		ND	0.43	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	0.084	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	0.062	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	0.030	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	0.071	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	0.069	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
104-51-8	n-Butylbenzene	ND	0.20	0.11	ppbv		ND	1.1	ug/m3
135-98-8	sec-Butylbenzene	ND	0.20	0.081	ppbv		ND	1.1	ug/m3
75-15-0	Carbon disulfide	ND	0.20	0.045	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	0.074	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	0.068	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	0.037	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	0.090	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	0.083	ppbv		ND	0.63	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	0.040	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	0.11	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	0.057	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.059	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane (EDB)	ND	0.20	0.097	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	0.070	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	0.062	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	0.12	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	0.032	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	0.052	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.069	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.077	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	0.062	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	0.040	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	0.15	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	0.19	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	0.10	ppbv		ND	0.91	ug/m3
108-20-3	Di-Isopropyl ether	ND	0.20	0.082	ppbv		ND	0.83	ug/m3

Method Blank Summary

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W1141-MB	6W26949.D	1	11/07/22	TCH	n/a	n/a	V6W1141

The QC reported here applies to the following samples: **Method:** TO-15

V6W1141-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
64-17-5	Ethanol	ND	0.50	0.39	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	0.10	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	0.095	ppbv		ND	0.98	ug/m3
76-13-1	Freon 113	ND	0.20	0.031	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	0.050	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	0.092	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	0.062	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	0.15	ppbv		ND	0.82	ug/m3
98-82-8	Isopropylbenzene	ND	0.20	0.064	ppbv		ND	0.98	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	0.14	ppbv		ND	0.49	ug/m3
99-87-6	p-Isopropyltoluene	ND	0.20	0.080	ppbv		ND	1.1	ug/m3
75-09-2	Methylene chloride	ND	0.20	0.056	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	0.11	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	0.073	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	0.080	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	0.070	ppbv		ND	0.82	ug/m3
91-20-3	Naphthalene	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
109-66-0	Pentane	ND	0.20	0.14	ppbv		ND	0.59	ug/m3
103-65-1	n-Propylbenzene	ND	0.20	0.091	ppbv		ND	0.98	ug/m3
115-07-1	Propylene	ND	0.50	0.14	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	0.12	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.037	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.048	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.038	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	0.12	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	0.087	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	0.080	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	0.095	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	0.093	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	0.014	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	0.090	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	0.057	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	0.036	ppbv		ND	1.1	ug/m3

Method Blank Summary

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W1141-MB	6W26949.D	1	11/07/22	TCH	n/a	n/a	V6W1141

The QC reported here applies to the following samples: **Method:** TO-15

V6W1141-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
75-01-4	Vinyl chloride	ND	0.20	0.069	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	0.14	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	0.077	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	0.077	ppbv		ND	0.87	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	100%	65-128%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
124-38-9	Carbon dioxide	1.65	3.2	ppbv	JN
	Total TIC, Volatile		0	ppbv	

Method Blank Summary

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W1149-MB	6W27192.D	1	11/25/22	TCH	n/a	n/a	V6W1149

The QC reported here applies to the following samples: **Method:** TO-15

V6W1149-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
67-64-1	Acetone (2-Propanone)	ND	0.20	0.15	ppbv		ND	0.48	ug/m3
107-02-8	Acrolein	ND	0.20	0.088	ppbv		ND	0.46	ug/m3
107-13-1	Acrylonitrile	ND	0.20	0.091	ppbv		ND	0.43	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	0.084	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	0.099	0.20	0.062	ppbv	J	0.32	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	0.030	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	0.071	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	0.069	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
104-51-8	n-Butylbenzene	ND	0.20	0.11	ppbv		ND	1.1	ug/m3
135-98-8	sec-Butylbenzene	ND	0.20	0.081	ppbv		ND	1.1	ug/m3
75-15-0	Carbon disulfide	ND	0.20	0.045	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	0.074	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	0.068	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	0.037	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	0.090	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	0.083	ppbv		ND	0.63	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	0.040	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	0.11	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	0.057	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.059	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane (EDB)	ND	0.20	0.097	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	0.070	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	0.062	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	0.12	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	0.032	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	0.052	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.069	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.077	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	0.062	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	0.040	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	0.15	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	0.19	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	0.10	ppbv		ND	0.91	ug/m3
108-20-3	Di-Isopropyl ether	ND	0.20	0.082	ppbv		ND	0.83	ug/m3

Method Blank Summary

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W1149-MB	6W27192.D	1	11/25/22	TCH	n/a	n/a	V6W1149

The QC reported here applies to the following samples: **Method:** TO-15

V6W1149-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
64-17-5	Ethanol	ND	0.50	0.39	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	0.10	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	0.095	ppbv		ND	0.98	ug/m3
76-13-1	Freon 113	ND	0.20	0.031	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	0.050	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	0.092	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	0.062	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	0.15	ppbv		ND	0.82	ug/m3
98-82-8	Isopropylbenzene	ND	0.20	0.064	ppbv		ND	0.98	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	0.14	ppbv		ND	0.49	ug/m3
99-87-6	p-Isopropyltoluene	ND	0.20	0.080	ppbv		ND	1.1	ug/m3
75-09-2	Methylene chloride	ND	0.20	0.056	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	0.11	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	0.073	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	0.080	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	0.070	ppbv		ND	0.82	ug/m3
91-20-3	Naphthalene	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
109-66-0	Pentane	ND	0.20	0.14	ppbv		ND	0.59	ug/m3
103-65-1	n-Propylbenzene	ND	0.20	0.091	ppbv		ND	0.98	ug/m3
115-07-1	Propylene	ND	0.50	0.14	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	0.12	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.037	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.048	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.038	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	0.12	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	0.087	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	0.080	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	0.095	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	0.093	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	0.014	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	0.090	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	0.057	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	0.036	ppbv		ND	1.1	ug/m3

Method Blank Summary

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W1149-MB	6W27192.D	1	11/25/22	TCH	n/a	n/a	V6W1149

The QC reported here applies to the following samples: **Method:** TO-15

V6W1149-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
75-01-4	Vinyl chloride	ND	0.20	0.069	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	0.14	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	0.077	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	0.077	ppbv		ND	0.87	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	92%	65-128%

Method Blank Summary

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V8W10-MB	8W00229.D	1	02/07/23	TCH	n/a	n/a	V8W10

The QC reported here applies to the following samples: **Method:** TO-15

V8W10-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
67-64-1	Acetone (2-Propanone)	ND	0.20	0.15	ppbv		ND	0.48	ug/m3
107-02-8	Acrolein	ND	0.20	0.088	ppbv		ND	0.46	ug/m3
107-13-1	Acrylonitrile	ND	0.20	0.091	ppbv		ND	0.43	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	0.084	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	0.062	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	0.030	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	0.071	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	0.069	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
104-51-8	n-Butylbenzene	ND	0.20	0.11	ppbv		ND	1.1	ug/m3
135-98-8	sec-Butylbenzene	ND	0.20	0.081	ppbv		ND	1.1	ug/m3
75-15-0	Carbon disulfide	ND	0.20	0.045	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	0.074	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	0.068	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	0.037	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	0.090	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	0.083	ppbv		ND	0.63	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	0.040	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	0.11	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	0.057	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.059	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane (EDB)	ND	0.20	0.097	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	0.070	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	0.062	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	0.12	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	0.032	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	0.052	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.069	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.077	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	0.062	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	0.040	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	0.15	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	0.19	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	0.10	ppbv		ND	0.91	ug/m3
108-20-3	Di-Isopropyl ether	ND	0.20	0.082	ppbv		ND	0.83	ug/m3

Method Blank Summary

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V8W10-MB	8W00229.D	1	02/07/23	TCH	n/a	n/a	V8W10

The QC reported here applies to the following samples: **Method:** TO-15

V8W10-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
64-17-5	Ethanol	ND	0.50	0.39	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	0.10	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	0.095	ppbv		ND	0.98	ug/m3
76-13-1	Freon 113	ND	0.20	0.031	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	0.050	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	0.092	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	0.062	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	0.15	ppbv		ND	0.82	ug/m3
98-82-8	Isopropylbenzene	ND	0.20	0.064	ppbv		ND	0.98	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	0.14	ppbv		ND	0.49	ug/m3
99-87-6	p-Isopropyltoluene	ND	0.20	0.080	ppbv		ND	1.1	ug/m3
75-09-2	Methylene chloride	ND	0.20	0.056	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	0.11	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	0.073	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	0.080	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	0.070	ppbv		ND	0.82	ug/m3
91-20-3	Naphthalene	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
109-66-0	Pentane	ND	0.20	0.14	ppbv		ND	0.59	ug/m3
103-65-1	n-Propylbenzene	ND	0.20	0.091	ppbv		ND	0.98	ug/m3
115-07-1	Propylene	ND	0.50	0.14	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	0.12	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.037	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.048	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.038	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	0.12	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	0.087	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	0.080	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	0.095	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	0.093	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	0.014	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	0.090	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	0.057	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	0.036	ppbv		ND	1.1	ug/m3

Method Blank Summary

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V8W10-MB	8W00229.D	1	02/07/23	TCH	n/a	n/a	V8W10

The QC reported here applies to the following samples: **Method:** TO-15

V8W10-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
75-01-4	Vinyl chloride	ND	0.20	0.069	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	0.14	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	0.077	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	0.077	ppbv		ND	0.87	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	94%	65-128%

Method Blank Summary

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V7W21-MB	7W00408.D	1	02/10/23	TCH	n/a	n/a	V7W21

The QC reported here applies to the following samples: **Method:** TO-15

V7W21-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
67-64-1	Acetone (2-Propanone)	ND	0.20	0.15	ppbv		ND	0.48	ug/m3
107-02-8	Acrolein	ND	0.20	0.088	ppbv		ND	0.46	ug/m3
107-13-1	Acrylonitrile	ND	0.20	0.091	ppbv		ND	0.43	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	0.084	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	0.062	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	0.030	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	0.071	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	0.069	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
104-51-8	n-Butylbenzene	ND	0.20	0.11	ppbv		ND	1.1	ug/m3
135-98-8	sec-Butylbenzene	ND	0.20	0.081	ppbv		ND	1.1	ug/m3
75-15-0	Carbon disulfide	ND	0.20	0.045	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	0.074	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	0.068	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	0.037	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	0.090	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	0.083	ppbv		ND	0.63	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	0.040	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	0.11	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	0.057	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.059	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane (EDB)	ND	0.20	0.097	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	0.070	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	0.062	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	0.12	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	0.032	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	0.052	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.069	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.077	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	0.062	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	0.040	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	0.15	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	0.19	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	0.10	ppbv		ND	0.91	ug/m3
108-20-3	Di-Isopropyl ether	ND	0.20	0.082	ppbv		ND	0.83	ug/m3

Method Blank Summary

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V7W21-MB	7W00408.D	1	02/10/23	TCH	n/a	n/a	V7W21

The QC reported here applies to the following samples: **Method:** TO-15

V7W21-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
64-17-5	Ethanol	ND	0.50	0.39	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	0.10	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	0.095	ppbv		ND	0.98	ug/m3
76-13-1	Freon 113	ND	0.20	0.031	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	0.050	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	0.092	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	0.062	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	0.15	ppbv		ND	0.82	ug/m3
98-82-8	Isopropylbenzene	ND	0.20	0.064	ppbv		ND	0.98	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	0.14	ppbv		ND	0.49	ug/m3
99-87-6	p-Isopropyltoluene	ND	0.20	0.080	ppbv		ND	1.1	ug/m3
75-09-2	Methylene chloride	ND	0.20	0.056	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	0.11	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	0.073	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	0.080	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	0.070	ppbv		ND	0.82	ug/m3
91-20-3	Naphthalene	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
109-66-0	Pentane	ND	0.20	0.14	ppbv		ND	0.59	ug/m3
103-65-1	n-Propylbenzene	ND	0.20	0.091	ppbv		ND	0.98	ug/m3
115-07-1	Propylene	ND	0.50	0.14	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	0.12	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.037	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.048	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.038	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	0.12	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	0.087	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	0.080	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	0.095	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	0.093	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	0.014	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	0.090	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	0.057	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	0.036	ppbv		ND	1.1	ug/m3

Method Blank Summary

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V7W21-MB	7W00408.D	1	02/10/23	TCH	n/a	n/a	V7W21

The QC reported here applies to the following samples: **Method:** TO-15

V7W21-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
75-01-4	Vinyl chloride	ND	0.20	0.069	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	0.14	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	0.077	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	0.077	ppbv		ND	0.87	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	97%	65-128%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
124-38-9	Carbon dioxide	1.75	5.3	ppbv	JN
	Total TIC, Volatile		0	ppbv	

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V7W65-BS	7W01418.D	1	04/06/23	TCH	n/a	n/a	V7W65
V7W65-BSD	7W01419.D	1	04/06/23	TCH	n/a	n/a	V7W65

The QC reported here applies to the following samples: **Method:** TO-15

JD62956-1, JD62956-2, JD62956-3

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone (2-Propanone)	10	7.9	79	8.0	80	1	70-130/30
107-02-8	Acrolein	10	7.7	77	7.9	79	3	70-130/30
107-13-1	Acrylonitrile	10	8.4	84	8.6	86	2	70-130/30
106-99-0	1,3-Butadiene	10	8.3	83	8.5	85	2	70-130/30
71-43-2	Benzene	10	8.0	80	8.1	81	1	70-130/30
75-27-4	Bromodichloromethane	10	9.4	94	9.2	92	2	70-130/30
75-25-2	Bromoform	10	12.3	123	12.1	121	2	70-130/30
74-83-9	Bromomethane	10	11.2	112	11.2	112	0	70-130/30
593-60-2	Bromoethene	10	10.8	108	10.8	108	0	70-130/30
100-44-7	Benzyl Chloride	10	6.6	66* [a]	6.5	65* [a]	2	70-130/30
104-51-8	n-Butylbenzene	10	12.1	121	11.7	117	3	50-150/30 [b]
135-98-8	sec-Butylbenzene	10	11.6	116	11.4	114	2	50-150/30 [b]
75-15-0	Carbon disulfide	10	10.8	108	10.8	108	0	70-130/30
108-90-7	Chlorobenzene	10	10.3	103	10.0	100	3	70-130/30
75-00-3	Chloroethane	10	8.9	89	8.9	89	0	70-130/30
67-66-3	Chloroform	10	8.8	88	8.9	89	1	70-130/30
74-87-3	Chloromethane	10	8.6	86	8.9	89	3	70-130/30
107-05-1	3-Chloropropene	10	10.5	105	10.8	108	3	70-130/30
56-23-5	Carbon tetrachloride	10	8.7	87	9.0	90	3	70-130/30
110-82-7	Cyclohexane	10	9.1	91	9.0	90	1	70-130/30
75-34-3	1,1-Dichloroethane	10	7.7	77	7.9	79	3	70-130/30
75-35-4	1,1-Dichloroethylene	10	11.2	112	11.2	112	0	70-130/30
106-93-4	1,2-Dibromoethane (EDB)	10	10	100	9.7	97	3	70-130/30
107-06-2	1,2-Dichloroethane	10	7.7	77	7.8	78	1	70-130/30
78-87-5	1,2-Dichloropropane	10	8.4	84	8.2	82	2	70-130/30
123-91-1	1,4-Dioxane	10	8.8	88	8.4	84	5	70-130/30
75-71-8	Dichlorodifluoromethane	10	9.4	94	9.6	96	2	70-130/30
124-48-1	Dibromochloromethane	10	10.4	104	10.3	103	1	70-130/30
156-60-5	trans-1,2-Dichloroethylene	10	8.3	83	8.6	86	4	70-130/30
156-59-2	cis-1,2-Dichloroethylene	10	8.7	87	8.6	86	1	70-130/30
10061-01-5	cis-1,3-Dichloropropene	10	8.5	85	8.3	83	2	70-130/30
541-73-1	m-Dichlorobenzene	10	12.1	121	11.9	119	2	70-130/30
95-50-1	o-Dichlorobenzene	10	12.4	124	12.2	122	2	70-130/30
106-46-7	p-Dichlorobenzene	10	12.3	123	12.0	120	2	70-130/30
10061-02-6	trans-1,3-Dichloropropene	10	8.5	85	8.2	82	4	70-130/30
108-20-3	Di-Isopropyl ether	10	7.8	78	7.8	78	0	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V7W65-BS	7W01418.D	1	04/06/23	TCH	n/a	n/a	V7W65
V7W65-BSD	7W01419.D	1	04/06/23	TCH	n/a	n/a	V7W65

The QC reported here applies to the following samples: **Method:** TO-15

JD62956-1, JD62956-2, JD62956-3

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
64-17-5	Ethanol	10	8.4	84	8.4	84	0	70-130/30
100-41-4	Ethylbenzene	10	9.3	93	9.1	91	2	70-130/30
141-78-6	Ethyl Acetate	10	7.5	75	7.7	77	3	70-130/30
622-96-8	4-Ethyltoluene	10	10.7	107	10.4	104	3	70-130/30
76-13-1	Freon 113	10	13.1	131* [c]	13.0	130	1	70-130/30
76-14-2	Freon 114	10	10.5	105	10.4	104	1	70-130/30
142-82-5	Heptane	10	7.9	79	7.8	78	1	70-130/30
87-68-3	Hexachlorobutadiene	10	14.3	143* [c]	14.0	140* [c]	2	70-130/30
110-54-3	Hexane	10	7.7	77	7.7	77	0	70-130/30
591-78-6	2-Hexanone	10	7.2	72	7.0	70	3	70-130/30
98-82-8	Isopropylbenzene	10	10.7	107	10.4	104	3	70-130/30
67-63-0	Isopropyl Alcohol	10	8.2	82	8.2	82	0	70-130/30
99-87-6	p-Isopropyltoluene	10	12.1	121	11.8	118	3	70-130/30
75-09-2	Methylene chloride	10	10.4	104	10.3	103	1	70-130/30
78-93-3	Methyl ethyl ketone	10	8.2	82	8.1	81	1	70-130/30
108-10-1	Methyl Isobutyl Ketone	10	7.5	75	7.4	74	1	70-130/30
1634-04-4	Methyl Tert Butyl Ether	10	7.1	71	7.1	71	0	70-130/30
80-62-6	Methylmethacrylate	10	8.5	85	8.2	82	4	70-130/30
91-20-3	Naphthalene	10	11.5	115	11.3	113	2	70-130/30
109-66-0	Pentane	10	9.0	90	8.8	88	2	70-130/30
103-65-1	n-Propylbenzene	10	11.0	110	10.8	108	2	50-150/30 [b]
115-07-1	Propylene	10	7.2	72	7.6	76	5	70-130/30
100-42-5	Styrene	10	9.9	99	9.8	98	1	70-130/30
71-55-6	1,1,1-Trichloroethane	10	8.4	84	8.5	85	1	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	10	10.0	100	9.8	98	2	70-130/30
79-00-5	1,1,2-Trichloroethane	10	9.0	90	8.9	89	1	70-130/30
120-82-1	1,2,4-Trichlorobenzene	10	12.5	125	12.1	121	3	70-130/30
95-63-6	1,2,4-Trimethylbenzene	10	10.6	106	10.5	105	1	70-130/30
108-67-8	1,3,5-Trimethylbenzene	10	10.3	103	10.1	101	2	70-130/30
540-84-1	2,2,4-Trimethylpentane	10	8.1	81	7.9	79	2	70-130/30
75-65-0	Tertiary Butyl Alcohol	10	8.7	87	8.5	85	2	70-130/30
127-18-4	Tetrachloroethylene	10	11.1	111	11.0	110	1	70-130/30
109-99-9	Tetrahydrofuran	10	8.1	81	8.2	82	1	70-130/30
108-88-3	Toluene	10	9.0	90	8.8	88	2	70-130/30
79-01-6	Trichloroethylene	10	9.7	97	9.5	95	2	70-130/30
75-69-4	Trichlorofluoromethane	10	10.5	105	10.4	104	1	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V7W65-BS	7W01418.D	1	04/06/23	TCH	n/a	n/a	V7W65
V7W65-BSD	7W01419.D	1	04/06/23	TCH	n/a	n/a	V7W65

The QC reported here applies to the following samples: **Method:** TO-15

JD62956-1, JD62956-2, JD62956-3

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
75-01-4	Vinyl chloride	10	9.0	90	9.0	90	0	70-130/30
108-05-4	Vinyl Acetate	10	7.9	79	7.9	79	0	70-130/30
	m,p-Xylene	20	18.7	94	18.4	92	2	70-130/30
95-47-6	o-Xylene	10	9.5	95	9.4	94	1	70-130/30
1330-20-7	Xylenes (total)	30	28.2	94	27.8	93	1	70-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	98%	96%	65-128%

(a) Outside in house control limits.
(b) Advisory control limits.
(c) High percent recovery and no associated positive reported in the QC batch.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W3154-BS	3W79975.D	1	04/08/23	TCH	n/a	n/a	V3W3154
V3W3154-BSD	3W79976.D	1	04/08/23	TCH	n/a	n/a	V3W3154

The QC reported here applies to the following samples: **Method:** TO-15

JD62956-4

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone (2-Propanone)	10	9.1	91	9.3	93	2	70-130/30
107-02-8	Acrolein	10	8.8	88	8.9	89	1	70-130/30
107-13-1	Acrylonitrile	10	8.9	89	9.1	91	2	70-130/30
106-99-0	1,3-Butadiene	10	10.8	108	10.9	109	1	70-130/30
71-43-2	Benzene	10	9.0	90	9.1	91	1	70-130/30
75-27-4	Bromodichloromethane	10	9.7	97	9.8	98	1	70-130/30
75-25-2	Bromoform	10	10.9	109	11.1	111	2	70-130/30
74-83-9	Bromomethane	10	11.2	112	11.0	110	2	70-130/30
593-60-2	Bromoethene	10	11.8	118	11.5	115	3	70-130/30
100-44-7	Benzyl Chloride	10	12.5	125	12.6	126	1	70-130/30
104-51-8	n-Butylbenzene	10	13.2	132	13.3	133	1	50-150/30 [a]
135-98-8	sec-Butylbenzene	10	11.4	114	11.4	114	0	50-150/30 [a]
75-15-0	Carbon disulfide	10	8.6	86	8.7	87	1	70-130/30
108-90-7	Chlorobenzene	10	10.0	100	10.0	100	0	70-130/30
75-00-3	Chloroethane	10	11.3	113	10.9	109	4	70-130/30
67-66-3	Chloroform	10	8.6	86	8.7	87	1	70-130/30
74-87-3	Chloromethane	10	9.0	90	9.2	92	2	70-130/30
107-05-1	3-Chloropropene	10	8.6	86	8.7	87	1	70-130/30
56-23-5	Carbon tetrachloride	10	9.3	93	9.4	94	1	70-130/30
110-82-7	Cyclohexane	10	8.7	87	8.8	88	1	70-130/30
75-34-3	1,1-Dichloroethane	10	8.2	82	8.2	82	0	70-130/30
75-35-4	1,1-Dichloroethylene	10	8.5	85	8.5	85	0	70-130/30
106-93-4	1,2-Dibromoethane (EDB)	10	10.3	103	10.3	103	0	70-130/30
107-06-2	1,2-Dichloroethane	10	9.3	93	9.5	95	2	70-130/30
78-87-5	1,2-Dichloropropane	10	8.6	86	8.7	87	1	70-130/30
123-91-1	1,4-Dioxane	10	9.9	99	10.2	102	3	70-130/30
75-71-8	Dichlorodifluoromethane	10	9.4	94	9.5	95	1	70-130/30
124-48-1	Dibromochloromethane	10	10.1	101	10.0	100	1	70-130/30
156-60-5	trans-1,2-Dichloroethylene	10	8.6	86	8.7	87	1	70-130/30
156-59-2	cis-1,2-Dichloroethylene	10	8.6	86	8.7	87	1	70-130/30
10061-01-5	cis-1,3-Dichloropropene	10	9.4	94	9.6	96	2	70-130/30
541-73-1	m-Dichlorobenzene	10	13.7	137* [b]	13.7	137* [b]	0	70-130/30
95-50-1	o-Dichlorobenzene	10	12.5	125	12.5	125	0	70-130/30
106-46-7	p-Dichlorobenzene	10	13.7	137* [b]	13.6	136* [b]	1	70-130/30
10061-02-6	trans-1,3-Dichloropropene	10	9.5	95	9.8	98	3	70-130/30
108-20-3	Di-Isopropyl ether	10	9.7	97	9.9	99	2	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W3154-BS	3W79975.D	1	04/08/23	TCH	n/a	n/a	V3W3154
V3W3154-BSD	3W79976.D	1	04/08/23	TCH	n/a	n/a	V3W3154

The QC reported here applies to the following samples: **Method:** TO-15

JD62956-4

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
64-17-5	Ethanol	10	11.0	110	10.4	104	6	70-130/30
100-41-4	Ethylbenzene	10	9.8	98	9.8	98	0	70-130/30
141-78-6	Ethyl Acetate	10	9.6	96	9.6	96	0	70-130/30
622-96-8	4-Ethyltoluene	10	11.3	113	11.3	113	0	70-130/30
76-13-1	Freon 113	10	9.2	92	9.3	93	1	70-130/30
76-14-2	Freon 114	10	10.9	109	10.9	109	0	70-130/30
142-82-5	Heptane	10	9.0	90	9.1	91	1	70-130/30
87-68-3	Hexachlorobutadiene	10	12.6	126	12.6	126	0	70-130/30
110-54-3	Hexane	10	8.7	87	8.7	87	0	70-130/30
591-78-6	2-Hexanone	10	9.8	98	9.7	97	1	70-130/30
98-82-8	Isopropylbenzene	10	10.8	108	10.8	108	0	70-130/30
67-63-0	Isopropyl Alcohol	10	8.4	84	8.5	85	1	70-130/30
99-87-6	p-Isopropyltoluene	10	12.4	124	12.4	124	0	70-130/30
75-09-2	Methylene chloride	10	8.2	82	8.3	83	1	70-130/30
78-93-3	Methyl ethyl ketone	10	8.9	89	9.0	90	1	70-130/30
108-10-1	Methyl Isobutyl Ketone	10	9.7	97	9.7	97	0	70-130/30
1634-04-4	Methyl Tert Butyl Ether	10	7.9	79	7.9	79	0	70-130/30
80-62-6	Methylmethacrylate	10	8.4	84	8.5	85	1	70-130/30
91-20-3	Naphthalene	10	12.0	120	12.2	122	2	70-130/30
109-66-0	Pentane	10	8.0	80	8.1	81	1	70-130/30
103-65-1	n-Propylbenzene	10	11.1	111	11.1	111	0	50-150/30 [a]
115-07-1	Propylene	10	7.8	78	7.8	78	0	70-130/30
100-42-5	Styrene	10	10.5	105	10.6	106	1	70-130/30
71-55-6	1,1,1-Trichloroethane	10	8.8	88	8.9	89	1	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	10	10.5	105	10.5	105	0	70-130/30
79-00-5	1,1,2-Trichloroethane	10	9.3	93	9.5	95	2	70-130/30
120-82-1	1,2,4-Trichlorobenzene	10	9.8	98	10.0	100	2	70-130/30
95-63-6	1,2,4-Trimethylbenzene	10	12.0	120	12.0	120	0	70-130/30
108-67-8	1,3,5-Trimethylbenzene	10	10.7	107	10.7	107	0	70-130/30
540-84-1	2,2,4-Trimethylpentane	10	9.5	95	9.6	96	1	70-130/30
75-65-0	Tertiary Butyl Alcohol	10	8.8	88	8.8	88	0	70-130/30
127-18-4	Tetrachloroethylene	10	10.5	105	10.5	105	0	70-130/30
109-99-9	Tetrahydrofuran	10	8.7	87	8.7	87	0	70-130/30
108-88-3	Toluene	10	9.7	97	9.8	98	1	70-130/30
79-01-6	Trichloroethylene	10	9.9	99	10.0	100	1	70-130/30
75-69-4	Trichlorofluoromethane	10	9.6	96	9.7	97	1	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W3154-BS	3W79975.D	1	04/08/23	TCH	n/a	n/a	V3W3154
V3W3154-BSD	3W79976.D	1	04/08/23	TCH	n/a	n/a	V3W3154

The QC reported here applies to the following samples: **Method:** TO-15

JD62956-4

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
75-01-4	Vinyl chloride	10	11.3	113	11.4	114	1	70-130/30
108-05-4	Vinyl Acetate	10	9.6	96	9.7	97	1	70-130/30
	m,p-Xylene	20	20.7	104	20.8	104	0	70-130/30
95-47-6	o-Xylene	10	10.6	106	10.6	106	0	70-130/30
1330-20-7	Xylenes (total)	30	31.3	104	31.4	105	0	70-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	107%	108%	65-128%

(a) Advisory control limits.
(b) High percent recovery and no associated positive reported in the QC batch.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W1141-BS	6W26946.D	1	11/07/22	TCH	n/a	n/a	V6W1141
V6W1141-BSD	6W26947.D	1	11/07/22	TCH	n/a	n/a	V6W1141

The QC reported here applies to the following samples: **Method:** TO-15

V6W1141-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone (2-Propanone)	10	9.8	98	9.4	94	4	70-130/30
107-02-8	Acrolein	10	11.0	110	10.6	106	4	70-130/30
107-13-1	Acrylonitrile	10	10.4	104	10.0	100	4	70-130/30
106-99-0	1,3-Butadiene	10	10.1	101	9.9	99	2	70-130/30
71-43-2	Benzene	10	8.9	89	8.7	87	2	70-130/30
75-27-4	Bromodichloromethane	10	8.6	86	8.4	84	2	70-130/30
75-25-2	Bromoform	10	9.8	98	9.4	94	4	70-130/30
74-83-9	Bromomethane	10	10.4	104	10.1	101	3	70-130/30
593-60-2	Bromoethene	10	10.5	105	10.2	102	3	70-130/30
100-44-7	Benzyl Chloride	10	10.5	105	10.2	102	3	70-130/30
104-51-8	n-Butylbenzene	10	11.2	112	10.6	106	6	50-150/30 [a]
135-98-8	sec-Butylbenzene	10	10.4	104	9.9	99	5	50-150/30 [a]
75-15-0	Carbon disulfide	10	9.5	95	9.1	91	4	70-130/30
108-90-7	Chlorobenzene	10	9.4	94	9.0	90	4	70-130/30
75-00-3	Chloroethane	10	10.8	108	10.3	103	5	70-130/30
67-66-3	Chloroform	10	9.2	92	8.9	89	3	70-130/30
74-87-3	Chloromethane	10	9.4	94	9.1	91	3	70-130/30
107-05-1	3-Chloropropene	10	10.1	101	9.6	96	5	70-130/30
56-23-5	Carbon tetrachloride	10	9.0	90	8.6	86	5	70-130/30
110-82-7	Cyclohexane	10	9.2	92	8.7	87	6	70-130/30
75-34-3	1,1-Dichloroethane	10	9.2	92	9.0	90	2	70-130/30
75-35-4	1,1-Dichloroethylene	10	9.5	95	9.2	92	3	70-130/30
106-93-4	1,2-Dibromoethane (EDB)	10	9.5	95	9.1	91	4	70-130/30
107-06-2	1,2-Dichloroethane	10	8.7	87	8.4	84	4	70-130/30
78-87-5	1,2-Dichloropropane	10	9.0	90	8.5	85	6	70-130/30
123-91-1	1,4-Dioxane	10	10.8	108	10.3	103	5	70-130/30
75-71-8	Dichlorodifluoromethane	10	9.2	92	8.8	88	4	70-130/30
124-48-1	Dibromochloromethane	10	9.1	91	8.7	87	4	70-130/30
156-60-5	trans-1,2-Dichloroethylene	10	9.4	94	9.0	90	4	70-130/30
156-59-2	cis-1,2-Dichloroethylene	10	9.3	93	8.9	89	4	70-130/30
10061-01-5	cis-1,3-Dichloropropene	10	9.3	93	9.0	90	3	70-130/30
541-73-1	m-Dichlorobenzene	10	10.0	100	9.6	96	4	70-130/30
95-50-1	o-Dichlorobenzene	10	9.9	99	9.5	95	4	70-130/30
106-46-7	p-Dichlorobenzene	10	10.0	100	9.7	97	3	70-130/30
10061-02-6	trans-1,3-Dichloropropene	10	9.4	94	9.0	90	4	70-130/30
108-20-3	Di-Isopropyl ether	10	8.9	89	8.7	87	2	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W1141-BS	6W26946.D	1	11/07/22	TCH	n/a	n/a	V6W1141
V6W1141-BSD	6W26947.D	1	11/07/22	TCH	n/a	n/a	V6W1141

The QC reported here applies to the following samples: **Method:** TO-15

V6W1141-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
64-17-5	Ethanol	10	9.8	98	9.6	96	2	70-130/30
100-41-4	Ethylbenzene	10	8.3	83	8.0	80	4	70-130/30
141-78-6	Ethyl Acetate	10	9.4	94	9.1	91	3	70-130/30
622-96-8	4-Ethyltoluene	10	10.4	104	10.3	103	1	70-130/30
76-13-1	Freon 113	10	9.7	97	9.4	94	3	70-130/30
76-14-2	Freon 114	10	9.4	94	9.1	91	3	70-130/30
142-82-5	Heptane	10	9.3	93	8.9	89	4	70-130/30
87-68-3	Hexachlorobutadiene	10	11.0	110	10.6	106	4	70-130/30
110-54-3	Hexane	10	9.0	90	8.7	87	3	70-130/30
591-78-6	2-Hexanone	10	12.6	126	12.2	122	3	70-130/30
98-82-8	Isopropylbenzene	10	9.4	94	9.0	90	4	70-130/30
67-63-0	Isopropyl Alcohol	10	9.5	95	9.2	92	3	70-130/30
99-87-6	p-Isopropyltoluene	10	10.2	102	9.8	98	4	70-130/30
75-09-2	Methylene chloride	10	9.2	92	8.9	89	3	70-130/30
78-93-3	Methyl ethyl ketone	10	9.8	98	9.4	94	4	70-130/30
108-10-1	Methyl Isobutyl Ketone	10	11.0	110	10.7	107	3	70-130/30
1634-04-4	Methyl Tert Butyl Ether	10	8.0	80	7.7	77	4	70-130/30
80-62-6	Methylmethacrylate	10	9.6	96	9.5	95	1	70-130/30
91-20-3	Naphthalene	10	11.8	118	11.2	112	5	70-130/30
109-66-0	Pentane	10	9.6	96	9.4	94	2	70-130/30
103-65-1	n-Propylbenzene	10	10.0	100	9.7	97	3	50-150/30 [a]
115-07-1	Propylene	10	8.9	89	8.7	87	2	70-130/30
100-42-5	Styrene	10	10.2	102	9.8	98	4	70-130/30
71-55-6	1,1,1-Trichloroethane	10	8.8	88	8.5	85	3	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	10	9.8	98	9.4	94	4	70-130/30
79-00-5	1,1,2-Trichloroethane	10	9.4	94	9.0	90	4	70-130/30
120-82-1	1,2,4-Trichlorobenzene	10	11.2	112	10.5	105	6	70-130/30
95-63-6	1,2,4-Trimethylbenzene	10	10.5	105	10.2	102	3	70-130/30
108-67-8	1,3,5-Trimethylbenzene	10	10.5	105	10.0	100	5	70-130/30
540-84-1	2,2,4-Trimethylpentane	10	9.0	90	8.7	87	3	70-130/30
75-65-0	Tertiary Butyl Alcohol	10	8.7	87	8.5	85	2	70-130/30
127-18-4	Tetrachloroethylene	10	9.9	99	9.6	96	3	70-130/30
109-99-9	Tetrahydrofuran	10	9.8	98	9.5	95	3	70-130/30
108-88-3	Toluene	10	8.5	85	8.1	81	5	70-130/30
79-01-6	Trichloroethylene	10	8.7	87	8.4	84	4	70-130/30
75-69-4	Trichlorofluoromethane	10	10	100	9.7	97	3	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W1141-BS	6W26946.D	1	11/07/22	TCH	n/a	n/a	V6W1141
V6W1141-BSD	6W26947.D	1	11/07/22	TCH	n/a	n/a	V6W1141

The QC reported here applies to the following samples: **Method:** TO-15

V6W1141-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
75-01-4	Vinyl chloride	10	9.6	96	9.4	94	2	70-130/30
108-05-4	Vinyl Acetate	10	10.1	101	9.8	98	3	70-130/30
	m,p-Xylene	20	17.4	87	16.7	84	4	70-130/30
95-47-6	o-Xylene	10	8.8	88	8.5	85	3	70-130/30
1330-20-7	Xylenes (total)	30	26.2	87	25.2	84	4	70-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	103%	104%	65-128%

(a) Advisory control limits.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W1149-BS	6W27189.D	1	11/25/22	TCH	n/a	n/a	V6W1149
V6W1149-BSD	6W27190.D	1	11/25/22	TCH	n/a	n/a	V6W1149

The QC reported here applies to the following samples: **Method:** TO-15

V6W1149-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone (2-Propanone)	10	10.3	103	10.3	103	0	70-130/30
107-02-8	Acrolein	10	12.0	120	12.0	120	0	70-130/30
107-13-1	Acrylonitrile	10	10.5	105	10.6	106	1	70-130/30
106-99-0	1,3-Butadiene	10	10.4	104	10.4	104	0	70-130/30
71-43-2	Benzene	10	9.3	93	9.2	92	1	70-130/30
75-27-4	Bromodichloromethane	10	9.8	98	9.8	98	0	70-130/30
75-25-2	Bromoform	10	11.2	112	11.1	111	1	70-130/30
74-83-9	Bromomethane	10	11.5	115	11.7	117	2	70-130/30
593-60-2	Bromoethene	10	11.5	115	11.4	114	1	70-130/30
100-44-7	Benzyl Chloride	10	14.6	146* [a]	14.4	144* [a]	1	70-130/30
104-51-8	n-Butylbenzene	10	13.1	131	12.9	129	2	50-150/30 [b]
135-98-8	sec-Butylbenzene	10	11.9	119	11.9	119	0	50-150/30 [b]
75-15-0	Carbon disulfide	10	10.0	100	10	100	0	70-130/30
108-90-7	Chlorobenzene	10	10.5	105	10.5	105	0	70-130/30
75-00-3	Chloroethane	10	11.0	110	10.9	109	1	70-130/30
67-66-3	Chloroform	10	9.7	97	9.7	97	0	70-130/30
74-87-3	Chloromethane	10	9.4	94	9.5	95	1	70-130/30
107-05-1	3-Chloropropene	10	10.5	105	10.2	102	3	70-130/30
56-23-5	Carbon tetrachloride	10	9.4	94	9.3	93	1	70-130/30
110-82-7	Cyclohexane	10	9.9	99	9.8	98	1	70-130/30
75-34-3	1,1-Dichloroethane	10	9.6	96	9.6	96	0	70-130/30
75-35-4	1,1-Dichloroethylene	10	10.8	108	10.5	105	3	70-130/30
106-93-4	1,2-Dibromoethane (EDB)	10	10.4	104	10.4	104	0	70-130/30
107-06-2	1,2-Dichloroethane	10	8.7	87	8.6	86	1	70-130/30
78-87-5	1,2-Dichloropropane	10	9.7	97	9.7	97	0	70-130/30
123-91-1	1,4-Dioxane	10	12.7	127	12.7	127	0	70-130/30
75-71-8	Dichlorodifluoromethane	10	12.1	121	12.1	121	0	70-130/30
124-48-1	Dibromochloromethane	10	10.2	102	10.3	103	1	70-130/30
156-60-5	trans-1,2-Dichloroethylene	10	10.3	103	10.2	102	1	70-130/30
156-59-2	cis-1,2-Dichloroethylene	10	10.2	102	10	100	2	70-130/30
10061-01-5	cis-1,3-Dichloropropene	10	10	100	9.9	99	1	70-130/30
541-73-1	m-Dichlorobenzene	10	12.3	123	12.2	122	1	70-130/30
95-50-1	o-Dichlorobenzene	10	12.3	123	12.2	122	1	70-130/30
106-46-7	p-Dichlorobenzene	10	12.5	125	12.4	124	1	70-130/30
10061-02-6	trans-1,3-Dichloropropene	10	10.2	102	10.1	101	1	70-130/30
108-20-3	Di-Isopropyl ether	10	9.7	97	9.5	95	2	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W1149-BS	6W27189.D	1	11/25/22	TCH	n/a	n/a	V6W1149
V6W1149-BSD	6W27190.D	1	11/25/22	TCH	n/a	n/a	V6W1149

The QC reported here applies to the following samples: **Method:** TO-15

V6W1149-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
64-17-5	Ethanol	10	10	100	10.1	101	1	70-130/30
100-41-4	Ethylbenzene	10	9.4	94	9.2	92	2	70-130/30
141-78-6	Ethyl Acetate	10	10.3	103	10.2	102	1	70-130/30
622-96-8	4-Ethyltoluene	10	12.0	120	11.8	118	2	70-130/30
76-13-1	Freon 113	10	10.9	109	10.8	108	1	70-130/30
76-14-2	Freon 114	10	10.0	100	10.1	101	1	70-130/30
142-82-5	Heptane	10	9.3	93	9.2	92	1	70-130/30
87-68-3	Hexachlorobutadiene	10	13.8	138* [a]	13.9	139* [a]	1	70-130/30
110-54-3	Hexane	10	9.4	94	9.3	93	1	70-130/30
591-78-6	2-Hexanone	10	13.8	138* [a]	13.6	136* [a]	1	70-130/30
98-82-8	Isopropylbenzene	10	10.5	105	10.4	104	1	70-130/30
67-63-0	Isopropyl Alcohol	10	9.8	98	9.6	96	2	70-130/30
99-87-6	p-Isopropyltoluene	10	11.9	119	12.0	120	1	70-130/30
75-09-2	Methylene chloride	10	9.9	99	9.8	98	1	70-130/30
78-93-3	Methyl ethyl ketone	10	10.6	106	10.4	104	2	70-130/30
108-10-1	Methyl Isobutyl Ketone	10	12.2	122	12.0	120	2	70-130/30
1634-04-4	Methyl Tert Butyl Ether	10	9.3	93	9.1	91	2	70-130/30
80-62-6	Methylmethacrylate	10	10.6	106	10.4	104	2	70-130/30
91-20-3	Naphthalene	10	15.7	157* [a]	15.7	157* [a]	0	70-130/30
109-66-0	Pentane	10	9.9	99	10	100	1	70-130/30
103-65-1	n-Propylbenzene	10	11.5	115	11.5	115	0	50-150/30 [b]
115-07-1	Propylene	10	9.2	92	9.0	90	2	70-130/30
100-42-5	Styrene	10	11.4	114	11.3	113	1	70-130/30
71-55-6	1,1,1-Trichloroethane	10	9.5	95	9.4	94	1	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	10	11.3	113	11.3	113	0	70-130/30
79-00-5	1,1,2-Trichloroethane	10	10.3	103	10.4	104	1	70-130/30
120-82-1	1,2,4-Trichlorobenzene	10	14.4	144* [a]	14.4	144* [a]	0	70-130/30
95-63-6	1,2,4-Trimethylbenzene	10	12.1	121	12.1	121	0	70-130/30
108-67-8	1,3,5-Trimethylbenzene	10	11.8	118	11.7	117	1	70-130/30
540-84-1	2,2,4-Trimethylpentane	10	9.7	97	9.6	96	1	70-130/30
75-65-0	Tertiary Butyl Alcohol	10	10.3	103	10.0	100	3	70-130/30
127-18-4	Tetrachloroethylene	10	10.8	108	10.8	108	0	70-130/30
109-99-9	Tetrahydrofuran	10	10.5	105	10.3	103	2	70-130/30
108-88-3	Toluene	10	9.5	95	9.4	94	1	70-130/30
79-01-6	Trichloroethylene	10	10	100	9.9	99	1	70-130/30
75-69-4	Trichlorofluoromethane	10	10.2	102	10.3	103	1	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W1149-BS	6W27189.D	1	11/25/22	TCH	n/a	n/a	V6W1149
V6W1149-BSD	6W27190.D	1	11/25/22	TCH	n/a	n/a	V6W1149

The QC reported here applies to the following samples: **Method:** TO-15

V6W1149-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
75-01-4	Vinyl chloride	10	10	100	10.1	101	1	70-130/30
108-05-4	Vinyl Acetate	10	11.8	118	11.5	115	3	70-130/30
	m,p-Xylene	20	19.6	98	19.4	97	1	70-130/30
95-47-6	o-Xylene	10	9.9	99	9.8	98	1	70-130/30
1330-20-7	Xylenes (total)	30	29.5	98	29.2	97	1	70-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	98%	97%	65-128%

(a) High percent recovery and no associated positive reported in the QC batch.
(b) Advisory control limits.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V8W10-BS	8W00226.D	1	02/07/23	TCH	n/a	n/a	V8W10
V8W10-BSD	8W00227.D	1	02/07/23	TCH	n/a	n/a	V8W10

The QC reported here applies to the following samples: **Method:** TO-15

V8W10-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone (2-Propanone)	10	9.0	90	9.3	93	3	70-130/30
107-02-8	Acrolein	10	7.6	76	8.0	80	5	70-130/30
107-13-1	Acrylonitrile	10	10.1	101	10.6	106	5	70-130/30
106-99-0	1,3-Butadiene	10	10.3	103	10.8	108	5	70-130/30
71-43-2	Benzene	10	9.8	98	10.1	101	3	70-130/30
75-27-4	Bromodichloromethane	10	10.6	106	10.7	107	1	70-130/30
75-25-2	Bromoform	10	9.5	95	9.6	96	1	70-130/30
74-83-9	Bromomethane	10	9.7	97	10.0	100	3	70-130/30
593-60-2	Bromoethene	10	9.6	96	9.9	99	3	70-130/30
100-44-7	Benzyl Chloride	10	7.9	79	8.2	82	4	70-130/30
104-51-8	n-Butylbenzene	10	11.7	117	11.8	118	1	50-150/30 [a]
135-98-8	sec-Butylbenzene	10	11.2	112	11.3	113	1	50-150/30 [a]
75-15-0	Carbon disulfide	10	10.3	103	10.6	106	3	70-130/30
108-90-7	Chlorobenzene	10	10.2	102	10.3	103	1	70-130/30
75-00-3	Chloroethane	10	10	100	10.4	104	4	70-130/30
67-66-3	Chloroform	10	10.8	108	11.0	110	2	70-130/30
74-87-3	Chloromethane	10	9.1	91	9.3	93	2	70-130/30
107-05-1	3-Chloropropene	10	10.1	101	10.6	106	5	70-130/30
56-23-5	Carbon tetrachloride	10	9.8	98	10.0	100	2	70-130/30
110-82-7	Cyclohexane	10	10	100	10.2	102	2	70-130/30
75-34-3	1,1-Dichloroethane	10	10.3	103	10.6	106	3	70-130/30
75-35-4	1,1-Dichloroethylene	10	10.2	102	10.5	105	3	70-130/30
106-93-4	1,2-Dibromoethane (EDB)	10	10.2	102	10.4	104	2	70-130/30
107-06-2	1,2-Dichloroethane	10	10.7	107	10.9	109	2	70-130/30
78-87-5	1,2-Dichloropropane	10	10.5	105	10.7	107	2	70-130/30
123-91-1	1,4-Dioxane	10	10.0	100	10.1	101	1	70-130/30
75-71-8	Dichlorodifluoromethane	10	11.0	110	11.3	113	3	70-130/30
124-48-1	Dibromochloromethane	10	9.9	99	10	100	1	70-130/30
156-60-5	trans-1,2-Dichloroethylene	10	10.1	101	10.3	103	2	70-130/30
156-59-2	cis-1,2-Dichloroethylene	10	10	100	10.3	103	3	70-130/30
10061-01-5	cis-1,3-Dichloropropene	10	9.2	92	9.4	94	2	70-130/30
541-73-1	m-Dichlorobenzene	10	10.8	108	10.9	109	1	70-130/30
95-50-1	o-Dichlorobenzene	10	11.1	111	11.3	113	2	70-130/30
106-46-7	p-Dichlorobenzene	10	10.8	108	10.8	108	0	70-130/30
10061-02-6	trans-1,3-Dichloropropene	10	8.9	89	9.2	92	3	70-130/30
108-20-3	Di-Isopropyl ether	10	10.6	106	11.0	110	4	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V8W10-BS	8W00226.D	1	02/07/23	TCH	n/a	n/a	V8W10
V8W10-BSD	8W00227.D	1	02/07/23	TCH	n/a	n/a	V8W10

The QC reported here applies to the following samples: **Method:** TO-15

V8W10-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
64-17-5	Ethanol	10	10.6	106	10.8	108	2	70-130/30
100-41-4	Ethylbenzene	10	8.6	86	8.8	88	2	70-130/30
141-78-6	Ethyl Acetate	10	10.9	109	11.3	113	4	70-130/30
622-96-8	4-Ethyltoluene	10	10.9	109	11.1	111	2	70-130/30
76-13-1	Freon 113	10	10.0	100	10.3	103	3	70-130/30
76-14-2	Freon 114	10	10.8	108	11.1	111	3	70-130/30
142-82-5	Heptane	10	9.9	99	10.0	100	1	70-130/30
87-68-3	Hexachlorobutadiene	10	10.1	101	10.2	102	1	70-130/30
110-54-3	Hexane	10	10.8	108	11.0	110	2	70-130/30
591-78-6	2-Hexanone	10	10.5	105	10.8	108	3	70-130/30
98-82-8	Isopropylbenzene	10	10.4	104	10.6	106	2	70-130/30
67-63-0	Isopropyl Alcohol	10	9.2	92	9.6	96	4	70-130/30
99-87-6	p-Isopropyltoluene	10	11.8	118	11.8	118	0	70-130/30
75-09-2	Methylene chloride	10	10	100	10.3	103	3	70-130/30
78-93-3	Methyl ethyl ketone	10	10.1	101	10.5	105	4	70-130/30
108-10-1	Methyl Isobutyl Ketone	10	10.2	102	10.4	104	2	70-130/30
1634-04-4	Methyl Tert Butyl Ether	10	9.0	90	9.4	94	4	70-130/30
80-62-6	Methylmethacrylate	10	10.2	102	10.4	104	2	70-130/30
91-20-3	Naphthalene	10	11.3	113	11.4	114	1	70-130/30
109-66-0	Pentane	10	9.9	99	10.3	103	4	70-130/30
103-65-1	n-Propylbenzene	10	10.6	106	10.7	107	1	50-150/30 [a]
115-07-1	Propylene	10	9.7	97	9.9	99	2	70-130/30
100-42-5	Styrene	10	10.1	101	10.3	103	2	70-130/30
71-55-6	1,1,1-Trichloroethane	10	9.8	98	10.1	101	3	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	10	11.2	112	11.3	113	1	70-130/30
79-00-5	1,1,2-Trichloroethane	10	10.7	107	10.9	109	2	70-130/30
120-82-1	1,2,4-Trichlorobenzene	10	10.6	106	10.6	106	0	70-130/30
95-63-6	1,2,4-Trimethylbenzene	10	11.7	117	11.8	118	1	70-130/30
108-67-8	1,3,5-Trimethylbenzene	10	11.1	111	11.2	112	1	70-130/30
540-84-1	2,2,4-Trimethylpentane	10	10.4	104	10.5	105	1	70-130/30
75-65-0	Tertiary Butyl Alcohol	10	8.7	87	9.1	91	4	70-130/30
127-18-4	Tetrachloroethylene	10	10.3	103	10.5	105	2	70-130/30
109-99-9	Tetrahydrofuran	10	10.1	101	10.6	106	5	70-130/30
108-88-3	Toluene	10	8.9	89	9.2	92	3	70-130/30
79-01-6	Trichloroethylene	10	10.3	103	10.5	105	2	70-130/30
75-69-4	Trichlorofluoromethane	10	10.8	108	11.1	111	3	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V8W10-BS	8W00226.D	1	02/07/23	TCH	n/a	n/a	V8W10
V8W10-BSD	8W00227.D	1	02/07/23	TCH	n/a	n/a	V8W10

The QC reported here applies to the following samples: **Method:** TO-15

V8W10-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
75-01-4	Vinyl chloride	10	10.4	104	10.6	106	2	70-130/30
108-05-4	Vinyl Acetate	10	9.3	93	9.5	95	2	70-130/30
	m,p-Xylene	20	18.0	90	18.3	92	2	70-130/30
95-47-6	o-Xylene	10	9.1	91	9.2	92	1	70-130/30
1330-20-7	Xylenes (total)	30	27.1	90	27.5	92	1	70-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	100%	99%	65-128%

(a) Advisory control limits.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V7W21-BS	7W00405.D	1	02/10/23	TCH	n/a	n/a	V7W21
V7W21-BSD	7W00406.D	1	02/10/23	TCH	n/a	n/a	V7W21

The QC reported here applies to the following samples: **Method:** TO-15

V7W21-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone (2-Propanone)	10	9.8	98	9.7	97	1	70-130/30
107-02-8	Acrolein	10	8.1	81	7.8	78	4	70-130/30
107-13-1	Acrylonitrile	10	10.6	106	10.4	104	2	70-130/30
106-99-0	1,3-Butadiene	10	10.7	107	10.6	106	1	70-130/30
71-43-2	Benzene	10	8.9	89	8.8	88	1	70-130/30
75-27-4	Bromodichloromethane	10	9.8	98	9.7	97	1	70-130/30
75-25-2	Bromoform	10	9.0	90	9.3	93	3	70-130/30
74-83-9	Bromomethane	10	9.7	97	9.6	96	1	70-130/30
593-60-2	Bromoethene	10	9.3	93	9.2	92	1	70-130/30
100-44-7	Benzyl Chloride	10	7.5	75	7.6	76	1	70-130/30
104-51-8	n-Butylbenzene	10	10.5	105	10.5	105	0	50-150/30 [a]
135-98-8	sec-Butylbenzene	10	10.1	101	10.3	103	2	50-150/30 [a]
75-15-0	Carbon disulfide	10	9.9	99	9.7	97	2	70-130/30
108-90-7	Chlorobenzene	10	9.8	98	10.1	101	3	70-130/30
75-00-3	Chloroethane	10	10.5	105	10.2	102	3	70-130/30
67-66-3	Chloroform	10	9.5	95	9.4	94	1	70-130/30
74-87-3	Chloromethane	10	11.4	114	11.4	114	0	70-130/30
107-05-1	3-Chloropropene	10	10.5	105	10.2	102	3	70-130/30
56-23-5	Carbon tetrachloride	10	8.6	86	8.5	85	1	70-130/30
110-82-7	Cyclohexane	10	9.7	97	9.7	97	0	70-130/30
75-34-3	1,1-Dichloroethane	10	9.7	97	9.5	95	2	70-130/30
75-35-4	1,1-Dichloroethylene	10	9.7	97	9.6	96	1	70-130/30
106-93-4	1,2-Dibromoethane (EDB)	10	9.6	96	9.7	97	1	70-130/30
107-06-2	1,2-Dichloroethane	10	9.5	95	9.4	94	1	70-130/30
78-87-5	1,2-Dichloropropane	10	9.4	94	9.5	95	1	70-130/30
123-91-1	1,4-Dioxane	10	9.9	99	9.6	96	3	70-130/30
75-71-8	Dichlorodifluoromethane	10	10.1	101	10.2	102	1	70-130/30
124-48-1	Dibromochloromethane	10	9.3	93	9.3	93	0	70-130/30
156-60-5	trans-1,2-Dichloroethylene	10	9.3	93	9.1	91	2	70-130/30
156-59-2	cis-1,2-Dichloroethylene	10	9.2	92	9.3	93	1	70-130/30
10061-01-5	cis-1,3-Dichloropropene	10	9.3	93	9.3	93	0	70-130/30
541-73-1	m-Dichlorobenzene	10	9.8	98	9.8	98	0	70-130/30
95-50-1	o-Dichlorobenzene	10	9.6	96	9.8	98	2	70-130/30
106-46-7	p-Dichlorobenzene	10	9.6	96	9.7	97	1	70-130/30
10061-02-6	trans-1,3-Dichloropropene	10	9.3	93	9.3	93	0	70-130/30
108-20-3	Di-Isopropyl ether	10	9.9	99	9.8	98	1	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V7W21-BS	7W00405.D	1	02/10/23	TCH	n/a	n/a	V7W21
V7W21-BSD	7W00406.D	1	02/10/23	TCH	n/a	n/a	V7W21

The QC reported here applies to the following samples: **Method:** TO-15

V7W21-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
64-17-5	Ethanol	10	11.1	111	10.8	108	3	70-130/30
100-41-4	Ethylbenzene	10	9.1	91	9.2	92	1	70-130/30
141-78-6	Ethyl Acetate	10	10.2	102	9.8	98	4	70-130/30
622-96-8	4-Ethyltoluene	10	10.1	101	10.3	103	2	70-130/30
76-13-1	Freon 113	10	9.2	92	9.0	90	2	70-130/30
76-14-2	Freon 114	10	9.8	98	9.8	98	0	70-130/30
142-82-5	Heptane	10	10.1	101	10.1	101	0	70-130/30
87-68-3	Hexachlorobutadiene	10	8.5	85	8.8	88	3	70-130/30
110-54-3	Hexane	10	10.0	100	9.9	99	1	70-130/30
591-78-6	2-Hexanone	10	9.8	98	9.7	97	1	70-130/30
98-82-8	Isopropylbenzene	10	9.5	95	9.8	98	3	70-130/30
67-63-0	Isopropyl Alcohol	10	11.0	110	10.9	109	1	70-130/30
99-87-6	p-Isopropyltoluene	10	10.4	104	10.4	104	0	70-130/30
75-09-2	Methylene chloride	10	9.6	96	9.5	95	1	70-130/30
78-93-3	Methyl ethyl ketone	10	9.1	91	9.2	92	1	70-130/30
108-10-1	Methyl Isobutyl Ketone	10	9.6	96	9.4	94	2	70-130/30
1634-04-4	Methyl Tert Butyl Ether	10	8.7	87	8.7	87	0	70-130/30
80-62-6	Methylmethacrylate	10	9.5	95	9.5	95	0	70-130/30
91-20-3	Naphthalene	10	9.0	90	9.0	90	0	70-130/30
109-66-0	Pentane	10	12.2	122	12.0	120	2	70-130/30
103-65-1	n-Propylbenzene	10	10.2	102	10.2	102	0	50-150/30 [a]
115-07-1	Propylene	10	10.7	107	10.9	109	2	70-130/30
100-42-5	Styrene	10	9.8	98	9.9	99	1	70-130/30
71-55-6	1,1,1-Trichloroethane	10	9.2	92	9.1	91	1	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	10	10.5	105	10.6	106	1	70-130/30
79-00-5	1,1,2-Trichloroethane	10	9.6	96	9.7	97	1	70-130/30
120-82-1	1,2,4-Trichlorobenzene	10	7.7	77	7.6	76	1	70-130/30
95-63-6	1,2,4-Trimethylbenzene	10	10.2	102	10.4	104	2	70-130/30
108-67-8	1,3,5-Trimethylbenzene	10	9.9	99	10.1	101	2	70-130/30
540-84-1	2,2,4-Trimethylpentane	10	10	100	9.9	99	1	70-130/30
75-65-0	Tertiary Butyl Alcohol	10	11.0	110	10.7	107	3	70-130/30
127-18-4	Tetrachloroethylene	10	9.6	96	9.8	98	2	70-130/30
109-99-9	Tetrahydrofuran	10	9.6	96	9.4	94	2	70-130/30
108-88-3	Toluene	10	8.4	84	8.5	85	1	70-130/30
79-01-6	Trichloroethylene	10	9.6	96	9.4	94	2	70-130/30
75-69-4	Trichlorofluoromethane	10	9.4	94	9.5	95	1	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V7W21-BS	7W00405.D	1	02/10/23	TCH	n/a	n/a	V7W21
V7W21-BSD	7W00406.D	1	02/10/23	TCH	n/a	n/a	V7W21

The QC reported here applies to the following samples: **Method:** TO-15

V7W21-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
75-01-4	Vinyl chloride	10	10.6	106	10.6	106	0	70-130/30
108-05-4	Vinyl Acetate	10	8.8	88	8.8	88	0	70-130/30
	m,p-Xylene	20	18.5	93	18.8	94	2	70-130/30
95-47-6	o-Xylene	10	9.3	93	9.4	94	1	70-130/30
1330-20-7	Xylenes (total)	30	27.8	93	28.2	94	1	70-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	104%	106%	65-128%

(a) Advisory control limits.

* = Outside of Control Limits.

Duplicate Summary

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD62486-1DUP	7W01424.D	1	04/06/23	TCH	n/a	n/a	V7W65
JD62486-1	7W01423.D	1	04/06/23	TCH	n/a	n/a	V7W65

The QC reported here applies to the following samples: **Method:** TO-15

JD62956-1, JD62956-2, JD62956-3

CAS No.	Compound	JD62486-1 ppbv	Q	DUP ppbv	Q	RPD	Limits
67-64-1	Acetone (2-Propanone)	2.8		2.7		4	25
107-02-8	Acrolein	ND		ND		nc	25
107-13-1	Acrylonitrile	ND		ND		nc	25
106-99-0	1,3-Butadiene	ND		ND		nc	25
71-43-2	Benzene	0.086	J	0.097	J	12	25
75-27-4	Bromodichloromethane	ND		ND		nc	25
75-25-2	Bromoform	ND		ND		nc	25
74-83-9	Bromomethane	ND		ND		nc	25
593-60-2	Bromoethene	ND		ND		nc	25
100-44-7	Benzyl Chloride	ND		ND		nc	25
104-51-8	n-Butylbenzene	ND		ND		nc	30 [a]
135-98-8	sec-Butylbenzene	ND		ND		nc	30 [a]
75-15-0	Carbon disulfide	ND		ND		nc	25
108-90-7	Chlorobenzene	ND		ND		nc	25
75-00-3	Chloroethane	ND		ND		nc	25
67-66-3	Chloroform	ND		ND		nc	25
74-87-3	Chloromethane	0.62		0.59		5	25
107-05-1	3-Chloropropene	ND		ND		nc	25
56-23-5	Carbon tetrachloride	ND		ND		nc	25
110-82-7	Cyclohexane	ND		ND		nc	25
75-34-3	1,1-Dichloroethane	ND		ND		nc	25
75-35-4	1,1-Dichloroethylene	ND		ND		nc	25
106-93-4	1,2-Dibromoethane (EDB)	ND		ND		nc	25
107-06-2	1,2-Dichloroethane	ND		ND		nc	25
78-87-5	1,2-Dichloropropane	ND		ND		nc	25
123-91-1	1,4-Dioxane	ND		ND		nc	25
75-71-8	Dichlorodifluoromethane	0.40		0.41		2	25
124-48-1	Dibromochloromethane	ND		ND		nc	25
156-60-5	trans-1,2-Dichloroethylene	ND		ND		nc	25
156-59-2	cis-1,2-Dichloroethylene	ND		ND		nc	25
10061-01-5	cis-1,3-Dichloropropene	ND		ND		nc	25
541-73-1	m-Dichlorobenzene	ND		ND		nc	25
95-50-1	o-Dichlorobenzene	ND		ND		nc	25
106-46-7	p-Dichlorobenzene	ND		ND		nc	25
10061-02-6	trans-1,3-Dichloropropene	ND		ND		nc	25
108-20-3	Di-Isopropyl ether	ND		ND		nc	25

* = Outside of Control Limits.

Duplicate Summary

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD62486-1DUP	7W01424.D	1	04/06/23	TCH	n/a	n/a	V7W65
JD62486-1	7W01423.D	1	04/06/23	TCH	n/a	n/a	V7W65

The QC reported here applies to the following samples: **Method:** TO-15

JD62956-1, JD62956-2, JD62956-3

CAS No.	Compound	JD62486-1 ppbv	Q	DUP ppbv	Q	RPD	Limits
64-17-5	Ethanol	5.3		5.3		0	25
100-41-4	Ethylbenzene	ND		ND		nc	25
141-78-6	Ethyl Acetate	3.8		3.9		3	25
622-96-8	4-Ethyltoluene	ND		ND		nc	25
76-13-1	Freon 113	ND		ND		nc	25
76-14-2	Freon 114	ND		ND		nc	25
142-82-5	Heptane	ND		ND		nc	25
87-68-3	Hexachlorobutadiene	ND		ND		nc	25
110-54-3	Hexane	ND		ND		nc	25
591-78-6	2-Hexanone	ND		ND		nc	25
98-82-8	Isopropylbenzene	ND		ND		nc	25
67-63-0	Isopropyl Alcohol	0.67		0.73		9	25
99-87-6	p-Isopropyltoluene	ND		ND		nc	25
75-09-2	Methylene chloride	0.27		0.28		4	25
78-93-3	Methyl ethyl ketone	0.24		0.23		4	25
108-10-1	Methyl Isobutyl Ketone	ND		ND		nc	25
1634-04-4	Methyl Tert Butyl Ether	ND		ND		nc	25
80-62-6	Methylmethacrylate	ND		ND		nc	25
91-20-3	Naphthalene	0.22		0.18	J	20	25
109-66-0	Pentane	ND		0.15	J	200* [b]	25
103-65-1	n-Propylbenzene	ND		ND		nc	30 [a]
115-07-1	Propylene	ND		ND		nc	25
100-42-5	Styrene	ND		ND		nc	25
71-55-6	1,1,1-Trichloroethane	ND		ND		nc	25
79-34-5	1,1,2,2-Tetrachloroethane	ND		ND		nc	25
79-00-5	1,1,2-Trichloroethane	ND		ND		nc	25
120-82-1	1,2,4-Trichlorobenzene	ND		ND		nc	25
95-63-6	1,2,4-Trimethylbenzene	ND		ND		nc	25
108-67-8	1,3,5-Trimethylbenzene	ND		ND		nc	25
540-84-1	2,2,4-Trimethylpentane	ND		ND		nc	25
75-65-0	Tertiary Butyl Alcohol	ND		ND		nc	25
127-18-4	Tetrachloroethylene	ND		ND		nc	25
109-99-9	Tetrahydrofuran	ND		ND		nc	25
108-88-3	Toluene	0.10	J	0.092	J	8	25
79-01-6	Trichloroethylene	ND		ND		nc	25
75-69-4	Trichlorofluoromethane	0.25		0.24		4	25

* = Outside of Control Limits.

Duplicate Summary

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD62486-1DUP	7W01424.D	1	04/06/23	TCH	n/a	n/a	V7W65
JD62486-1	7W01423.D	1	04/06/23	TCH	n/a	n/a	V7W65

The QC reported here applies to the following samples: **Method:** TO-15

JD62956-1, JD62956-2, JD62956-3

CAS No.	Compound	JD62486-1 ppbv	Q	DUP ppbv	Q	RPD	Limits
75-01-4	Vinyl chloride	ND		ND		nc	25
108-05-4	Vinyl Acetate	ND		ND		nc	25
	m,p-Xylene	0.23		0.23		0	25
95-47-6	o-Xylene	ND		ND		nc	25
1330-20-7	Xylenes (total)	0.23		0.23		0	25

CAS No.	Surrogate Recoveries	DUP	JD62486-1	Limits
460-00-4	4-Bromofluorobenzene	94%	93%	65-128%

(a) Advisory control limits.
(b) RPD acceptable due to low DUP and sample concentrations.

* = Outside of Control Limits.

Duplicate Summary

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD62956-4DUP	3W79980.D	1.6	04/08/23	TCH	n/a	n/a	V3W3154
JD62956-4	3W79979.D	1.6	04/08/23	TCH	n/a	n/a	V3W3154

The QC reported here applies to the following samples: **Method:** TO-15

JD62956-4

CAS No.	Compound	JD62956-4 ppbv	Q	DUP ppbv	Q	RPD	Limits
67-64-1	Acetone (2-Propanone)	16.9		17.3		2	25
107-02-8	Acrolein	0.33		0.32		3	25
107-13-1	Acrylonitrile	ND		ND		nc	25
106-99-0	1,3-Butadiene	ND		ND		nc	25
71-43-2	Benzene	0.17	J	0.17	J	0	25
75-27-4	Bromodichloromethane	ND		ND		nc	25
75-25-2	Bromoform	ND		ND		nc	25
74-83-9	Bromomethane	ND		ND		nc	25
593-60-2	Bromoethene	ND		ND		nc	25
100-44-7	Benzyl Chloride	ND		ND		nc	25
104-51-8	n-Butylbenzene	ND		ND		nc	30 [a]
135-98-8	sec-Butylbenzene	ND		ND		nc	30 [a]
75-15-0	Carbon disulfide	ND		ND		nc	25
108-90-7	Chlorobenzene	ND		ND		nc	25
75-00-3	Chloroethane	ND		ND		nc	25
67-66-3	Chloroform	ND		ND		nc	25
74-87-3	Chloromethane	0.72		0.74		3	25
107-05-1	3-Chloropropene	ND		ND		nc	25
56-23-5	Carbon tetrachloride	ND		ND		nc	25
110-82-7	Cyclohexane	ND		ND		nc	25
75-34-3	1,1-Dichloroethane	ND		ND		nc	25
75-35-4	1,1-Dichloroethylene	ND		ND		nc	25
106-93-4	1,2-Dibromoethane (EDB)	ND		ND		nc	25
107-06-2	1,2-Dichloroethane	ND		ND		nc	25
78-87-5	1,2-Dichloropropane	ND		ND		nc	25
123-91-1	1,4-Dioxane	ND		ND		nc	25
75-71-8	Dichlorodifluoromethane	0.41		0.42		2	25
124-48-1	Dibromochloromethane	ND		ND		nc	25
156-60-5	trans-1,2-Dichloroethylene	ND		ND		nc	25
156-59-2	cis-1,2-Dichloroethylene	ND		ND		nc	25
10061-01-5	cis-1,3-Dichloropropene	ND		ND		nc	25
541-73-1	m-Dichlorobenzene	ND		ND		nc	25
95-50-1	o-Dichlorobenzene	ND		ND		nc	25
106-46-7	p-Dichlorobenzene	ND		ND		nc	25
10061-02-6	trans-1,3-Dichloropropene	ND		ND		nc	25
108-20-3	Di-Isopropyl ether	ND		ND		nc	25

* = Outside of Control Limits.

Duplicate Summary

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD62956-4DUP	3W79980.D	1.6	04/08/23	TCH	n/a	n/a	V3W3154
JD62956-4	3W79979.D	1.6	04/08/23	TCH	n/a	n/a	V3W3154

The QC reported here applies to the following samples: **Method:** TO-15

JD62956-4

CAS No.	Compound	JD62956-4 ppbv	Q	DUP ppbv	Q	RPD	Limits
64-17-5	Ethanol	177	E	175	E	1	25
100-41-4	Ethylbenzene	ND		ND		nc	25
141-78-6	Ethyl Acetate	4.0		4.0		0	25
622-96-8	4-Ethyltoluene	ND		ND		nc	25
76-13-1	Freon 113	ND		ND		nc	25
76-14-2	Freon 114	ND		ND		nc	25
142-82-5	Heptane	0.12	J	0.11	J	9	25
87-68-3	Hexachlorobutadiene	ND		ND		nc	25
110-54-3	Hexane	0.46		0.48		4	25
591-78-6	2-Hexanone	ND		ND		nc	25
98-82-8	Isopropylbenzene	ND		ND		nc	25
67-63-0	Isopropyl Alcohol	1.2		1.3		8	25
99-87-6	p-Isopropyltoluene	0.92		0.93		1	25
75-09-2	Methylene chloride	0.21		0.20		5	25
78-93-3	Methyl ethyl ketone	0.52		0.53		2	25
108-10-1	Methyl Isobutyl Ketone	ND		ND		nc	25
1634-04-4	Methyl Tert Butyl Ether	ND		ND		nc	25
80-62-6	Methylmethacrylate	ND		ND		nc	25
91-20-3	Naphthalene	ND		ND		nc	25
109-66-0	Pentane	1.3		1.3		0	25
103-65-1	n-Propylbenzene	ND		ND		nc	30 [a]
115-07-1	Propylene	ND		ND		nc	25
100-42-5	Styrene	ND		ND		nc	25
71-55-6	1,1,1-Trichloroethane	ND		ND		nc	25
79-34-5	1,1,2,2-Tetrachloroethane	ND		ND		nc	25
79-00-5	1,1,2-Trichloroethane	ND		ND		nc	25
120-82-1	1,2,4-Trichlorobenzene	0.60		0.58		3	25
95-63-6	1,2,4-Trimethylbenzene	0.12	J	0.11	J	9	25
108-67-8	1,3,5-Trimethylbenzene	ND		ND		nc	25
540-84-1	2,2,4-Trimethylpentane	ND		ND		nc	25
75-65-0	Tertiary Butyl Alcohol	ND		ND		nc	25
127-18-4	Tetrachloroethylene	0.039	J	0.042		7	25
109-99-9	Tetrahydrofuran	ND		ND		nc	25
108-88-3	Toluene	0.57		0.59		3	25
79-01-6	Trichloroethylene	ND		ND		nc	25
75-69-4	Trichlorofluoromethane	0.22		0.23		4	25

* = Outside of Control Limits.

Duplicate Summary

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD62956-4DUP	3W79980.D	1.6	04/08/23	TCH	n/a	n/a	V3W3154
JD62956-4	3W79979.D	1.6	04/08/23	TCH	n/a	n/a	V3W3154

The QC reported here applies to the following samples: **Method:** TO-15

JD62956-4

CAS No.	Compound	JD62956-4 ppbv	Q	DUP ppbv	Q	RPD	Limits
75-01-4	Vinyl chloride	ND		ND		nc	25
108-05-4	Vinyl Acetate	0.67		0.73		9	25
	m,p-Xylene	0.31		0.30		3	25
95-47-6	o-Xylene	0.11	J	0.11	J	0	25
1330-20-7	Xylenes (total)	0.41		0.41		0	25

CAS No.	Surrogate Recoveries	DUP	JD62956-4	Limits
460-00-4	4-Bromofluorobenzene	106%	105%	65-128%

(a) Advisory control limits.

* = Outside of Control Limits.

Summa Cleaning Certification

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W1141-SCC	6W26979.D	1	11/08/22	TCH	n/a	n/a	V6W1141

The QC reported here (Summa A1069) applies to the following samples: **Method:** TO-15

Batch CP11947 cleaned 11/04/22: JD62956-4(A1069)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
67-64-1	Acetone (2-Propanone)	ND	0.20	0.15	ppbv		ND	0.48	ug/m3
107-02-8	Acrolein	ND	0.20	0.088	ppbv		ND	0.46	ug/m3
107-13-1	Acrylonitrile	ND	0.20	0.091	ppbv		ND	0.43	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	0.084	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	0.062	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	0.030	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	0.071	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	0.069	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
104-51-8	n-Butylbenzene	ND	0.20	0.11	ppbv		ND	1.1	ug/m3
135-98-8	sec-Butylbenzene	ND	0.20	0.081	ppbv		ND	1.1	ug/m3
75-15-0	Carbon disulfide	ND	0.20	0.045	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	0.074	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	0.068	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	0.037	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	0.090	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	0.083	ppbv		ND	0.63	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	0.040	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	0.11	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	0.057	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.059	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane (EDB)	ND	0.20	0.097	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	0.070	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	0.062	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	0.12	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	0.032	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	0.052	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.069	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.077	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	0.062	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	0.040	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	0.15	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	0.19	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	0.10	ppbv		ND	0.91	ug/m3
108-20-3	Di-Isopropyl ether	ND	0.20	0.082	ppbv		ND	0.83	ug/m3

Summa Cleaning Certification

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W1141-SCC	6W26979.D	1	11/08/22	TCH	n/a	n/a	V6W1141

The QC reported here (Summa A1069) applies to the following samples: **Method:** TO-15

Batch CP11947 cleaned 11/04/22: JD62956-4(A1069)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
64-17-5	Ethanol	ND	0.50	0.39	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	0.10	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	0.095	ppbv		ND	0.98	ug/m3
76-13-1	Freon 113	ND	0.20	0.031	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	0.050	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	0.092	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	0.062	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	0.15	ppbv		ND	0.82	ug/m3
98-82-8	Isopropylbenzene	ND	0.20	0.064	ppbv		ND	0.98	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	0.14	ppbv		ND	0.49	ug/m3
99-87-6	p-Isopropyltoluene	ND	0.20	0.080	ppbv		ND	1.1	ug/m3
75-09-2	Methylene chloride	ND	0.20	0.056	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	0.11	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	0.073	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	0.080	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	0.070	ppbv		ND	0.82	ug/m3
91-20-3	Naphthalene	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
109-66-0	Pentane	ND	0.20	0.14	ppbv		ND	0.59	ug/m3
103-65-1	n-Propylbenzene	ND	0.20	0.091	ppbv		ND	0.98	ug/m3
115-07-1	Propylene	ND	0.50	0.14	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	0.12	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.037	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.048	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.038	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	0.12	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	0.087	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	0.080	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	0.095	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	0.093	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	0.014	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	0.090	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	0.057	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	0.036	ppbv		ND	1.1	ug/m3

Summa Cleaning Certification

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W1141-SCC	6W26979.D	1	11/08/22	TCH	n/a	n/a	V6W1141

The QC reported here (Summa A1069) applies to the following samples: **Method:** TO-15

Batch CP11947 cleaned 11/04/22: JD62956-4(A1069)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
75-01-4	Vinyl chloride	ND	0.20	0.069	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	0.14	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	0.077	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	0.077	ppbv		ND	0.87	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	99%	65-128%

Summa Cleaning Certification

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W1149-SCC	6W27219.D	1	11/26/22	TCH	n/a	n/a	V6W1149

The QC reported here (Summa A1609) applies to the following samples: **Method:** TO-15

Batch CP11981 cleaned 11/18/22: JD62956-2(A1609)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
67-64-1	Acetone (2-Propanone)	ND	0.20	0.15	ppbv		ND	0.48	ug/m3
107-02-8	Acrolein	ND	0.20	0.088	ppbv		ND	0.46	ug/m3
107-13-1	Acrylonitrile	ND	0.20	0.091	ppbv		ND	0.43	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	0.084	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	0.062	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	0.030	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	0.071	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	0.069	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
104-51-8	n-Butylbenzene	ND	0.20	0.11	ppbv		ND	1.1	ug/m3
135-98-8	sec-Butylbenzene	ND	0.20	0.081	ppbv		ND	1.1	ug/m3
75-15-0	Carbon disulfide	ND	0.20	0.045	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	0.074	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	0.068	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	0.037	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	0.090	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	0.083	ppbv		ND	0.63	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	0.040	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	0.11	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	0.057	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.059	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane (EDB)	ND	0.20	0.097	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	0.070	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	0.062	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	0.12	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	0.032	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	0.052	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.069	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.077	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	0.062	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	0.040	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	0.15	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	0.19	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	0.10	ppbv		ND	0.91	ug/m3
108-20-3	Di-Isopropyl ether	ND	0.20	0.082	ppbv		ND	0.83	ug/m3

Summa Cleaning Certification

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W1149-SCC	6W27219.D	1	11/26/22	TCH	n/a	n/a	V6W1149

The QC reported here (Summa A1609) applies to the following samples: **Method:** TO-15

Batch CP11981 cleaned 11/18/22: JD62956-2(A1609)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
64-17-5	Ethanol	ND	0.50	0.39	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	0.10	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	0.095	ppbv		ND	0.98	ug/m3
76-13-1	Freon 113	ND	0.20	0.031	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	0.050	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	0.092	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	0.062	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	0.15	ppbv		ND	0.82	ug/m3
98-82-8	Isopropylbenzene	ND	0.20	0.064	ppbv		ND	0.98	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	0.14	ppbv		ND	0.49	ug/m3
99-87-6	p-Isopropyltoluene	ND	0.20	0.080	ppbv		ND	1.1	ug/m3
75-09-2	Methylene chloride	ND	0.20	0.056	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	0.11	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	0.073	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	0.080	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	0.070	ppbv		ND	0.82	ug/m3
91-20-3	Naphthalene	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
109-66-0	Pentane	ND	0.20	0.14	ppbv		ND	0.59	ug/m3
103-65-1	n-Propylbenzene	ND	0.20	0.091	ppbv		ND	0.98	ug/m3
115-07-1	Propylene	ND	0.50	0.14	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	0.12	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.037	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.048	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.038	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	0.12	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	0.087	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	0.080	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	0.095	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	0.093	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	0.014	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	0.090	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	0.057	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	0.036	ppbv		ND	1.1	ug/m3

Summa Cleaning Certification

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W1149-SCC	6W27219.D	1	11/26/22	TCH	n/a	n/a	V6W1149

The QC reported here (Summa A1609) applies to the following samples: **Method:** TO-15

Batch CP11981 cleaned 11/18/22: JD62956-2(A1609)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
75-01-4	Vinyl chloride	ND	0.20	0.069	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	0.14	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	0.077	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	0.077	ppbv		ND	0.87	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	92%	65-128%

Summa Cleaning Certification

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V8W10-SCC	8W00241.D	1	02/08/23	TCH	n/a	n/a	V8W10

The QC reported here (Summa A1611) applies to the following samples: **Method:** TO-15

Batch CP12084 cleaned 02/03/23: JD62956-1(A1611)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
67-64-1	Acetone (2-Propanone)	ND	0.20	0.15	ppbv		ND	0.48	ug/m3
107-02-8	Acrolein	ND	0.20	0.088	ppbv		ND	0.46	ug/m3
107-13-1	Acrylonitrile	ND	0.20	0.091	ppbv		ND	0.43	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	0.084	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	0.062	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	0.030	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	0.071	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	0.069	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
104-51-8	n-Butylbenzene	ND	0.20	0.11	ppbv		ND	1.1	ug/m3
135-98-8	sec-Butylbenzene	ND	0.20	0.081	ppbv		ND	1.1	ug/m3
75-15-0	Carbon disulfide	ND	0.20	0.045	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	0.074	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	0.068	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	0.037	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	0.090	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	0.083	ppbv		ND	0.63	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	0.040	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	0.11	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	0.057	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.059	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane (EDB)	ND	0.20	0.097	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	0.070	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	0.062	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	0.12	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	0.032	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	0.052	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.069	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.077	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	0.062	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	0.040	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	0.15	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	0.19	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	0.10	ppbv		ND	0.91	ug/m3
108-20-3	Di-Isopropyl ether	ND	0.20	0.082	ppbv		ND	0.83	ug/m3

Summa Cleaning Certification

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V8W10-SCC	8W00241.D	1	02/08/23	TCH	n/a	n/a	V8W10

The QC reported here (Summa A1611) applies to the following samples: **Method:** TO-15

Batch CP12084 cleaned 02/03/23: JD62956-1(A1611)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
64-17-5	Ethanol	ND	0.50	0.39	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	0.10	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	0.095	ppbv		ND	0.98	ug/m3
76-13-1	Freon 113	ND	0.20	0.031	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	0.050	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	0.092	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	0.062	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	0.15	ppbv		ND	0.82	ug/m3
98-82-8	Isopropylbenzene	ND	0.20	0.064	ppbv		ND	0.98	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	0.14	ppbv		ND	0.49	ug/m3
99-87-6	p-Isopropyltoluene	ND	0.20	0.080	ppbv		ND	1.1	ug/m3
75-09-2	Methylene chloride	ND	0.20	0.056	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	0.11	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	0.073	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	0.080	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	0.070	ppbv		ND	0.82	ug/m3
91-20-3	Naphthalene	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
109-66-0	Pentane	ND	0.20	0.14	ppbv		ND	0.59	ug/m3
103-65-1	n-Propylbenzene	ND	0.20	0.091	ppbv		ND	0.98	ug/m3
115-07-1	Propylene	ND	0.50	0.14	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	0.12	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.037	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.048	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.038	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	0.12	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	0.087	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	0.080	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	0.095	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	0.093	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	0.014	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	0.090	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	0.057	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	0.036	ppbv		ND	1.1	ug/m3

Summa Cleaning Certification

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V8W10-SCC	8W00241.D	1	02/08/23	TCH	n/a	n/a	V8W10

The QC reported here (Summa A1611) applies to the following samples: **Method:** TO-15

Batch CP12084 cleaned 02/03/23: JD62956-1(A1611)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
75-01-4	Vinyl chloride	ND	0.20	0.069	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	0.14	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	0.077	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	0.077	ppbv		ND	0.87	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	94%	65-128%

Summa Cleaning Certification

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V7W21-SCC	7W00413.D	1	02/10/23	TCH	n/a	n/a	V7W21

The QC reported here (Summa A231) applies to the following samples: **Method:** TO-15

Batch CP12095 cleaned 02/08/23: JD62956-3(A231)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
67-64-1	Acetone (2-Propanone)	ND	0.20	0.15	ppbv		ND	0.48	ug/m3
107-02-8	Acrolein	ND	0.20	0.088	ppbv		ND	0.46	ug/m3
107-13-1	Acrylonitrile	ND	0.20	0.091	ppbv		ND	0.43	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	0.084	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	0.062	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	0.030	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	0.071	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	0.069	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
104-51-8	n-Butylbenzene	ND	0.20	0.11	ppbv		ND	1.1	ug/m3
135-98-8	sec-Butylbenzene	ND	0.20	0.081	ppbv		ND	1.1	ug/m3
75-15-0	Carbon disulfide	ND	0.20	0.045	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	0.074	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	0.068	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	0.037	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	0.090	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	0.083	ppbv		ND	0.63	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	0.040	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	0.11	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	0.057	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.059	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane (EDB)	ND	0.20	0.097	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	0.070	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	0.062	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	0.12	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	0.032	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	0.052	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.069	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.077	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	0.062	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	0.040	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	0.15	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	0.19	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	0.10	ppbv		ND	0.91	ug/m3
108-20-3	Di-Isopropyl ether	ND	0.20	0.082	ppbv		ND	0.83	ug/m3

Summa Cleaning Certification

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V7W21-SCC	7W00413.D	1	02/10/23	TCH	n/a	n/a	V7W21

The QC reported here (Summa A231) applies to the following samples: **Method:** TO-15

Batch CP12095 cleaned 02/08/23: JD62956-3(A231)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
64-17-5	Ethanol	ND	0.50	0.39	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	0.10	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	0.095	ppbv		ND	0.98	ug/m3
76-13-1	Freon 113	ND	0.20	0.031	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	0.050	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	0.092	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	0.062	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	0.15	ppbv		ND	0.82	ug/m3
98-82-8	Isopropylbenzene	ND	0.20	0.064	ppbv		ND	0.98	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	0.14	ppbv		ND	0.49	ug/m3
99-87-6	p-Isopropyltoluene	ND	0.20	0.080	ppbv		ND	1.1	ug/m3
75-09-2	Methylene chloride	ND	0.20	0.056	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	0.11	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	0.073	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	0.080	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	0.070	ppbv		ND	0.82	ug/m3
91-20-3	Naphthalene	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
109-66-0	Pentane	ND	0.20	0.14	ppbv		ND	0.59	ug/m3
103-65-1	n-Propylbenzene	ND	0.20	0.091	ppbv		ND	0.98	ug/m3
115-07-1	Propylene	ND	0.50	0.14	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	0.12	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.037	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.048	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.038	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	0.12	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	0.087	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	0.080	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	0.095	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	0.093	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	0.014	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	0.090	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	0.057	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	0.036	ppbv		ND	1.1	ug/m3

Summa Cleaning Certification

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V7W21-SCC	7W00413.D	1	02/10/23	TCH	n/a	n/a	V7W21

The QC reported here (Summa A231) applies to the following samples: **Method:** TO-15

Batch CP12095 cleaned 02/08/23: JD62956-3(A231)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
75-01-4	Vinyl chloride	ND	0.20	0.069	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	0.14	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	0.077	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	0.077	ppbv		ND	0.87	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	95%	65-128%

Instrument Performance Check (BFB)

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample:	V3W3146-BFB	**Injection Date:**	03/30/23
Lab File ID:	3W79755.D	**Injection Time:**	19:26
Instrument ID:	GCMS3W		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	25131	21.4		Pass
75	30.0 - 66.0% of mass 95	55896	47.7		Pass
95	Base peak, 100% relative abundance	117229	100.0		Pass
96	5.0 - 9.0% of mass 95	7739	6.60		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	102621	87.5		Pass
175	4.0 - 9.01% of mass 174	7732	6.60	(7.53) [a]	Pass
176	93.0 - 101.0% of mass 174	97333	83.0	(94.8) [a]	Pass
177	5.0 - 9.0% of mass 176	6716	5.73	(6.90) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V3W3146-IC3146	3W79756.D	03/30/23	20:04	00:38	Initial cal 0.04
V3W3146-IC3146	3W79757.D	03/30/23	20:41	01:15	Initial cal 0.1
V3W3146-IC3146	3W79758.D	03/30/23	21:20	01:54	Initial cal 0.2
V3W3146-IC3146	3W79759.D	03/30/23	22:00	02:34	Initial cal 0.5
V3W3146-IC3146	3W79761.D	03/30/23	23:16	03:50	Initial cal 5
V3W3146-ICC3146	3W79762.D	03/30/23	23:55	04:29	Initial cal 10
V3W3146-IC3146	3W79763.D	03/31/23	00:35	05:09	Initial cal 20
V3W3146-IC3146	3W79764.D	03/31/23	01:20	05:54	Initial cal 40
V3W3146-IC3146	3W79765.D	03/31/23	02:05	06:39	Initial cal 50
V3W3146-ICV3146	3W79768.D	03/31/23	04:02	08:36	Initial cal verification 10

Instrument Performance Check (BFB)

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample: V3W3154-BFB
Lab File ID: 3W79973.D
Instrument ID: GCMS3W
Injection Date: 04/08/23
Injection Time: 10:46

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	24987	23.4		Pass
75	30.0 - 66.0% of mass 95	52747	49.5		Pass
95	Base peak, 100% relative abundance	106635	100.0		Pass
96	5.0 - 9.0% of mass 95	7292	6.84		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	100032	93.8		Pass
175	4.0 - 9.01% of mass 174	7675	7.20	(7.67) [a]	Pass
176	93.0 - 101.0% of mass 174	96973	90.9	(96.9) [a]	Pass
177	5.0 - 9.0% of mass 176	6447	6.05	(6.65) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V3W3154-CC3146	3W79974.D	04/08/23	11:26	00:40	Continuing cal 10
V3W3154-BS	3W79975.D	04/08/23	12:09	01:23	Blank Spike
V3W3154-BSD	3W79976.D	04/08/23	12:49	02:03	Blank Spike Duplicate
V3W3154-MB	3W79978.D	04/08/23	14:19	03:33	Method Blank
JD62956-4	3W79979.D	04/08/23	15:22	04:36	IA-04_UNIVAR13_032923
JD62956-4DUP	3W79980.D	04/08/23	16:13	05:27	Duplicate
ZZZZZZ	3W79981.D	04/08/23	16:50	06:04	(unrelated sample)
ZZZZZZ	3W79983.D	04/08/23	18:07	07:21	(unrelated sample)
ZZZZZZ	3W79985.D	04/08/23	19:25	08:39	(unrelated sample)
ZZZZZZ	3W79986.D	04/08/23	20:05	09:19	(unrelated sample)
ZZZZZZ	3W79987.D	04/08/23	20:43	09:57	(unrelated sample)
ZZZZZZ	3W79988.D	04/08/23	21:22	10:36	(unrelated sample)
ZZZZZZ	3W79989.D	04/08/23	22:01	11:15	(unrelated sample)
ZZZZZZ	3W79990.D	04/08/23	22:41	11:55	(unrelated sample)
ZZZZZZ	3W79992.D	04/08/23	23:57	13:11	(unrelated sample)
ZZZZZZ	3W79994.D	04/09/23	01:17	14:31	(unrelated sample)
ZZZZZZ	3W79995.D	04/09/23	01:57	15:11	(unrelated sample)
ZZZZZZ	3W79996.D	04/09/23	02:36	15:50	(unrelated sample)
ZZZZZZ	3W79997.D	04/09/23	03:15	16:29	(unrelated sample)
ZZZZZZ	3W79999.D	04/09/23	04:35	17:49	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample:	V6W1125-BFB	**Injection Date:**	10/19/22
Lab File ID:	6W26446.D	**Injection Time:**	17:44
Instrument ID:	GCMS6W		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	11894	25.6		Pass
75	30.0 - 66.0% of mass 95	23544	50.6		Pass
95	Base peak, 100% relative abundance	46541	100.0		Pass
96	5.0 - 9.0% of mass 95	3244	6.97		Pass
173	Less than 2.0% of mass 174	352	0.76	(0.98) [a]	Pass
174	50.0 - 120.0% of mass 95	35928	77.2		Pass
175	4.0 - 9.01% of mass 174	2432	5.23	(6.77) [a]	Pass
176	93.0 - 101.0% of mass 174	34165	73.4	(95.1) [a]	Pass
177	5.0 - 9.0% of mass 176	2442	5.25	(7.15) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V6W1125-IC1125	6W26448.D	10/19/22	19:10	01:26	Initial cal 0.04
V6W1125-IC1125	6W26449.D	10/19/22	19:43	01:59	Initial cal 0.1
V6W1125-IC1125	6W26450.D	10/19/22	20:15	02:31	Initial cal 0.2
V6W1125-IC1125	6W26451.D	10/19/22	20:47	03:03	Initial cal 0.5
V6W1125-IC1125	6W26453.D	10/19/22	21:52	04:08	Initial cal 5
V6W1125-ICC1125	6W26454.D	10/19/22	22:25	04:41	Initial cal 10
V6W1125-IC1125	6W26455.D	10/19/22	22:57	05:13	Initial cal 20
V6W1125-IC1125	6W26456.D	10/19/22	23:29	05:45	Initial cal 40
V6W1125-IC1125	6W26457.D	10/20/22	00:03	06:19	Initial cal 50
V6W1125-ICV1125	6W26462.D	10/20/22	09:08	15:24	Initial cal verification 10

Instrument Performance Check (BFB)

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample: V6W1141-BFB
Lab File ID: 6W26944.D
Instrument ID: GCMS6W
Injection Date: 11/07/22
Injection Time: 07:38

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	7992	24.5		Pass
75	30.0 - 66.0% of mass 95	16955	52.0		Pass
95	Base peak, 100% relative abundance	32624	100.0		Pass
96	5.0 - 9.0% of mass 95	1954	5.99		Pass
173	Less than 2.0% of mass 174	210	0.64	(0.78) [a]	Pass
174	50.0 - 120.0% of mass 95	26923	82.5		Pass
175	4.0 - 9.01% of mass 174	1824	5.59	(6.77) [a]	Pass
176	93.0 - 101.0% of mass 174	25112	77.0	(93.3) [a]	Pass
177	5.0 - 9.0% of mass 176	1556	4.77	(6.20) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V6W1141-CC1125	6W26945.D	11/07/22	08:11	00:33	Continuing cal 10
V6W1141-BS	6W26946.D	11/07/22	08:52	01:14	Blank Spike
V6W1141-BSD	6W26947.D	11/07/22	09:25	01:47	Blank Spike Duplicate
V6W1141-MB	6W26949.D	11/07/22	10:43	03:05	Method Blank
V6W1141-SCC	6W26950.D	11/07/22	11:38	04:00	Summa Cleaning Certification
V6W1141-SCC	6W26951.D	11/07/22	12:11	04:33	Summa Cleaning Certification
V6W1141-SCC	6W26952.D	11/07/22	12:43	05:05	Summa Cleaning Certification
ZZZZZZ	6W26953.D	11/07/22	13:21	05:43	(unrelated sample)
ZZZZZZ	6W26955.D	11/07/22	14:46	07:08	(unrelated sample)
ZZZZZZ	6W26956.D	11/07/22	15:18	07:40	(unrelated sample)
ZZZZZZ	6W26957.D	11/07/22	15:52	08:14	(unrelated sample)
JD54490-11	6W26958.D	11/07/22	16:25	08:47	(used for QC only; not part of job JD62956)
JD54490-11DUP	6W26959.D	11/07/22	16:58	09:20	Duplicate
ZZZZZZ	6W26960.D	11/07/22	17:31	09:53	(unrelated sample)
ZZZZZZ	6W26961.D	11/07/22	18:03	10:25	(unrelated sample)
ZZZZZZ	6W26962.D	11/07/22	18:36	10:58	(unrelated sample)
ZZZZZZ	6W26963.D	11/07/22	19:08	11:30	(unrelated sample)
ZZZZZZ	6W26964.D	11/07/22	19:40	12:02	(unrelated sample)
ZZZZZZ	6W26965.D	11/07/22	20:13	12:35	(unrelated sample)
ZZZZZZ	6W26969.D	11/07/22	22:23	14:45	(unrelated sample)
V6W1141-SCC	6W26971.D	11/07/22	23:45	16:07	Summa Cleaning Certification
V6W1141-SCC	6W26972.D	11/08/22	00:17	16:39	Summa Cleaning Certification
V6W1141-SCC	6W26973.D	11/08/22	00:50	17:12	Summa Cleaning Certification
V6W1141-SCC	6W26974.D	11/08/22	01:22	17:44	Summa Cleaning Certification

Instrument Performance Check (BFB)

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample:	V6W1141-BFB	**Injection Date:**	11/07/22
Lab File ID:	6W26944.D	**Injection Time:**	07:38
Instrument ID:	GCMS6W		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V6W1141-SCC	6W26976.D	11/08/22	02:26	18:48	Summa Cleaning Certification
V6W1141-SCC	6W26977.D	11/08/22	02:59	19:21	Summa Cleaning Certification
V6W1141-SCC	6W26978.D	11/08/22	03:32	19:54	Summa Cleaning Certification
V6W1141-SCC	6W26979.D	11/08/22	04:05	20:27	Summa Cleaning Certification
V6W1141-SCC	6W26980.D	11/08/22	04:38	21:00	Summa Cleaning Certification
V6W1141-SCC	6W26981.D	11/08/22	05:10	21:32	Summa Cleaning Certification

Instrument Performance Check (BFB)

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample:	V6W1149-BFB	**Injection Date:**	11/25/22
Lab File ID:	6W27186.D	**Injection Time:**	14:13
Instrument ID:	GCMS6W		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	9303	22.7		Pass
75	30.0 - 66.0% of mass 95	19816	48.4		Pass
95	Base peak, 100% relative abundance	40955	100.0		Pass
96	5.0 - 9.0% of mass 95	2586	6.31		Pass
173	Less than 2.0% of mass 174	386	0.94	(1.09) [a]	Pass
174	50.0 - 120.0% of mass 95	35355	86.3		Pass
175	4.0 - 9.01% of mass 174	2694	6.58	(7.62) [a]	Pass
176	93.0 - 101.0% of mass 174	34733	84.8	(98.2) [a]	Pass
177	5.0 - 9.0% of mass 176	2163	5.28	(6.23) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V6W1149-CC1125	6W27187.D	11/25/22	14:46	00:33	Continuing cal 10
V6W1149-BS	6W27189.D	11/25/22	16:02	01:49	Blank Spike
V6W1149-BSD	6W27190.D	11/25/22	16:35	02:22	Blank Spike Duplicate
V6W1149-MB	6W27192.D	11/25/22	17:40	03:27	Method Blank
JD55696-11	6W27193.D	11/25/22	18:13	04:00	(used for QC only; not part of job JD62956)
JD55696-11DUP	6W27194.D	11/25/22	18:46	04:33	Duplicate
ZZZZZZ	6W27195.D	11/25/22	19:19	05:06	(unrelated sample)
ZZZZZZ	6W27197.D	11/25/22	20:29	06:16	(unrelated sample)
ZZZZZZ	6W27198.D	11/25/22	21:02	06:49	(unrelated sample)
ZZZZZZ	6W27199.D	11/25/22	21:35	07:22	(unrelated sample)
ZZZZZZ	6W27200.D	11/25/22	22:10	07:57	(unrelated sample)
ZZZZZZ	6W27201.D	11/25/22	22:45	08:32	(unrelated sample)
ZZZZZZ	6W27202.D	11/25/22	23:20	09:07	(unrelated sample)
ZZZZZZ	6W27203.D	11/25/22	23:55	09:42	(unrelated sample)
ZZZZZZ	6W27204.D	11/26/22	00:28	10:15	(unrelated sample)
ZZZZZZ	6W27205.D	11/26/22	01:02	10:49	(unrelated sample)
ZZZZZZ	6W27206.D	11/26/22	01:35	11:22	(unrelated sample)
ZZZZZZ	6W27207.D	11/26/22	02:08	11:55	(unrelated sample)
ZZZZZZ	6W27208.D	11/26/22	02:42	12:29	(unrelated sample)
ZZZZZZ	6W27213.D	11/26/22	05:29	15:16	(unrelated sample)
V6W1149-SCC	6W27219.D	11/26/22	08:49	18:36	Summa Cleaning Certification
V6W1149-SCC	6W27220.D	11/26/22	09:22	19:09	Summa Cleaning Certification
V6W1149-SCC	6W27221.D	11/26/22	09:55	19:42	Summa Cleaning Certification
V6W1149-SCC	6W27222.D	11/26/22	10:27	20:14	Summa Cleaning Certification

Instrument Performance Check (BFB)

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample: V7W5-BFB
Lab File ID: 7W00090.D
Instrument ID: GCMS7W
Injection Date: 11/30/22
Injection Time: 09:57

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	15648	20.2		Pass
75	30.0 - 66.0% of mass 95	39362	50.9		Pass
95	Base peak, 100% relative abundance	77379	100.0		Pass
96	5.0 - 9.0% of mass 95	4703	6.08		Pass
173	Less than 2.0% of mass 174	502	0.65	(0.84) [a]	Pass
174	50.0 - 120.0% of mass 95	60048	77.6		Pass
175	4.0 - 9.01% of mass 174	4685	6.05	(7.80) [a]	Pass
176	93.0 - 101.0% of mass 174	59629	77.1	(99.3) [a]	Pass
177	5.0 - 9.0% of mass 176	4038	5.22	(6.77) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V7W5-IC0005	7W00093.D	11/30/22	11:33	01:36	Initial cal 0.04
V7W5-IC0005	7W00094.D	11/30/22	12:06	02:09	Initial cal 0.1
V7W5-IC0005	7W00095.D	11/30/22	12:38	02:41	Initial cal 0.2
V7W5-IC0005	7W00096.D	11/30/22	13:09	03:12	Initial cal 0.5
V7W5-IC0005	7W00098.D	11/30/22	14:12	04:15	Initial cal 5
V7W5-ICC0005	7W00099.D	11/30/22	14:44	04:47	Initial cal 10
V7W5-IC0005	7W00100.D	11/30/22	15:16	05:19	Initial cal 20
V7W5-IC0005	7W00101.D	11/30/22	15:51	05:54	Initial cal 40
V7W5-IC0005	7W00102.D	11/30/22	16:26	06:29	Initial cal 50
V7W5-ICV0005	7W00105.D	11/30/22	17:59	08:02	Initial cal verification 10

Instrument Performance Check (BFB)

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample: V7W21-BFB
Lab File ID: 7W00402.D
Instrument ID: GCMS7W
Injection Date: 02/10/23
Injection Time: 08:40

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	13688	20.7		Pass
75	30.0 - 66.0% of mass 95	33299	50.4		Pass
95	Base peak, 100% relative abundance	66101	100.0		Pass
96	5.0 - 9.0% of mass 95	4403	6.66		Pass
173	Less than 2.0% of mass 174	599	0.91	(1.26) [a]	Pass
174	50.0 - 120.0% of mass 95	47653	72.1		Pass
175	4.0 - 9.01% of mass 174	3253	4.92	(6.83) [a]	Pass
176	93.0 - 101.0% of mass 174	45699	69.1	(95.9) [a]	Pass
177	5.0 - 9.0% of mass 176	2930	4.43	(6.41) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V7W21-CC0005	7W00404.D	02/10/23	10:33	01:53	Continuing cal 10
V7W21-BS	7W00405.D	02/10/23	11:14	02:34	Blank Spike
V7W21-BSD	7W00406.D	02/10/23	11:45	03:05	Blank Spike Duplicate
V7W21-MB	7W00408.D	02/10/23	13:15	04:35	Method Blank
V7W21-SCC	7W00412.D	02/10/23	16:05	07:25	Summa Cleaning Certification
V7W21-SCC	7W00413.D	02/10/23	16:39	07:59	Summa Cleaning Certification
ZZZZZZ	7W00414.D	02/10/23	17:10	08:30	(unrelated sample)
ZZZZZZ	7W00415.D	02/10/23	17:41	09:01	(unrelated sample)
JD60034-3	7W00416.D	02/10/23	18:16	09:36	(used for QC only; not part of job JD62956)
JD60034-3DUP	7W00417.D	02/10/23	18:50	10:10	Duplicate
ZZZZZZ	7W00418.D	02/10/23	19:26	10:46	(unrelated sample)
ZZZZZZ	7W00419.D	02/10/23	19:58	11:18	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample:	V7W57-BFB	**Injection Date:**	03/29/23
Lab File ID:	7W01234.D	**Injection Time:**	21:16
Instrument ID:	GCMS7W		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	7503	24.4		Pass
75	30.0 - 66.0% of mass 95	16274	52.9		Pass
95	Base peak, 100% relative abundance	30736	100.0		Pass
96	5.0 - 9.0% of mass 95	1895	6.17		Pass
173	Less than 2.0% of mass 174	186	0.61	(0.82) [a]	Pass
174	50.0 - 120.0% of mass 95	22704	73.9		Pass
175	4.0 - 9.01% of mass 174	1750	5.69	(7.71) [a]	Pass
176	93.0 - 101.0% of mass 174	22899	74.5	(100.9) [a]	Pass
177	5.0 - 9.0% of mass 176	1436	4.67	(6.27) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V7W57-IC57	7W01235.D	03/29/23	21:47	00:31	Initial cal 0.04
V7W57-IC57	7W01236.D	03/29/23	22:19	01:03	Initial cal 0.1
V7W57-IC57	7W01237.D	03/29/23	22:51	01:35	Initial cal 0.2
V7W57-IC57	7W01238.D	03/29/23	23:23	02:07	Initial cal 0.5
V7W57-IC57	7W01240.D	03/30/23	00:25	03:09	Initial cal 5
V7W57-ICC57	7W01241.D	03/30/23	00:58	03:42	Initial cal 10
V7W57-IC57	7W01242.D	03/30/23	01:30	04:14	Initial cal 20
V7W57-IC57	7W01243.D	03/30/23	02:04	04:48	Initial cal 40
V7W57-IC57	7W01244.D	03/30/23	02:40	05:24	Initial cal 50
V7W57-ICV57	7W01247.D	03/30/23	04:17	07:01	Initial cal verification 10

Instrument Performance Check (BFB)

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample:	V7W65-BFB	**Injection Date:**	04/06/23
Lab File ID:	7W01416.D	**Injection Time:**	13:47
Instrument ID:	GCMS7W		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	6497	23.2		Pass
75	30.0 - 66.0% of mass 95	15335	54.7		Pass
95	Base peak, 100% relative abundance	28021	100.0		Pass
96	5.0 - 9.0% of mass 95	1832	6.54		Pass
173	Less than 2.0% of mass 174	300	1.07	(1.17) [a]	Pass
174	50.0 - 120.0% of mass 95	25533	91.1		Pass
175	4.0 - 9.01% of mass 174	1960	6.99	(7.68) [a]	Pass
176	93.0 - 101.0% of mass 174	25203	89.9	(98.7) [a]	Pass
177	5.0 - 9.0% of mass 176	1620	5.78	(6.43) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V7W65-CC0057	7W01417.D	04/06/23	14:20	00:33	Continuing cal 10
V7W65-BS	7W01418.D	04/06/23	14:59	01:12	Blank Spike
V7W65-BSD	7W01419.D	04/06/23	15:33	01:46	Blank Spike Duplicate
V7W65-MB	7W01422.D	04/06/23	17:44	03:57	Method Blank
JD62486-1	7W01423.D	04/06/23	18:49	05:02	(used for QC only; not part of job JD62956)
JD62486-1DUP	7W01424.D	04/06/23	19:31	05:44	Duplicate
ZZZZZZ	7W01425.D	04/06/23	20:10	06:23	(unrelated sample)
ZZZZZZ	7W01426.D	04/06/23	20:50	07:03	(unrelated sample)
ZZZZZZ	7W01427.D	04/06/23	21:30	07:43	(unrelated sample)
ZZZZZZ	7W01428.D	04/06/23	22:10	08:23	(unrelated sample)
ZZZZZZ	7W01429.D	04/06/23	22:45	08:58	(unrelated sample)
ZZZZZZ	7W01430.D	04/06/23	23:21	09:34	(unrelated sample)
JD62956-1	7W01431.D	04/07/23	00:01	10:14	AA-03_UNIVAR_032923
JD62956-2	7W01432.D	04/07/23	00:42	10:55	IA-05_UNIVAR-FD-01_032923
JD62956-3	7W01433.D	04/07/23	01:26	11:39	IA-06_UNIVAR-FD-02_032923
ZZZZZZ	7W01434.D	04/07/23	02:00	12:13	(unrelated sample)
ZZZZZZ	7W01435.D	04/07/23	02:34	12:47	(unrelated sample)
ZZZZZZ	7W01436.D	04/07/23	03:08	13:21	(unrelated sample)
ZZZZZZ	7W01438.D	04/07/23	04:18	14:31	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample:	V8W1-BFB	**Injection Date:**	12/16/22
Lab File ID:	8W00006.D	**Injection Time:**	16:27
Instrument ID:	GCMS8W		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	15729	13.6		Pass
75	30.0 - 66.0% of mass 95	56885	49.3		Pass
95	Base peak, 100% relative abundance	115283	100.0		Pass
96	5.0 - 9.0% of mass 95	7956	6.90		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	94600	82.1		Pass
175	4.0 - 9.01% of mass 174	6689	5.80	(7.07) [a]	Pass
176	93.0 - 101.0% of mass 174	91331	79.2	(96.5) [a]	Pass
177	5.0 - 9.0% of mass 176	5825	5.05	(6.38) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V8W1-IC0001	8W00007.D	12/16/22	17:01	00:34	Initial cal 0.04
V8W1-IC0001	8W00008.D	12/16/22	17:35	01:08	Initial cal 0.1
V8W1-IC0001	8W00009.D	12/16/22	18:09	01:42	Initial cal 0.2
V8W1-IC0001	8W00010.D	12/16/22	18:46	02:19	Initial cal 0.5
V8W1-IC0001	8W00012.D	12/16/22	19:56	03:29	Initial cal 5
V8W1-ICC0001	8W00013.D	12/16/22	20:32	04:05	Initial cal 10
V8W1-IC0001	8W00014.D	12/16/22	21:10	04:43	Initial cal 20
V8W1-IC0001	8W00015.D	12/16/22	21:51	05:24	Initial cal 40
V8W1-IC0001	8W00016.D	12/16/22	22:34	06:07	Initial cal 50
V8W1-ICV0001	8W00019.D	12/17/22	00:17	07:50	Initial cal verification 10

Instrument Performance Check (BFB)

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample:	V8W10-BFB	**Injection Date:**	02/07/23
Lab File ID:	8W00224.D	**Injection Time:**	09:58
Instrument ID:	GCMS8W		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	15059	14.0		Pass
75	30.0 - 66.0% of mass 95	53560	49.7		Pass
95	Base peak, 100% relative abundance	107757	100.0		Pass
96	5.0 - 9.0% of mass 95	7811	7.25		Pass
173	Less than 2.0% of mass 174	415	0.39	(0.51) [a]	Pass
174	50.0 - 120.0% of mass 95	80933	75.1		Pass
175	4.0 - 9.01% of mass 174	5921	5.49	(7.32) [a]	Pass
176	93.0 - 101.0% of mass 174	78635	73.0	(97.2) [a]	Pass
177	5.0 - 9.0% of mass 176	5228	4.85	(6.65) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V8W10-CC0001	8W00225.D	02/07/23	10:33	00:35	Continuing cal 10
V8W10-BS	8W00226.D	02/07/23	11:15	01:17	Blank Spike
V8W10-BSD	8W00227.D	02/07/23	11:51	01:53	Blank Spike Duplicate
V8W10-MB	8W00229.D	02/07/23	14:24	04:26	Method Blank
V8W10-SCC	8W00230.D	02/07/23	17:36	07:38	Summa Cleaning Certification
V8W10-SCC	8W00231.D	02/07/23	18:17	08:19	Summa Cleaning Certification
V8W10-SCC	8W00232.D	02/07/23	18:57	08:59	Summa Cleaning Certification
V8W10-SCC	8W00233.D	02/07/23	19:37	09:39	Summa Cleaning Certification
V8W10-SCC	8W00235.D	02/07/23	20:58	11:00	Summa Cleaning Certification
V8W10-SCC	8W00236.D	02/07/23	21:38	11:40	Summa Cleaning Certification
V8W10-SCC	8W00238.D	02/07/23	23:00	13:02	Summa Cleaning Certification
V8W10-SCC	8W00239.D	02/07/23	23:39	13:41	Summa Cleaning Certification
V8W10-SCC	8W00241.D	02/08/23	01:00	15:02	Summa Cleaning Certification
V8W10-SCC	8W00243.D	02/08/23	02:21	16:23	Summa Cleaning Certification
V8W10-SCC	8W00244.D	02/08/23	03:02	17:04	Summa Cleaning Certification
V8W10-SCC	8W00245.D	02/08/23	03:42	17:44	Summa Cleaning Certification
V8W10-SCC	8W00246.D	02/08/23	04:24	18:26	Summa Cleaning Certification
V8W10-SCC	8W00247.D	02/08/23	05:04	19:06	Summa Cleaning Certification
V8W10-SCC	8W00248.D	02/08/23	05:45	19:47	Summa Cleaning Certification
V8W10-SCC	8W00249.D	02/08/23	06:26	20:28	Summa Cleaning Certification

Surrogate Recovery Summary

Job Number: JD62956
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Method: TO-15 **Matrix:** AIR

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1
JD62956-1	7W01431.D	90
JD62956-2	7W01432.D	92
JD62956-3	7W01433.D	92
JD62956-4	3W79979.D	105
JD62486-1DUP	7W01424.D	94
JD62956-4DUP	3W79980.D	106
V3W3154-BS	3W79975.D	107
V3W3154-BSD	3W79976.D	108
V3W3154-MB	3W79978.D	93
V6W1141-SCC	6W26979.D	99
V6W1149-SCC	6W27219.D	92
V7W21-SCC	7W00413.D	95
V7W65-BS	7W01418.D	98
V7W65-BSD	7W01419.D	96
V7W65-MB	7W01422.D	91
V8W10-SCC	8W00241.D	94
V6W1141-BS	6W26946.D	103
V6W1141-BSD	6W26947.D	104
V6W1141-MB	6W26949.D	100
V6W1149-BS	6W27189.D	98
V6W1149-BSD	6W27190.D	97
V6W1149-MB	6W27192.D	92
V7W21-BS	7W00405.D	104
V7W21-BSD	7W00406.D	106
V7W21-MB	7W00408.D	97
V8W10-BS	8W00226.D	100
V8W10-BSD	8W00227.D	99
V8W10-MB	8W00229.D	94

Surrogate Compounds	Recovery Limits
S1 = 4-Bromofluorobenzene	65-128%

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

UNIVAR

AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

30164040.00700

SGS Job Number: JD63360

Sampling Dates: 03/29/23 - 03/31/23

Report to:

Arcadis
28550 Cabot Drive Suite 500
Novi, MI 48377
Kaitlyn.Hunt@arcadis.com; Erin.Kozak@Arcadis.com;
marina.samp@arcadis.com; Christina.weaver@arcadis.com
ATTN: Erin Kozak

Total number of pages in report: **113**

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

David Chastain
General Manager

Client Service contact: Beth Stopen 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA(68-00408), RI, SC, TX, UT, VA, WV

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Test results relate only to samples analyzed.

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Please share your ideas about
how we can serve you better at:
EHS.US.CustomerCare@sgs.com

April 27, 2023

Mr. Erin Kozak
Arcadis
28550 Cabot Drive Suite 500
Novi, MI 48377

Re: SGS North America – Dayton, NJ Jobs # JD63360 – Reissues

Dear Mr. Kozak,

The final reports for SGS jobs number JD63360 have been edited to reflect corrections to the final results. These edits have been incorporated into the revised report which is attached.

Specifically, the sample JD63360-8 initial Volume had to be revised due a lab typo error. The attached revised report incorporates these revisions.

SGS apologizes for this occurrence and for any inconvenience this situation may have caused. Please contact me at 732-329-0200 if I can be of further assistance in this matter.

Sincerely,

Report Department

SGS North America Inc

CONTINUOUS SERVICE IMPROVEMENT!

Our goal is to continuously improve our service to you. Please share your ideas about how we can serve you better at EHS.US.CustomerCare@sgs.com. Your feedback is appreciated!

Table of Contents

SGS North America Inc.

Sample Summary

UNIVAR

Job No: JD63360

AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI
Project No: 30164040.00700

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JD63360-1	03/29/23	08:35	SF	04/03/23	AIR	Soil Vapor Comp.	SSMP-510_032923
JD63360-2	03/29/23	11:08	SF	04/03/23	AIR	Soil Vapor Comp.	FLOORDRAIN-02_032923
JD63360-3	03/29/23	11:24	SF	04/03/23	AIR	Soil Vapor Comp.	FLOORDRAIN-01_032923
JD63360-4	03/29/23	14:27	SF	04/03/23	AIR	Soil Vapor Comp.	SSMP-13_032923
JD63360-5	03/29/23	00:00	SF	04/03/23	AIR	Soil Vapor Comp.	DUP-01_032923
JD63360-6	03/29/23	00:00	SF	04/03/23	AIR	Soil Vapor Comp.	DUP-02_032923
JD63360-7	03/31/23	10:00	SF	04/03/23	AIR	Soil Vapor Comp.	SSMP-401_033123
JD63360-8	03/31/23	14:00	SF	04/03/23	AIR	Ambient Air Comp.	IA_01-GILMORE302R_033123
JD63360-9	03/31/23	15:32	SF	04/03/23	AIR	Soil Vapor Comp.	SSMP-302R_033123

This report contains results reported as ND = Not detected. The following applies:
Organics ND = Not detected above the MDL

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: UNIVAR **Job No:** JD63360

Site: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, **Report Date** 4/21/2023 5:30:32 PM

On 04/03/2023, 9 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at SGS North America Inc. An SGS Job Number of JD63360 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

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

MS Volatiles By Method TO-15

Matrix: AIR **Batch ID:** V2W2873

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD63724-13DUP were used as the QC samples indicated.
- The duplicate RPD(s) for Pentane are outside control limits for sample JD63724-13DUP. RPD acceptable due to low DUP and sample concentrations.

Matrix: AIR **Batch ID:** V3W3157

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD62665-10DUP were used as the QC samples indicated.
- Sample(s) JD63360-3, JD63360-4, JD63360-6, JD63360-7 have compounds reported with "E" qualifiers indicating estimated value exceeding calibration range.

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

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

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

Summary of Hits

Job Number: JD63360
Account: UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI
Collected: 03/29/23 thru 03/31/23

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JD63360-1	**SSMP-510_032923**					
Acetone (2-Propanone)		17.6	0.80	0.58	ppbv	TO-15
Acrolein		0.65 J	0.80	0.35	ppbv	TO-15
Benzene		0.70 J	0.80	0.25	ppbv	TO-15
Carbon disulfide		5.6	0.80	0.18	ppbv	TO-15
Chloroform		1.1	0.80	0.15	ppbv	TO-15
Chloromethane		0.52 J	0.80	0.36	ppbv	TO-15
1,4-Dioxane		0.53 J	0.80	0.47	ppbv	TO-15
Dichlorodifluoromethane		1.3	0.80	0.13	ppbv	TO-15
Ethanol		43.3	2.0	1.6	ppbv	TO-15
Ethyl Acetate		9.6	0.80	0.42	ppbv	TO-15
Hexane		1.7	0.80	0.45	ppbv	TO-15
Isopropyl Alcohol		3.6	0.80	0.56	ppbv	TO-15
Methylene chloride		0.81	0.80	0.22	ppbv	TO-15
Methyl ethyl ketone		1.8	0.80	0.44	ppbv	TO-15
Pentane		1.8	0.80	0.55	ppbv	TO-15
Propylene		46.0	2.0	0.57	ppbv	TO-15
2,2,4-Trimethylpentane		0.49 J	0.80	0.38	ppbv	TO-15
Tetrachloroethylene		0.22	0.16	0.056	ppbv	TO-15
Toluene		1.4	0.80	0.23	ppbv	TO-15
Trichlorofluoromethane		0.42 J	0.80	0.14	ppbv	TO-15
Acetone (2-Propanone)		41.8	1.9	1.4	ug/m3	TO-15
Acrolein		1.5 J	1.8	0.80	ug/m3	TO-15
Benzene		2.2 J	2.6	0.80	ug/m3	TO-15
Carbon disulfide		17	2.5	0.56	ug/m3	TO-15
Chloroform		5.4	3.9	0.73	ug/m3	TO-15
Chloromethane		1.1 J	1.7	0.74	ug/m3	TO-15
1,4-Dioxane		1.9 J	2.9	1.7	ug/m3	TO-15
Dichlorodifluoromethane		6.4	4.0	0.64	ug/m3	TO-15
Ethanol		81.6	3.8	3.0	ug/m3	TO-15
Ethyl Acetate		35	2.9	1.5	ug/m3	TO-15
Hexane		6.0	2.8	1.6	ug/m3	TO-15
Isopropyl Alcohol		8.8	2.0	1.4	ug/m3	TO-15
Methylene chloride		2.8	2.8	0.76	ug/m3	TO-15
Methyl ethyl ketone		5.3	2.4	1.3	ug/m3	TO-15
Pentane		5.3	2.4	1.6	ug/m3	TO-15
Propylene		79.0	3.4	0.98	ug/m3	TO-15
2,2,4-Trimethylpentane		2.3 J	3.7	1.8	ug/m3	TO-15
Tetrachloroethylene		1.5	1.1	0.38	ug/m3	TO-15
Toluene		5.3	3.0	0.87	ug/m3	TO-15
Trichlorofluoromethane		2.4 J	4.5	0.79	ug/m3	TO-15

Summary of Hits

Job Number: JD63360
Account: UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI
Collected: 03/29/23 thru 03/31/23

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JD63360-2	**FLOORDRAIN-02_032923**					
Acetone (2-Propanone)		20.0	0.80	0.58	ppbv	TO-15
Carbon disulfide		0.96	0.80	0.18	ppbv	TO-15
Chloroform		0.61 J	0.80	0.15	ppbv	TO-15
Chloromethane		0.83	0.80	0.36	ppbv	TO-15
Dichlorodifluoromethane		0.40 J	0.80	0.13	ppbv	TO-15
Ethanol		9.7	2.0	1.6	ppbv	TO-15
Ethyl Acetate		3.0	0.80	0.42	ppbv	TO-15
Isopropyl Alcohol		1.7	0.80	0.56	ppbv	TO-15
Methylene chloride		0.93	0.80	0.22	ppbv	TO-15
Methyl ethyl ketone		2.5	0.80	0.44	ppbv	TO-15
Pentane		0.70 J	0.80	0.55	ppbv	TO-15
Tertiary Butyl Alcohol		1.3	0.80	0.37	ppbv	TO-15
Tetrachloroethylene		2.1	0.16	0.056	ppbv	TO-15
Tetrahydrofuran		1.7	0.80	0.36	ppbv	TO-15
Acetone (2-Propanone)		47.5	1.9	1.4	ug/m3	TO-15
Carbon disulfide		3.0	2.5	0.56	ug/m3	TO-15
Chloroform		3.0 J	3.9	0.73	ug/m3	TO-15
Chloromethane		1.7	1.7	0.74	ug/m3	TO-15
Dichlorodifluoromethane		2.0 J	4.0	0.64	ug/m3	TO-15
Ethanol		18	3.8	3.0	ug/m3	TO-15
Ethyl Acetate		11	2.9	1.5	ug/m3	TO-15
Isopropyl Alcohol		4.2	2.0	1.4	ug/m3	TO-15
Methylene chloride		3.2	2.8	0.76	ug/m3	TO-15
Methyl ethyl ketone		7.4	2.4	1.3	ug/m3	TO-15
Pentane		2.1 J	2.4	1.6	ug/m3	TO-15
Tertiary Butyl Alcohol		3.9	2.4	1.1	ug/m3	TO-15
Tetrachloroethylene		14	1.1	0.38	ug/m3	TO-15
Tetrahydrofuran		5.0	2.4	1.1	ug/m3	TO-15
JD63360-3	**FLOORDRAIN-01_032923**					
Acetone (2-Propanone)		7.3	0.80	0.58	ppbv	TO-15
Chloromethane		0.76 J	0.80	0.36	ppbv	TO-15
Dichlorodifluoromethane		0.42 J	0.80	0.13	ppbv	TO-15
Ethanol		13.5	2.0	1.6	ppbv	TO-15
Ethyl Acetate		7.1	0.80	0.42	ppbv	TO-15
Isopropyl Alcohol		668 E	0.80	0.56	ppbv	TO-15
Methyl ethyl ketone		1.0	0.80	0.44	ppbv	TO-15
Pentane		0.63 J	0.80	0.55	ppbv	TO-15
Tetrachloroethylene		0.25	0.16	0.056	ppbv	TO-15
Acetone (2-Propanone)		17	1.9	1.4	ug/m3	TO-15
Chloromethane		1.6 J	1.7	0.74	ug/m3	TO-15
Dichlorodifluoromethane		2.1 J	4.0	0.64	ug/m3	TO-15

Summary of Hits

Job Number: JD63360
Account: UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI
Collected: 03/29/23 thru 03/31/23

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Ethanol		25.4	3.8	3.0	ug/m3	TO-15
Ethyl Acetate		26	2.9	1.5	ug/m3	TO-15
Isopropyl Alcohol		1640 E	2.0	1.4	ug/m3	TO-15
Methyl ethyl ketone		2.9	2.4	1.3	ug/m3	TO-15
Pentane		1.9 J	2.4	1.6	ug/m3	TO-15
Tetrachloroethylene		1.7	1.1	0.38	ug/m3	TO-15
JD63360-4	**SSMP-13_032923**					
Acetone (2-Propanone)		48.3	0.80	0.58	ppbv	TO-15
Carbon disulfide		0.56 J	0.80	0.18	ppbv	TO-15
Chloroform		26.7	0.80	0.15	ppbv	TO-15
Carbon tetrachloride		0.80	0.80	0.16	ppbv	TO-15
Dichlorodifluoromethane		0.43 J	0.80	0.13	ppbv	TO-15
Ethanol		38.0	2.0	1.6	ppbv	TO-15
Ethyl Acetate		5.5	0.80	0.42	ppbv	TO-15
Isopropyl Alcohol		1050 E	0.80	0.56	ppbv	TO-15
Methylene chloride		0.85	0.80	0.22	ppbv	TO-15
Methyl ethyl ketone		6.1	0.80	0.44	ppbv	TO-15
Methyl Isobutyl Ketone		0.39 J	0.80	0.29	ppbv	TO-15
Naphthalene		4.2	0.80	0.51	ppbv	TO-15
Pentane		0.81	0.80	0.55	ppbv	TO-15
1,1,1-Trichloroethane		1.1	0.80	0.15	ppbv	TO-15
Tertiary Butyl Alcohol		1.0	0.80	0.37	ppbv	TO-15
Tetrachloroethylene		30.5	0.16	0.056	ppbv	TO-15
Trichloroethylene		9.6	0.16	0.076	ppbv	TO-15
Acetone (2-Propanone)		115	1.9	1.4	ug/m3	TO-15
Carbon disulfide		1.7 J	2.5	0.56	ug/m3	TO-15
Chloroform		130	3.9	0.73	ug/m3	TO-15
Carbon tetrachloride		5.0	5.0	1.0	ug/m3	TO-15
Dichlorodifluoromethane		2.1 J	4.0	0.64	ug/m3	TO-15
Ethanol		71.6	3.8	3.0	ug/m3	TO-15
Ethyl Acetate		20	2.9	1.5	ug/m3	TO-15
Isopropyl Alcohol		2580 E	2.0	1.4	ug/m3	TO-15
Methylene chloride		3.0	2.8	0.76	ug/m3	TO-15
Methyl ethyl ketone		18	2.4	1.3	ug/m3	TO-15
Methyl Isobutyl Ketone		1.6 J	3.3	1.2	ug/m3	TO-15
Naphthalene		22	4.2	2.7	ug/m3	TO-15
Pentane		2.4	2.4	1.6	ug/m3	TO-15
1,1,1-Trichloroethane		6.0	4.4	0.82	ug/m3	TO-15
Tertiary Butyl Alcohol		3.0	2.4	1.1	ug/m3	TO-15
Tetrachloroethylene		207	1.1	0.38	ug/m3	TO-15
Trichloroethylene		52	0.86	0.41	ug/m3	TO-15

Summary of Hits

Job Number: JD63360
Account: UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI
Collected: 03/29/23 thru 03/31/23

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JD63360-5	**DUP-01_032923**					
Acetone (2-Propanone)		10.8	0.80	0.58	ppbv	TO-15
Chloromethane		0.62 J	0.80	0.36	ppbv	TO-15
Dichlorodifluoromethane		0.41 J	0.80	0.13	ppbv	TO-15
Ethanol		11.8	2.0	1.6	ppbv	TO-15
Ethyl Acetate		31.4	0.80	0.42	ppbv	TO-15
Hexane		0.55 J	0.80	0.45	ppbv	TO-15
Isopropyl Alcohol		108	0.80	0.56	ppbv	TO-15
Methylene chloride		1.6	0.80	0.22	ppbv	TO-15
Methyl ethyl ketone		1.4	0.80	0.44	ppbv	TO-15
Pentane		3.2	0.80	0.55	ppbv	TO-15
Tetrachloroethylene		1.3	0.16	0.056	ppbv	TO-15
Toluene		1.1	0.80	0.23	ppbv	TO-15
Acetone (2-Propanone)		25.7	1.9	1.4	ug/m3	TO-15
Chloromethane		1.3 J	1.7	0.74	ug/m3	TO-15
Dichlorodifluoromethane		2.0 J	4.0	0.64	ug/m3	TO-15
Ethanol		22.2	3.8	3.0	ug/m3	TO-15
Ethyl Acetate		113	2.9	1.5	ug/m3	TO-15
Hexane		1.9 J	2.8	1.6	ug/m3	TO-15
Isopropyl Alcohol		265	2.0	1.4	ug/m3	TO-15
Methylene chloride		5.6	2.8	0.76	ug/m3	TO-15
Methyl ethyl ketone		4.1	2.4	1.3	ug/m3	TO-15
Pentane		9.4	2.4	1.6	ug/m3	TO-15
Tetrachloroethylene		8.8	1.1	0.38	ug/m3	TO-15
Toluene		4.1	3.0	0.87	ug/m3	TO-15
JD63360-6	**DUP-02_032923**					
Acetone (2-Propanone)		49.2	0.80	0.58	ppbv	TO-15
Carbon disulfide		0.63 J	0.80	0.18	ppbv	TO-15
Chloroform		26.4	0.80	0.15	ppbv	TO-15
Carbon tetrachloride		0.82	0.80	0.16	ppbv	TO-15
Dichlorodifluoromethane		0.43 J	0.80	0.13	ppbv	TO-15
Ethanol		45.2	2.0	1.6	ppbv	TO-15
Ethyl Acetate		3.1	0.80	0.42	ppbv	TO-15
Isopropyl Alcohol		595 E	0.80	0.56	ppbv	TO-15
Methylene chloride		0.84	0.80	0.22	ppbv	TO-15
Methyl ethyl ketone		5.6	0.80	0.44	ppbv	TO-15
Naphthalene		1.6	0.80	0.51	ppbv	TO-15
Pentane		0.71 J	0.80	0.55	ppbv	TO-15
1,1,1-Trichloroethane		1.1	0.80	0.15	ppbv	TO-15
Tertiary Butyl Alcohol		0.91	0.80	0.37	ppbv	TO-15
Tetrachloroethylene		25.9	0.16	0.056	ppbv	TO-15
Trichloroethylene		9.1	0.16	0.076	ppbv	TO-15

Summary of Hits

Job Number: JD63360
Account: UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI
Collected: 03/29/23 thru 03/31/23

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Acetone (2-Propanone)		117	1.9	1.4	ug/m3	TO-15
Carbon disulfide		2.0 J	2.5	0.56	ug/m3	TO-15
Chloroform		129	3.9	0.73	ug/m3	TO-15
Carbon tetrachloride		5.2	5.0	1.0	ug/m3	TO-15
Dichlorodifluoromethane		2.1 J	4.0	0.64	ug/m3	TO-15
Ethanol		85.2	3.8	3.0	ug/m3	TO-15
Ethyl Acetate		11	2.9	1.5	ug/m3	TO-15
Isopropyl Alcohol		1460 E	2.0	1.4	ug/m3	TO-15
Methylene chloride		2.9	2.8	0.76	ug/m3	TO-15
Methyl ethyl ketone		17	2.4	1.3	ug/m3	TO-15
Naphthalene		8.4	4.2	2.7	ug/m3	TO-15
Pentane		2.1 J	2.4	1.6	ug/m3	TO-15
1,1,1-Trichloroethane		6.0	4.4	0.82	ug/m3	TO-15
Tertiary Butyl Alcohol		2.8	2.4	1.1	ug/m3	TO-15
Tetrachloroethylene		176	1.1	0.38	ug/m3	TO-15
Trichloroethylene		49	0.86	0.41	ug/m3	TO-15
JD63360-7	**SSMP-401_033123**					
Acetone (2-Propanone)		2.9	0.80	0.58	ppbv	TO-15
Chloroform		2.0	0.80	0.15	ppbv	TO-15
Dichlorodifluoromethane		0.60 J	0.80	0.13	ppbv	TO-15
Ethanol		244 E	2.0	1.6	ppbv	TO-15
Ethyl Acetate		1.5	0.80	0.42	ppbv	TO-15
Isopropyl Alcohol		20.0	0.80	0.56	ppbv	TO-15
Methyl ethyl ketone		0.50 J	0.80	0.44	ppbv	TO-15
Tetrachloroethylene		0.46	0.16	0.056	ppbv	TO-15
Tetrahydrofuran		0.43 J	0.80	0.36	ppbv	TO-15
Trichlorofluoromethane		1.8	0.80	0.14	ppbv	TO-15
Acetone (2-Propanone)		6.9	1.9	1.4	ug/m3	TO-15
Chloroform		9.8	3.9	0.73	ug/m3	TO-15
Dichlorodifluoromethane		3.0 J	4.0	0.64	ug/m3	TO-15
Ethanol		460 E	3.8	3.0	ug/m3	TO-15
Ethyl Acetate		5.4	2.9	1.5	ug/m3	TO-15
Isopropyl Alcohol		49.2	2.0	1.4	ug/m3	TO-15
Methyl ethyl ketone		1.5 J	2.4	1.3	ug/m3	TO-15
Tetrachloroethylene		3.1	1.1	0.38	ug/m3	TO-15
Tetrahydrofuran		1.3 J	2.4	1.1	ug/m3	TO-15
Trichlorofluoromethane		10	4.5	0.79	ug/m3	TO-15
JD63360-8	**IA_01-GILMORE302R_033123**					
Acetone (2-Propanone)		8.6	0.20	0.15	ppbv	TO-15
Acrolein		0.28	0.20	0.088	ppbv	TO-15
Benzene		0.87	0.20	0.062	ppbv	TO-15

Summary of Hits

Job Number: JD63360
Account: UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI
Collected: 03/29/23 thru 03/31/23

Lab Sample ID / Client Sample ID / Analyte	Result/ Qual	RL	MDL	Units	Method
Chloromethane	0.64	0.20	0.090	ppbv	TO-15
Cyclohexane	0.47	0.20	0.11	ppbv	TO-15
Dichlorodifluoromethane	0.41	0.20	0.032	ppbv	TO-15
Ethanol	28.8	0.50	0.39	ppbv	TO-15
Ethylbenzene	0.19 J	0.20	0.061	ppbv	TO-15
Ethyl Acetate	1.7	0.20	0.10	ppbv	TO-15
Heptane	0.56	0.20	0.092	ppbv	TO-15
Hexane	2.3	0.20	0.11	ppbv	TO-15
Isopropyl Alcohol	1.7	0.20	0.14	ppbv	TO-15
Methylene chloride	0.24	0.20	0.056	ppbv	TO-15
Methyl ethyl ketone	0.95	0.20	0.11	ppbv	TO-15
Pentane	7.8	0.20	0.14	ppbv	TO-15
1,2,4-Trimethylbenzene	0.19 J	0.20	0.087	ppbv	TO-15
2,2,4-Trimethylpentane	0.95	0.20	0.095	ppbv	TO-15
Tetrachloroethylene	0.051	0.040	0.014	ppbv	TO-15
Tetrahydrofuran	0.17 J	0.20	0.090	ppbv	TO-15
Toluene	1.8	0.20	0.057	ppbv	TO-15
Trichlorofluoromethane	0.23	0.20	0.036	ppbv	TO-15
m,p-Xylene	0.61	0.20	0.14	ppbv	TO-15
o-Xylene	0.23	0.20	0.077	ppbv	TO-15
Xylenes (total)	0.84	0.20	0.077	ppbv	TO-15
Acetone (2-Propanone)	20	0.48	0.36	ug/m3	TO-15
Acrolein	0.64	0.46	0.20	ug/m3	TO-15
Benzene	2.8	0.64	0.20	ug/m3	TO-15
Chloromethane	1.3	0.41	0.19	ug/m3	TO-15
Cyclohexane	1.6	0.69	0.38	ug/m3	TO-15
Dichlorodifluoromethane	2.0	0.99	0.16	ug/m3	TO-15
Ethanol	54.3	0.94	0.73	ug/m3	TO-15
Ethylbenzene	0.83 J	0.87	0.26	ug/m3	TO-15
Ethyl Acetate	6.1	0.72	0.36	ug/m3	TO-15
Heptane	2.3	0.82	0.38	ug/m3	TO-15
Hexane	8.1	0.70	0.39	ug/m3	TO-15
Isopropyl Alcohol	4.2	0.49	0.34	ug/m3	TO-15
Methylene chloride	0.83	0.69	0.19	ug/m3	TO-15
Methyl ethyl ketone	2.8	0.59	0.32	ug/m3	TO-15
Pentane	23	0.59	0.41	ug/m3	TO-15
1,2,4-Trimethylbenzene	0.93 J	0.98	0.43	ug/m3	TO-15
2,2,4-Trimethylpentane	4.4	0.93	0.44	ug/m3	TO-15
Tetrachloroethylene	0.35	0.27	0.095	ug/m3	TO-15
Tetrahydrofuran	0.50 J	0.59	0.27	ug/m3	TO-15
Toluene	6.8	0.75	0.21	ug/m3	TO-15
Trichlorofluoromethane	1.3	1.1	0.20	ug/m3	TO-15
m,p-Xylene	2.6	0.87	0.61	ug/m3	TO-15
o-Xylene	1.0	0.87	0.33	ug/m3	TO-15
Xylenes (total)	3.6	0.87	0.33	ug/m3	TO-15

Summary of Hits

Job Number: JD63360
Account: UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI
Collected: 03/29/23 thru 03/31/23

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JD63360-9	**SSMP-302R_033123**					
Benzene		6.2	0.80	0.25	ppbv	TO-15
Chloromethane		0.74 J	0.80	0.36	ppbv	TO-15
Cyclohexane		52.2	0.80	0.44	ppbv	TO-15
Dichlorodifluoromethane		0.41 J	0.80	0.13	ppbv	TO-15
Ethanol		19.6	2.0	1.6	ppbv	TO-15
Heptane		35.2	0.80	0.37	ppbv	TO-15
Hexane		285	25	14	ppbv	TO-15
Isopropyl Alcohol		43.5	0.80	0.56	ppbv	TO-15
Pentane		1610	25	17	ppbv	TO-15
Propylene		3.8	2.0	0.57	ppbv	TO-15
2,2,4-Trimethylpentane		15.9	0.80	0.38	ppbv	TO-15
Tetrachloroethylene		0.33	0.16	0.056	ppbv	TO-15
Toluene		2.2	0.80	0.23	ppbv	TO-15
m,p-Xylene		1.3	0.80	0.56	ppbv	TO-15
Xylenes (total)		1.3	0.80	0.31	ppbv	TO-15
Benzene		20	2.6	0.80	ug/m3	TO-15
Chloromethane		1.5 J	1.7	0.74	ug/m3	TO-15
Cyclohexane		180	2.8	1.5	ug/m3	TO-15
Dichlorodifluoromethane		2.0 J	4.0	0.64	ug/m3	TO-15
Ethanol		36.9	3.8	3.0	ug/m3	TO-15
Heptane		144	3.3	1.5	ug/m3	TO-15
Hexane		1000	88	49	ug/m3	TO-15
Isopropyl Alcohol		107	2.0	1.4	ug/m3	TO-15
Pentane		4740	74	50	ug/m3	TO-15
Propylene		6.5	3.4	0.98	ug/m3	TO-15
2,2,4-Trimethylpentane		74.3	3.7	1.8	ug/m3	TO-15
Tetrachloroethylene		2.2	1.1	0.38	ug/m3	TO-15
Toluene		8.3	3.0	0.87	ug/m3	TO-15
m,p-Xylene		5.6	3.5	2.4	ug/m3	TO-15
Xylenes (total)		5.6	3.5	1.3	ug/m3	TO-15

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	SSMP-510_032923		
Lab Sample ID:	JD63360-1	**Date Sampled:**	03/29/23
Matrix:	AIR - Soil Vapor Comp. Summa ID: A1500	**Date Received:**	04/03/23
Method:	TO-15	**Percent Solids:**	n/a
Project:	AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3W80066.D	1	04/11/23 18:32	TCH	n/a	n/a	V3W3157
Run #2							

	Initial Volume
Run #1	100 ml
Run #2	

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
67-64-1	58.08	Acetone (2-Propanone)	17.6	0.80	0.58	ppbv		41.8	1.9	1.4	ug/m3
107-02-8	56	Acrolein	0.65	0.80	0.35	ppbv	J	1.5	1.8	0.80	ug/m3
107-13-1	53	Acrylonitrile	ND	0.80	0.36	ppbv		ND	1.7	0.78	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.80	0.34	ppbv		ND	1.8	0.75	ug/m3
71-43-2	78.11	Benzene	0.70	0.80	0.25	ppbv	J	2.2	2.6	0.80	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.80	0.12	ppbv		ND	5.4	0.80	ug/m3
75-25-2	252.8	Bromoform	ND	0.80	0.28	ppbv		ND	8.3	2.9	ug/m3
74-83-9	94.94	Bromomethane	ND	0.80	0.28	ppbv		ND	3.1	1.1	ug/m3
593-60-2	106.9	Bromoethene	ND	0.80	0.24	ppbv		ND	3.5	1.0	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.80	0.50	ppbv		ND	4.1	2.6	ug/m3
104-51-8	134	n-Butylbenzene	ND	0.80	0.42	ppbv		ND	4.4	2.3	ug/m3
135-98-8	134	sec-Butylbenzene	ND	0.80	0.32	ppbv		ND	4.4	1.8	ug/m3
75-15-0	76.14	Carbon disulfide	5.6	0.80	0.18	ppbv		17	2.5	0.56	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.80	0.30	ppbv		ND	3.7	1.4	ug/m3
75-00-3	64.52	Chloroethane	ND	0.80	0.27	ppbv		ND	2.1	0.71	ug/m3
67-66-3	119.4	Chloroform	1.1	0.80	0.15	ppbv		5.4	3.9	0.73	ug/m3
74-87-3	50.49	Chloromethane	0.52	0.80	0.36	ppbv	J	1.1	1.7	0.74	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.80	0.33	ppbv		ND	2.5	1.0	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.80	0.16	ppbv		ND	5.0	1.0	ug/m3
110-82-7	84.16	Cyclohexane	ND	0.80	0.44	ppbv		ND	2.8	1.5	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.80	0.23	ppbv		ND	3.2	0.93	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.80	0.24	ppbv		ND	3.2	0.95	ug/m3
106-93-4	187.9	1,2-Dibromoethane (EDB)	ND	0.80	0.39	ppbv		ND	6.1	3.0	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.80	0.28	ppbv		ND	3.2	1.1	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.80	0.25	ppbv		ND	3.7	1.2	ug/m3
123-91-1	88.12	1,4-Dioxane	0.53	0.80	0.47	ppbv	J	1.9	2.9	1.7	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	1.3	0.80	0.13	ppbv		6.4	4.0	0.64	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.80	0.21	ppbv		ND	6.8	1.8	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.80	0.28	ppbv		ND	3.2	1.1	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.80	0.31	ppbv		ND	3.2	1.2	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.80	0.25	ppbv		ND	3.6	1.1	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.80	0.16	ppbv		ND	4.8	0.96	ug/m3

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

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

Report of Analysis

Client Sample ID:	SSMP-510_032923		
Lab Sample ID:	JD63360-1	**Date Sampled:**	03/29/23
Matrix:	AIR - Soil Vapor Comp. Summa ID: A1500	**Date Received:**	04/03/23
Method:	TO-15	**Percent Solids:**	n/a
Project:	AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
95-50-1	147	o-Dichlorobenzene	ND	0.80	0.62	ppbv		ND	4.8	3.7	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.80	0.76	ppbv		ND	4.8	4.6	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.80	0.40	ppbv		ND	3.6	1.8	ug/m3
108-20-3	102	Di-Isopropyl ether	ND	0.80	0.33	ppbv		ND	3.3	1.4	ug/m3
64-17-5	46.07	Ethanol	43.3	2.0	1.6	ppbv		81.6	3.8	3.0	ug/m3
100-41-4	106.2	Ethylbenzene	ND	0.80	0.24	ppbv		ND	3.5	1.0	ug/m3
141-78-6	88	Ethyl Acetate	9.6	0.80	0.42	ppbv		35	2.9	1.5	ug/m3
622-96-8	120.19	4-Ethyltoluene	ND	0.80	0.38	ppbv		ND	3.9	1.9	ug/m3
76-13-1	187.4	Freon 113	ND	0.80	0.12	ppbv		ND	6.1	0.92	ug/m3
76-14-2	170.9	Freon 114	ND	0.80	0.20	ppbv		ND	5.6	1.4	ug/m3
142-82-5	100.2	Heptane	ND	0.80	0.37	ppbv		ND	3.3	1.5	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.80	0.25	ppbv		ND	8.5	2.7	ug/m3
110-54-3	86.18	Hexane	1.7	0.80	0.45	ppbv		6.0	2.8	1.6	ug/m3
591-78-6	100	2-Hexanone	ND	0.80	0.58	ppbv		ND	3.3	2.4	ug/m3
98-82-8	120	Isopropylbenzene	ND	0.80	0.26	ppbv		ND	3.9	1.3	ug/m3
67-63-0	60.1	Isopropyl Alcohol	3.6	0.80	0.56	ppbv		8.8	2.0	1.4	ug/m3
99-87-6	134	p-Isopropyltoluene	ND	0.80	0.32	ppbv		ND	4.4	1.8	ug/m3
75-09-2	84.94	Methylene chloride	0.81	0.80	0.22	ppbv		2.8	2.8	0.76	ug/m3
78-93-3	72.11	Methyl ethyl ketone	1.8	0.80	0.44	ppbv		5.3	2.4	1.3	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.80	0.29	ppbv		ND	3.3	1.2	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.80	0.32	ppbv		ND	2.9	1.2	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.80	0.28	ppbv		ND	3.3	1.1	ug/m3
91-20-3	128.17	Naphthalene	ND	0.80	0.51	ppbv		ND	4.2	2.7	ug/m3
109-66-0	72	Pentane	1.8	0.80	0.55	ppbv		5.3	2.4	1.6	ug/m3
103-65-1	120	n-Propylbenzene	ND	0.80	0.36	ppbv		ND	3.9	1.8	ug/m3
115-07-1	42	Propylene	46.0	2.0	0.57	ppbv		79.0	3.4	0.98	ug/m3
100-42-5	104.1	Styrene	ND	0.80	0.47	ppbv		ND	3.4	2.0	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.80	0.15	ppbv		ND	4.4	0.82	ug/m3
79-34-5	167.85	1,1,2,2-Tetrachloroethane	ND	0.80	0.19	ppbv		ND	5.5	1.3	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.80	0.15	ppbv		ND	4.4	0.82	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.80	0.48	ppbv		ND	5.9	3.6	ug/m3
95-63-6	120.19	1,2,4-Trimethylbenzene	ND	0.80	0.35	ppbv		ND	3.9	1.7	ug/m3
108-67-8	120.19	1,3,5-Trimethylbenzene	ND	0.80	0.32	ppbv		ND	3.9	1.6	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	0.49	0.80	0.38	ppbv	J	2.3	3.7	1.8	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	0.80	0.37	ppbv		ND	2.4	1.1	ug/m3
127-18-4	165.8	Tetrachloroethylene	0.22	0.16	0.056	ppbv		1.5	1.1	0.38	ug/m3
109-99-9	72.11	Tetrahydrofuran	ND	0.80	0.36	ppbv		ND	2.4	1.1	ug/m3
108-88-3	92.14	Toluene	1.4	0.80	0.23	ppbv		5.3	3.0	0.87	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.16	0.076	ppbv		ND	0.86	0.41	ug/m3
75-69-4	137.4	Trichlorofluoromethane	0.42	0.80	0.14	ppbv	J	2.4	4.5	0.79	ug/m3

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SSMP-510_032923		
Lab Sample ID:	JD63360-1	**Date Sampled:**	03/29/23
Matrix:	AIR - Soil Vapor Comp. Summa ID: A1500	**Date Received:**	04/03/23
Method:	TO-15	**Percent Solids:**	n/a
Project:	AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
75-01-4	62.5	Vinyl chloride	ND	0.80	0.28	ppbv		ND	2.0	0.72	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.80	0.45	ppbv		ND	2.8	1.6	ug/m3
	106.2	m,p-Xylene	ND	0.80	0.56	ppbv		ND	3.5	2.4	ug/m3
95-47-6	106.2	o-Xylene	ND	0.80	0.31	ppbv		ND	3.5	1.3	ug/m3
1330-20-7	106.2	Xylenes (total)	ND	0.80	0.31	ppbv		ND	3.5	1.3	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	94%		65-128%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	FLOORDRAIN-02_032923		
Lab Sample ID:	JD63360-2	**Date Sampled:**	03/29/23
Matrix:	AIR - Soil Vapor Comp. Summa ID: A1899	**Date Received:**	04/03/23
Method:	TO-15	**Percent Solids:**	n/a
Project:	AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3W80067.D	1	04/11/23 19:11	TCH	n/a	n/a	V3W3157
Run #2							

	Initial Volume
Run #1	100 ml
Run #2	

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
67-64-1	58.08	Acetone (2-Propanone)	20.0	0.80	0.58	ppbv		47.5	1.9	1.4	ug/m3
107-02-8	56	Acrolein	ND	0.80	0.35	ppbv		ND	1.8	0.80	ug/m3
107-13-1	53	Acrylonitrile	ND	0.80	0.36	ppbv		ND	1.7	0.78	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.80	0.34	ppbv		ND	1.8	0.75	ug/m3
71-43-2	78.11	Benzene	ND	0.80	0.25	ppbv		ND	2.6	0.80	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.80	0.12	ppbv		ND	5.4	0.80	ug/m3
75-25-2	252.8	Bromoform	ND	0.80	0.28	ppbv		ND	8.3	2.9	ug/m3
74-83-9	94.94	Bromomethane	ND	0.80	0.28	ppbv		ND	3.1	1.1	ug/m3
593-60-2	106.9	Bromoethene	ND	0.80	0.24	ppbv		ND	3.5	1.0	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.80	0.50	ppbv		ND	4.1	2.6	ug/m3
104-51-8	134	n-Butylbenzene	ND	0.80	0.42	ppbv		ND	4.4	2.3	ug/m3
135-98-8	134	sec-Butylbenzene	ND	0.80	0.32	ppbv		ND	4.4	1.8	ug/m3
75-15-0	76.14	Carbon disulfide	0.96	0.80	0.18	ppbv		3.0	2.5	0.56	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.80	0.30	ppbv		ND	3.7	1.4	ug/m3
75-00-3	64.52	Chloroethane	ND	0.80	0.27	ppbv		ND	2.1	0.71	ug/m3
67-66-3	119.4	Chloroform	0.61	0.80	0.15	ppbv	J	3.0	3.9	0.73	ug/m3
74-87-3	50.49	Chloromethane	0.83	0.80	0.36	ppbv		1.7	1.7	0.74	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.80	0.33	ppbv		ND	2.5	1.0	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.80	0.16	ppbv		ND	5.0	1.0	ug/m3
110-82-7	84.16	Cyclohexane	ND	0.80	0.44	ppbv		ND	2.8	1.5	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.80	0.23	ppbv		ND	3.2	0.93	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.80	0.24	ppbv		ND	3.2	0.95	ug/m3
106-93-4	187.9	1,2-Dibromoethane (EDB)	ND	0.80	0.39	ppbv		ND	6.1	3.0	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.80	0.28	ppbv		ND	3.2	1.1	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.80	0.25	ppbv		ND	3.7	1.2	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.80	0.47	ppbv		ND	2.9	1.7	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.40	0.80	0.13	ppbv	J	2.0	4.0	0.64	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.80	0.21	ppbv		ND	6.8	1.8	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.80	0.28	ppbv		ND	3.2	1.1	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.80	0.31	ppbv		ND	3.2	1.2	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.80	0.25	ppbv		ND	3.6	1.1	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.80	0.16	ppbv		ND	4.8	0.96	ug/m3

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

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

Report of Analysis

Client Sample ID:	FLOORDRAIN-02_032923		
Lab Sample ID:	JD63360-2	**Date Sampled:**	03/29/23
Matrix:	AIR - Soil Vapor Comp. Summa ID: A1899	**Date Received:**	04/03/23
Method:	TO-15	**Percent Solids:**	n/a
Project:	AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
95-50-1	147	o-Dichlorobenzene	ND	0.80	0.62	ppbv		ND	4.8	3.7	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.80	0.76	ppbv		ND	4.8	4.6	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.80	0.40	ppbv		ND	3.6	1.8	ug/m3
108-20-3	102	Di-Isopropyl ether	ND	0.80	0.33	ppbv		ND	3.3	1.4	ug/m3
64-17-5	46.07	Ethanol	9.7	2.0	1.6	ppbv		18	3.8	3.0	ug/m3
100-41-4	106.2	Ethylbenzene	ND	0.80	0.24	ppbv		ND	3.5	1.0	ug/m3
141-78-6	88	Ethyl Acetate	3.0	0.80	0.42	ppbv		11	2.9	1.5	ug/m3
622-96-8	120.19	4-Ethyltoluene	ND	0.80	0.38	ppbv		ND	3.9	1.9	ug/m3
76-13-1	187.4	Freon 113	ND	0.80	0.12	ppbv		ND	6.1	0.92	ug/m3
76-14-2	170.9	Freon 114	ND	0.80	0.20	ppbv		ND	5.6	1.4	ug/m3
142-82-5	100.2	Heptane	ND	0.80	0.37	ppbv		ND	3.3	1.5	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.80	0.25	ppbv		ND	8.5	2.7	ug/m3
110-54-3	86.18	Hexane	ND	0.80	0.45	ppbv		ND	2.8	1.6	ug/m3
591-78-6	100	2-Hexanone	ND	0.80	0.58	ppbv		ND	3.3	2.4	ug/m3
98-82-8	120	Isopropylbenzene	ND	0.80	0.26	ppbv		ND	3.9	1.3	ug/m3
67-63-0	60.1	Isopropyl Alcohol	1.7	0.80	0.56	ppbv		4.2	2.0	1.4	ug/m3
99-87-6	134	p-Isopropyltoluene	ND	0.80	0.32	ppbv		ND	4.4	1.8	ug/m3
75-09-2	84.94	Methylene chloride	0.93	0.80	0.22	ppbv		3.2	2.8	0.76	ug/m3
78-93-3	72.11	Methyl ethyl ketone	2.5	0.80	0.44	ppbv		7.4	2.4	1.3	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.80	0.29	ppbv		ND	3.3	1.2	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.80	0.32	ppbv		ND	2.9	1.2	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.80	0.28	ppbv		ND	3.3	1.1	ug/m3
91-20-3	128.17	Naphthalene	ND	0.80	0.51	ppbv		ND	4.2	2.7	ug/m3
109-66-0	72	Pentane	0.70	0.80	0.55	ppbv	J	2.1	2.4	1.6	ug/m3
103-65-1	120	n-Propylbenzene	ND	0.80	0.36	ppbv		ND	3.9	1.8	ug/m3
115-07-1	42	Propylene	ND	2.0	0.57	ppbv		ND	3.4	0.98	ug/m3
100-42-5	104.1	Styrene	ND	0.80	0.47	ppbv		ND	3.4	2.0	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.80	0.15	ppbv		ND	4.4	0.82	ug/m3
79-34-5	167.85	1,1,2,2-Tetrachloroethane	ND	0.80	0.19	ppbv		ND	5.5	1.3	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.80	0.15	ppbv		ND	4.4	0.82	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.80	0.48	ppbv		ND	5.9	3.6	ug/m3
95-63-6	120.19	1,2,4-Trimethylbenzene	ND	0.80	0.35	ppbv		ND	3.9	1.7	ug/m3
108-67-8	120.19	1,3,5-Trimethylbenzene	ND	0.80	0.32	ppbv		ND	3.9	1.6	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	0.80	0.38	ppbv		ND	3.7	1.8	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	1.3	0.80	0.37	ppbv		3.9	2.4	1.1	ug/m3
127-18-4	165.8	Tetrachloroethylene	2.1	0.16	0.056	ppbv		14	1.1	0.38	ug/m3
109-99-9	72.11	Tetrahydrofuran	1.7	0.80	0.36	ppbv		5.0	2.4	1.1	ug/m3
108-88-3	92.14	Toluene	ND	0.80	0.23	ppbv		ND	3.0	0.87	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.16	0.076	ppbv		ND	0.86	0.41	ug/m3
75-69-4	137.4	Trichlorofluoromethane	ND	0.80	0.14	ppbv		ND	4.5	0.79	ug/m3

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	FLOORDRAIN-02_032923		
Lab Sample ID:	JD63360-2	**Date Sampled:**	03/29/23
Matrix:	AIR - Soil Vapor Comp. Summa ID: A1899	**Date Received:**	04/03/23
Method:	TO-15	**Percent Solids:**	n/a
Project:	AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
75-01-4	62.5	Vinyl chloride	ND	0.80	0.28	ppbv		ND	2.0	0.72	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.80	0.45	ppbv		ND	2.8	1.6	ug/m3
	106.2	m,p-Xylene	ND	0.80	0.56	ppbv		ND	3.5	2.4	ug/m3
95-47-6	106.2	o-Xylene	ND	0.80	0.31	ppbv		ND	3.5	1.3	ug/m3
1330-20-7	106.2	Xylenes (total)	ND	0.80	0.31	ppbv		ND	3.5	1.3	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	94%		65-128%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	FLOORDRAIN-01_032923		
Lab Sample ID:	JD63360-3	**Date Sampled:**	03/29/23
Matrix:	AIR - Soil Vapor Comp. Summa ID: A1422	**Date Received:**	04/03/23
Method:	TO-15	**Percent Solids:**	n/a
Project:	AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3W80068.D	1	04/11/23 19:51	TCH	n/a	n/a	V3W3157
Run #2							

	Initial Volume
Run #1	100 ml
Run #2	

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
67-64-1	58.08	Acetone (2-Propanone)	7.3	0.80	0.58	ppbv		17	1.9	1.4	ug/m3
107-02-8	56	Acrolein	ND	0.80	0.35	ppbv		ND	1.8	0.80	ug/m3
107-13-1	53	Acrylonitrile	ND	0.80	0.36	ppbv		ND	1.7	0.78	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.80	0.34	ppbv		ND	1.8	0.75	ug/m3
71-43-2	78.11	Benzene	ND	0.80	0.25	ppbv		ND	2.6	0.80	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.80	0.12	ppbv		ND	5.4	0.80	ug/m3
75-25-2	252.8	Bromoform	ND	0.80	0.28	ppbv		ND	8.3	2.9	ug/m3
74-83-9	94.94	Bromomethane	ND	0.80	0.28	ppbv		ND	3.1	1.1	ug/m3
593-60-2	106.9	Bromoethene	ND	0.80	0.24	ppbv		ND	3.5	1.0	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.80	0.50	ppbv		ND	4.1	2.6	ug/m3
104-51-8	134	n-Butylbenzene	ND	0.80	0.42	ppbv		ND	4.4	2.3	ug/m3
135-98-8	134	sec-Butylbenzene	ND	0.80	0.32	ppbv		ND	4.4	1.8	ug/m3
75-15-0	76.14	Carbon disulfide	ND	0.80	0.18	ppbv		ND	2.5	0.56	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.80	0.30	ppbv		ND	3.7	1.4	ug/m3
75-00-3	64.52	Chloroethane	ND	0.80	0.27	ppbv		ND	2.1	0.71	ug/m3
67-66-3	119.4	Chloroform	ND	0.80	0.15	ppbv		ND	3.9	0.73	ug/m3
74-87-3	50.49	Chloromethane	0.76	0.80	0.36	ppbv	J	1.6	1.7	0.74	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.80	0.33	ppbv		ND	2.5	1.0	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.80	0.16	ppbv		ND	5.0	1.0	ug/m3
110-82-7	84.16	Cyclohexane	ND	0.80	0.44	ppbv		ND	2.8	1.5	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.80	0.23	ppbv		ND	3.2	0.93	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.80	0.24	ppbv		ND	3.2	0.95	ug/m3
106-93-4	187.9	1,2-Dibromoethane (EDB)	ND	0.80	0.39	ppbv		ND	6.1	3.0	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.80	0.28	ppbv		ND	3.2	1.1	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.80	0.25	ppbv		ND	3.7	1.2	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.80	0.47	ppbv		ND	2.9	1.7	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.42	0.80	0.13	ppbv	J	2.1	4.0	0.64	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.80	0.21	ppbv		ND	6.8	1.8	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.80	0.28	ppbv		ND	3.2	1.1	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.80	0.31	ppbv		ND	3.2	1.2	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.80	0.25	ppbv		ND	3.6	1.1	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.80	0.16	ppbv		ND	4.8	0.96	ug/m3

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

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

Report of Analysis

Client Sample ID:	FLOORDRAIN-01_032923		
Lab Sample ID:	JD63360-3	**Date Sampled:**	03/29/23
Matrix:	AIR - Soil Vapor Comp. Summa ID: A1422	**Date Received:**	04/03/23
Method:	TO-15	**Percent Solids:**	n/a
Project:	AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
95-50-1	147	o-Dichlorobenzene	ND	0.80	0.62	ppbv		ND	4.8	3.7	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.80	0.76	ppbv		ND	4.8	4.6	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.80	0.40	ppbv		ND	3.6	1.8	ug/m3
108-20-3	102	Di-Isopropyl ether	ND	0.80	0.33	ppbv		ND	3.3	1.4	ug/m3
64-17-5	46.07	Ethanol	13.5	2.0	1.6	ppbv		25.4	3.8	3.0	ug/m3
100-41-4	106.2	Ethylbenzene	ND	0.80	0.24	ppbv		ND	3.5	1.0	ug/m3
141-78-6	88	Ethyl Acetate	7.1	0.80	0.42	ppbv		26	2.9	1.5	ug/m3
622-96-8	120.19	4-Ethyltoluene	ND	0.80	0.38	ppbv		ND	3.9	1.9	ug/m3
76-13-1	187.4	Freon 113	ND	0.80	0.12	ppbv		ND	6.1	0.92	ug/m3
76-14-2	170.9	Freon 114	ND	0.80	0.20	ppbv		ND	5.6	1.4	ug/m3
142-82-5	100.2	Heptane	ND	0.80	0.37	ppbv		ND	3.3	1.5	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.80	0.25	ppbv		ND	8.5	2.7	ug/m3
110-54-3	86.18	Hexane	ND	0.80	0.45	ppbv		ND	2.8	1.6	ug/m3
591-78-6	100	2-Hexanone	ND	0.80	0.58	ppbv		ND	3.3	2.4	ug/m3
98-82-8	120	Isopropylbenzene	ND	0.80	0.26	ppbv		ND	3.9	1.3	ug/m3
67-63-0	60.1	Isopropyl Alcohol	668	0.80	0.56	ppbv	E	1640	2.0	1.4	ug/m3
99-87-6	134	p-Isopropyltoluene	ND	0.80	0.32	ppbv		ND	4.4	1.8	ug/m3
75-09-2	84.94	Methylene chloride	ND	0.80	0.22	ppbv		ND	2.8	0.76	ug/m3
78-93-3	72.11	Methyl ethyl ketone	1.0	0.80	0.44	ppbv		2.9	2.4	1.3	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.80	0.29	ppbv		ND	3.3	1.2	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.80	0.32	ppbv		ND	2.9	1.2	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.80	0.28	ppbv		ND	3.3	1.1	ug/m3
91-20-3	128.17	Naphthalene	ND	0.80	0.51	ppbv		ND	4.2	2.7	ug/m3
109-66-0	72	Pentane	0.63	0.80	0.55	ppbv	J	1.9	2.4	1.6	ug/m3
103-65-1	120	n-Propylbenzene	ND	0.80	0.36	ppbv		ND	3.9	1.8	ug/m3
115-07-1	42	Propylene	ND	2.0	0.57	ppbv		ND	3.4	0.98	ug/m3
100-42-5	104.1	Styrene	ND	0.80	0.47	ppbv		ND	3.4	2.0	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.80	0.15	ppbv		ND	4.4	0.82	ug/m3
79-34-5	167.85	1,1,2,2-Tetrachloroethane	ND	0.80	0.19	ppbv		ND	5.5	1.3	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.80	0.15	ppbv		ND	4.4	0.82	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.80	0.48	ppbv		ND	5.9	3.6	ug/m3
95-63-6	120.19	1,2,4-Trimethylbenzene	ND	0.80	0.35	ppbv		ND	3.9	1.7	ug/m3
108-67-8	120.19	1,3,5-Trimethylbenzene	ND	0.80	0.32	ppbv		ND	3.9	1.6	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	0.80	0.38	ppbv		ND	3.7	1.8	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	0.80	0.37	ppbv		ND	2.4	1.1	ug/m3
127-18-4	165.8	Tetrachloroethylene	0.25	0.16	0.056	ppbv		1.7	1.1	0.38	ug/m3
109-99-9	72.11	Tetrahydrofuran	ND	0.80	0.36	ppbv		ND	2.4	1.1	ug/m3
108-88-3	92.14	Toluene	ND	0.80	0.23	ppbv		ND	3.0	0.87	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.16	0.076	ppbv		ND	0.86	0.41	ug/m3
75-69-4	137.4	Trichlorofluoromethane	ND	0.80	0.14	ppbv		ND	4.5	0.79	ug/m3

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

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

Report of Analysis

Client Sample ID:	FLOORDRAIN-01_032923		
Lab Sample ID:	JD63360-3	**Date Sampled:**	03/29/23
Matrix:	AIR - Soil Vapor Comp. Summa ID: A1422	**Date Received:**	04/03/23
Method:	TO-15	**Percent Solids:**	n/a
Project:	AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
75-01-4	62.5	Vinyl chloride	ND	0.80	0.28	ppbv		ND	2.0	0.72	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.80	0.45	ppbv		ND	2.8	1.6	ug/m3
	106.2	m,p-Xylene	ND	0.80	0.56	ppbv		ND	3.5	2.4	ug/m3
95-47-6	106.2	o-Xylene	ND	0.80	0.31	ppbv		ND	3.5	1.3	ug/m3
1330-20-7	106.2	Xylenes (total)	ND	0.80	0.31	ppbv		ND	3.5	1.3	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	93%		65-128%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SSMP-13_032923		
Lab Sample ID:	JD63360-4	**Date Sampled:**	03/29/23
Matrix:	AIR - Soil Vapor Comp. Summa ID: A1430	**Date Received:**	04/03/23
Method:	TO-15	**Percent Solids:**	n/a
Project:	AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3W80069.D	1	04/11/23 20:30	TCH	n/a	n/a	V3W3157
Run #2							

	Initial Volume
Run #1	100 ml
Run #2	

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
67-64-1	58.08	Acetone (2-Propanone)	48.3	0.80	0.58	ppbv		115	1.9	1.4	ug/m3
107-02-8	56	Acrolein	ND	0.80	0.35	ppbv		ND	1.8	0.80	ug/m3
107-13-1	53	Acrylonitrile	ND	0.80	0.36	ppbv		ND	1.7	0.78	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.80	0.34	ppbv		ND	1.8	0.75	ug/m3
71-43-2	78.11	Benzene	ND	0.80	0.25	ppbv		ND	2.6	0.80	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.80	0.12	ppbv		ND	5.4	0.80	ug/m3
75-25-2	252.8	Bromoform	ND	0.80	0.28	ppbv		ND	8.3	2.9	ug/m3
74-83-9	94.94	Bromomethane	ND	0.80	0.28	ppbv		ND	3.1	1.1	ug/m3
593-60-2	106.9	Bromoethene	ND	0.80	0.24	ppbv		ND	3.5	1.0	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.80	0.50	ppbv		ND	4.1	2.6	ug/m3
104-51-8	134	n-Butylbenzene	ND	0.80	0.42	ppbv		ND	4.4	2.3	ug/m3
135-98-8	134	sec-Butylbenzene	ND	0.80	0.32	ppbv		ND	4.4	1.8	ug/m3
75-15-0	76.14	Carbon disulfide	0.56	0.80	0.18	ppbv	J	1.7	2.5	0.56	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.80	0.30	ppbv		ND	3.7	1.4	ug/m3
75-00-3	64.52	Chloroethane	ND	0.80	0.27	ppbv		ND	2.1	0.71	ug/m3
67-66-3	119.4	Chloroform	26.7	0.80	0.15	ppbv		130	3.9	0.73	ug/m3
74-87-3	50.49	Chloromethane	ND	0.80	0.36	ppbv		ND	1.7	0.74	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.80	0.33	ppbv		ND	2.5	1.0	ug/m3
56-23-5	153.8	Carbon tetrachloride	0.80	0.80	0.16	ppbv		5.0	5.0	1.0	ug/m3
110-82-7	84.16	Cyclohexane	ND	0.80	0.44	ppbv		ND	2.8	1.5	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.80	0.23	ppbv		ND	3.2	0.93	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.80	0.24	ppbv		ND	3.2	0.95	ug/m3
106-93-4	187.9	1,2-Dibromoethane (EDB)	ND	0.80	0.39	ppbv		ND	6.1	3.0	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.80	0.28	ppbv		ND	3.2	1.1	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.80	0.25	ppbv		ND	3.7	1.2	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.80	0.47	ppbv		ND	2.9	1.7	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.43	0.80	0.13	ppbv	J	2.1	4.0	0.64	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.80	0.21	ppbv		ND	6.8	1.8	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.80	0.28	ppbv		ND	3.2	1.1	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.80	0.31	ppbv		ND	3.2	1.2	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.80	0.25	ppbv		ND	3.6	1.1	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.80	0.16	ppbv		ND	4.8	0.96	ug/m3

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

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

Report of Analysis

Client Sample ID:	SSMP-13_032923		
Lab Sample ID:	JD63360-4	**Date Sampled:**	03/29/23
Matrix:	AIR - Soil Vapor Comp. Summa ID: A1430	**Date Received:**	04/03/23
Method:	TO-15	**Percent Solids:**	n/a
Project:	AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
95-50-1	147	o-Dichlorobenzene	ND	0.80	0.62	ppbv		ND	4.8	3.7	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.80	0.76	ppbv		ND	4.8	4.6	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.80	0.40	ppbv		ND	3.6	1.8	ug/m3
108-20-3	102	Di-Isopropyl ether	ND	0.80	0.33	ppbv		ND	3.3	1.4	ug/m3
64-17-5	46.07	Ethanol	38.0	2.0	1.6	ppbv		71.6	3.8	3.0	ug/m3
100-41-4	106.2	Ethylbenzene	ND	0.80	0.24	ppbv		ND	3.5	1.0	ug/m3
141-78-6	88	Ethyl Acetate	5.5	0.80	0.42	ppbv		20	2.9	1.5	ug/m3
622-96-8	120.19	4-Ethyltoluene	ND	0.80	0.38	ppbv		ND	3.9	1.9	ug/m3
76-13-1	187.4	Freon 113	ND	0.80	0.12	ppbv		ND	6.1	0.92	ug/m3
76-14-2	170.9	Freon 114	ND	0.80	0.20	ppbv		ND	5.6	1.4	ug/m3
142-82-5	100.2	Heptane	ND	0.80	0.37	ppbv		ND	3.3	1.5	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.80	0.25	ppbv		ND	8.5	2.7	ug/m3
110-54-3	86.18	Hexane	ND	0.80	0.45	ppbv		ND	2.8	1.6	ug/m3
591-78-6	100	2-Hexanone	ND	0.80	0.58	ppbv		ND	3.3	2.4	ug/m3
98-82-8	120	Isopropylbenzene	ND	0.80	0.26	ppbv		ND	3.9	1.3	ug/m3
67-63-0	60.1	Isopropyl Alcohol	1050	0.80	0.56	ppbv	E	2580	2.0	1.4	ug/m3
99-87-6	134	p-Isopropyltoluene	ND	0.80	0.32	ppbv		ND	4.4	1.8	ug/m3
75-09-2	84.94	Methylene chloride	0.85	0.80	0.22	ppbv		3.0	2.8	0.76	ug/m3
78-93-3	72.11	Methyl ethyl ketone	6.1	0.80	0.44	ppbv		18	2.4	1.3	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	0.39	0.80	0.29	ppbv	J	1.6	3.3	1.2	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.80	0.32	ppbv		ND	2.9	1.2	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.80	0.28	ppbv		ND	3.3	1.1	ug/m3
91-20-3	128.17	Naphthalene	4.2	0.80	0.51	ppbv		22	4.2	2.7	ug/m3
109-66-0	72	Pentane	0.81	0.80	0.55	ppbv		2.4	2.4	1.6	ug/m3
103-65-1	120	n-Propylbenzene	ND	0.80	0.36	ppbv		ND	3.9	1.8	ug/m3
115-07-1	42	Propylene	ND	2.0	0.57	ppbv		ND	3.4	0.98	ug/m3
100-42-5	104.1	Styrene	ND	0.80	0.47	ppbv		ND	3.4	2.0	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	1.1	0.80	0.15	ppbv		6.0	4.4	0.82	ug/m3
79-34-5	167.85	1,1,2,2-Tetrachloroethane	ND	0.80	0.19	ppbv		ND	5.5	1.3	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.80	0.15	ppbv		ND	4.4	0.82	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.80	0.48	ppbv		ND	5.9	3.6	ug/m3
95-63-6	120.19	1,2,4-Trimethylbenzene	ND	0.80	0.35	ppbv		ND	3.9	1.7	ug/m3
108-67-8	120.19	1,3,5-Trimethylbenzene	ND	0.80	0.32	ppbv		ND	3.9	1.6	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	0.80	0.38	ppbv		ND	3.7	1.8	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	1.0	0.80	0.37	ppbv		3.0	2.4	1.1	ug/m3
127-18-4	165.8	Tetrachloroethylene	30.5	0.16	0.056	ppbv		207	1.1	0.38	ug/m3
109-99-9	72.11	Tetrahydrofuran	ND	0.80	0.36	ppbv		ND	2.4	1.1	ug/m3
108-88-3	92.14	Toluene	ND	0.80	0.23	ppbv		ND	3.0	0.87	ug/m3
79-01-6	131.4	Trichloroethylene	9.6	0.16	0.076	ppbv		52	0.86	0.41	ug/m3
75-69-4	137.4	Trichlorofluoromethane	ND	0.80	0.14	ppbv		ND	4.5	0.79	ug/m3

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SSMP-13_032923		
Lab Sample ID:	JD63360-4	**Date Sampled:**	03/29/23
Matrix:	AIR - Soil Vapor Comp. Summa ID: A1430	**Date Received:**	04/03/23
Method:	TO-15	**Percent Solids:**	n/a
Project:	AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
75-01-4	62.5	Vinyl chloride	ND	0.80	0.28	ppbv		ND	2.0	0.72	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.80	0.45	ppbv		ND	2.8	1.6	ug/m3
	106.2	m,p-Xylene	ND	0.80	0.56	ppbv		ND	3.5	2.4	ug/m3
95-47-6	106.2	o-Xylene	ND	0.80	0.31	ppbv		ND	3.5	1.3	ug/m3
1330-20-7	106.2	Xylenes (total)	ND	0.80	0.31	ppbv		ND	3.5	1.3	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	96%		65-128%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	DUP-01_032923		
Lab Sample ID:	JD63360-5	**Date Sampled:**	03/29/23
Matrix:	AIR - Soil Vapor Comp. Summa ID: A1439	**Date Received:**	04/03/23
Method:	TO-15	**Percent Solids:**	n/a
Project:	AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3W80070.D	1	04/11/23 21:10	TCH	n/a	n/a	V3W3157
Run #2							

	Initial Volume
Run #1	100 ml
Run #2	

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
67-64-1	58.08	Acetone (2-Propanone)	10.8	0.80	0.58	ppbv		25.7	1.9	1.4	ug/m3
107-02-8	56	Acrolein	ND	0.80	0.35	ppbv		ND	1.8	0.80	ug/m3
107-13-1	53	Acrylonitrile	ND	0.80	0.36	ppbv		ND	1.7	0.78	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.80	0.34	ppbv		ND	1.8	0.75	ug/m3
71-43-2	78.11	Benzene	ND	0.80	0.25	ppbv		ND	2.6	0.80	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.80	0.12	ppbv		ND	5.4	0.80	ug/m3
75-25-2	252.8	Bromoform	ND	0.80	0.28	ppbv		ND	8.3	2.9	ug/m3
74-83-9	94.94	Bromomethane	ND	0.80	0.28	ppbv		ND	3.1	1.1	ug/m3
593-60-2	106.9	Bromoethene	ND	0.80	0.24	ppbv		ND	3.5	1.0	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.80	0.50	ppbv		ND	4.1	2.6	ug/m3
104-51-8	134	n-Butylbenzene	ND	0.80	0.42	ppbv		ND	4.4	2.3	ug/m3
135-98-8	134	sec-Butylbenzene	ND	0.80	0.32	ppbv		ND	4.4	1.8	ug/m3
75-15-0	76.14	Carbon disulfide	ND	0.80	0.18	ppbv		ND	2.5	0.56	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.80	0.30	ppbv		ND	3.7	1.4	ug/m3
75-00-3	64.52	Chloroethane	ND	0.80	0.27	ppbv		ND	2.1	0.71	ug/m3
67-66-3	119.4	Chloroform	ND	0.80	0.15	ppbv		ND	3.9	0.73	ug/m3
74-87-3	50.49	Chloromethane	0.62	0.80	0.36	ppbv	J	1.3	1.7	0.74	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.80	0.33	ppbv		ND	2.5	1.0	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.80	0.16	ppbv		ND	5.0	1.0	ug/m3
110-82-7	84.16	Cyclohexane	ND	0.80	0.44	ppbv		ND	2.8	1.5	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.80	0.23	ppbv		ND	3.2	0.93	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.80	0.24	ppbv		ND	3.2	0.95	ug/m3
106-93-4	187.9	1,2-Dibromoethane (EDB)	ND	0.80	0.39	ppbv		ND	6.1	3.0	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.80	0.28	ppbv		ND	3.2	1.1	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.80	0.25	ppbv		ND	3.7	1.2	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.80	0.47	ppbv		ND	2.9	1.7	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.41	0.80	0.13	ppbv	J	2.0	4.0	0.64	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.80	0.21	ppbv		ND	6.8	1.8	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.80	0.28	ppbv		ND	3.2	1.1	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.80	0.31	ppbv		ND	3.2	1.2	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.80	0.25	ppbv		ND	3.6	1.1	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.80	0.16	ppbv		ND	4.8	0.96	ug/m3

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

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

Report of Analysis

Client Sample ID: DUP-01_032923
Lab Sample ID: JD63360-5 **Date Sampled:** 03/29/23
Matrix: AIR - Soil Vapor Comp. Summa ID: A1439 **Date Received:** 04/03/23
Method: TO-15 **Percent Solids:** n/a
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
95-50-1	147	o-Dichlorobenzene	ND	0.80	0.62	ppbv		ND	4.8	3.7	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.80	0.76	ppbv		ND	4.8	4.6	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.80	0.40	ppbv		ND	3.6	1.8	ug/m3
108-20-3	102	Di-Isopropyl ether	ND	0.80	0.33	ppbv		ND	3.3	1.4	ug/m3
64-17-5	46.07	Ethanol	11.8	2.0	1.6	ppbv		22.2	3.8	3.0	ug/m3
100-41-4	106.2	Ethylbenzene	ND	0.80	0.24	ppbv		ND	3.5	1.0	ug/m3
141-78-6	88	Ethyl Acetate	31.4	0.80	0.42	ppbv		113	2.9	1.5	ug/m3
622-96-8	120.19	4-Ethyltoluene	ND	0.80	0.38	ppbv		ND	3.9	1.9	ug/m3
76-13-1	187.4	Freon 113	ND	0.80	0.12	ppbv		ND	6.1	0.92	ug/m3
76-14-2	170.9	Freon 114	ND	0.80	0.20	ppbv		ND	5.6	1.4	ug/m3
142-82-5	100.2	Heptane	ND	0.80	0.37	ppbv		ND	3.3	1.5	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.80	0.25	ppbv		ND	8.5	2.7	ug/m3
110-54-3	86.18	Hexane	0.55	0.80	0.45	ppbv	J	1.9	2.8	1.6	ug/m3
591-78-6	100	2-Hexanone	ND	0.80	0.58	ppbv		ND	3.3	2.4	ug/m3
98-82-8	120	Isopropylbenzene	ND	0.80	0.26	ppbv		ND	3.9	1.3	ug/m3
67-63-0	60.1	Isopropyl Alcohol	108	0.80	0.56	ppbv		265	2.0	1.4	ug/m3
99-87-6	134	p-Isopropyltoluene	ND	0.80	0.32	ppbv		ND	4.4	1.8	ug/m3
75-09-2	84.94	Methylene chloride	1.6	0.80	0.22	ppbv		5.6	2.8	0.76	ug/m3
78-93-3	72.11	Methyl ethyl ketone	1.4	0.80	0.44	ppbv		4.1	2.4	1.3	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.80	0.29	ppbv		ND	3.3	1.2	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.80	0.32	ppbv		ND	2.9	1.2	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.80	0.28	ppbv		ND	3.3	1.1	ug/m3
91-20-3	128.17	Naphthalene	ND	0.80	0.51	ppbv		ND	4.2	2.7	ug/m3
109-66-0	72	Pentane	3.2	0.80	0.55	ppbv		9.4	2.4	1.6	ug/m3
103-65-1	120	n-Propylbenzene	ND	0.80	0.36	ppbv		ND	3.9	1.8	ug/m3
115-07-1	42	Propylene	ND	2.0	0.57	ppbv		ND	3.4	0.98	ug/m3
100-42-5	104.1	Styrene	ND	0.80	0.47	ppbv		ND	3.4	2.0	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.80	0.15	ppbv		ND	4.4	0.82	ug/m3
79-34-5	167.85	1,1,2,2-Tetrachloroethane	ND	0.80	0.19	ppbv		ND	5.5	1.3	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.80	0.15	ppbv		ND	4.4	0.82	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.80	0.48	ppbv		ND	5.9	3.6	ug/m3
95-63-6	120.19	1,2,4-Trimethylbenzene	ND	0.80	0.35	ppbv		ND	3.9	1.7	ug/m3
108-67-8	120.19	1,3,5-Trimethylbenzene	ND	0.80	0.32	ppbv		ND	3.9	1.6	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	0.80	0.38	ppbv		ND	3.7	1.8	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	0.80	0.37	ppbv		ND	2.4	1.1	ug/m3
127-18-4	165.8	Tetrachloroethylene	1.3	0.16	0.056	ppbv		8.8	1.1	0.38	ug/m3
109-99-9	72.11	Tetrahydrofuran	ND	0.80	0.36	ppbv		ND	2.4	1.1	ug/m3
108-88-3	92.14	Toluene	1.1	0.80	0.23	ppbv		4.1	3.0	0.87	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.16	0.076	ppbv		ND	0.86	0.41	ug/m3
75-69-4	137.4	Trichlorofluoromethane	ND	0.80	0.14	ppbv		ND	4.5	0.79	ug/m3

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	DUP-01_032923		
Lab Sample ID:	JD63360-5	**Date Sampled:**	03/29/23
Matrix:	AIR - Soil Vapor Comp. Summa ID: A1439	**Date Received:**	04/03/23
Method:	TO-15	**Percent Solids:**	n/a
Project:	AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
75-01-4	62.5	Vinyl chloride	ND	0.80	0.28	ppbv		ND	2.0	0.72	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.80	0.45	ppbv		ND	2.8	1.6	ug/m3
	106.2	m,p-Xylene	ND	0.80	0.56	ppbv		ND	3.5	2.4	ug/m3
95-47-6	106.2	o-Xylene	ND	0.80	0.31	ppbv		ND	3.5	1.3	ug/m3
1330-20-7	106.2	Xylenes (total)	ND	0.80	0.31	ppbv		ND	3.5	1.3	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	91%		65-128%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	DUP-02_032923		
Lab Sample ID:	JD63360-6	**Date Sampled:**	03/29/23
Matrix:	AIR - Soil Vapor Comp. Summa ID: A1983	**Date Received:**	04/03/23
Method:	TO-15	**Percent Solids:**	n/a
Project:	AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3W80071.D	1	04/11/23 21:49	TCH	n/a	n/a	V3W3157
Run #2							

	Initial Volume
Run #1	100 ml
Run #2	

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
67-64-1	58.08	Acetone (2-Propanone)	49.2	0.80	0.58	ppbv		117	1.9	1.4	ug/m3
107-02-8	56	Acrolein	ND	0.80	0.35	ppbv		ND	1.8	0.80	ug/m3
107-13-1	53	Acrylonitrile	ND	0.80	0.36	ppbv		ND	1.7	0.78	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.80	0.34	ppbv		ND	1.8	0.75	ug/m3
71-43-2	78.11	Benzene	ND	0.80	0.25	ppbv		ND	2.6	0.80	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.80	0.12	ppbv		ND	5.4	0.80	ug/m3
75-25-2	252.8	Bromoform	ND	0.80	0.28	ppbv		ND	8.3	2.9	ug/m3
74-83-9	94.94	Bromomethane	ND	0.80	0.28	ppbv		ND	3.1	1.1	ug/m3
593-60-2	106.9	Bromoethene	ND	0.80	0.24	ppbv		ND	3.5	1.0	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.80	0.50	ppbv		ND	4.1	2.6	ug/m3
104-51-8	134	n-Butylbenzene	ND	0.80	0.42	ppbv		ND	4.4	2.3	ug/m3
135-98-8	134	sec-Butylbenzene	ND	0.80	0.32	ppbv		ND	4.4	1.8	ug/m3
75-15-0	76.14	Carbon disulfide	0.63	0.80	0.18	ppbv	J	2.0	2.5	0.56	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.80	0.30	ppbv		ND	3.7	1.4	ug/m3
75-00-3	64.52	Chloroethane	ND	0.80	0.27	ppbv		ND	2.1	0.71	ug/m3
67-66-3	119.4	Chloroform	26.4	0.80	0.15	ppbv		129	3.9	0.73	ug/m3
74-87-3	50.49	Chloromethane	ND	0.80	0.36	ppbv		ND	1.7	0.74	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.80	0.33	ppbv		ND	2.5	1.0	ug/m3
56-23-5	153.8	Carbon tetrachloride	0.82	0.80	0.16	ppbv		5.2	5.0	1.0	ug/m3
110-82-7	84.16	Cyclohexane	ND	0.80	0.44	ppbv		ND	2.8	1.5	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.80	0.23	ppbv		ND	3.2	0.93	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.80	0.24	ppbv		ND	3.2	0.95	ug/m3
106-93-4	187.9	1,2-Dibromoethane (EDB)	ND	0.80	0.39	ppbv		ND	6.1	3.0	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.80	0.28	ppbv		ND	3.2	1.1	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.80	0.25	ppbv		ND	3.7	1.2	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.80	0.47	ppbv		ND	2.9	1.7	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.43	0.80	0.13	ppbv	J	2.1	4.0	0.64	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.80	0.21	ppbv		ND	6.8	1.8	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.80	0.28	ppbv		ND	3.2	1.1	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.80	0.31	ppbv		ND	3.2	1.2	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.80	0.25	ppbv		ND	3.6	1.1	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.80	0.16	ppbv		ND	4.8	0.96	ug/m3

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

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

Report of Analysis

Client Sample ID:	DUP-02_032923		
Lab Sample ID:	JD63360-6	**Date Sampled:**	03/29/23
Matrix:	AIR - Soil Vapor Comp. Summa ID: A1983	**Date Received:**	04/03/23
Method:	TO-15	**Percent Solids:**	n/a
Project:	AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
95-50-1	147	o-Dichlorobenzene	ND	0.80	0.62	ppbv		ND	4.8	3.7	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.80	0.76	ppbv		ND	4.8	4.6	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.80	0.40	ppbv		ND	3.6	1.8	ug/m3
108-20-3	102	Di-Isopropyl ether	ND	0.80	0.33	ppbv		ND	3.3	1.4	ug/m3
64-17-5	46.07	Ethanol	45.2	2.0	1.6	ppbv		85.2	3.8	3.0	ug/m3
100-41-4	106.2	Ethylbenzene	ND	0.80	0.24	ppbv		ND	3.5	1.0	ug/m3
141-78-6	88	Ethyl Acetate	3.1	0.80	0.42	ppbv		11	2.9	1.5	ug/m3
622-96-8	120.19	4-Ethyltoluene	ND	0.80	0.38	ppbv		ND	3.9	1.9	ug/m3
76-13-1	187.4	Freon 113	ND	0.80	0.12	ppbv		ND	6.1	0.92	ug/m3
76-14-2	170.9	Freon 114	ND	0.80	0.20	ppbv		ND	5.6	1.4	ug/m3
142-82-5	100.2	Heptane	ND	0.80	0.37	ppbv		ND	3.3	1.5	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.80	0.25	ppbv		ND	8.5	2.7	ug/m3
110-54-3	86.18	Hexane	ND	0.80	0.45	ppbv		ND	2.8	1.6	ug/m3
591-78-6	100	2-Hexanone	ND	0.80	0.58	ppbv		ND	3.3	2.4	ug/m3
98-82-8	120	Isopropylbenzene	ND	0.80	0.26	ppbv		ND	3.9	1.3	ug/m3
67-63-0	60.1	Isopropyl Alcohol	595	0.80	0.56	ppbv	E	1460	2.0	1.4	ug/m3
99-87-6	134	p-Isopropyltoluene	ND	0.80	0.32	ppbv		ND	4.4	1.8	ug/m3
75-09-2	84.94	Methylene chloride	0.84	0.80	0.22	ppbv		2.9	2.8	0.76	ug/m3
78-93-3	72.11	Methyl ethyl ketone	5.6	0.80	0.44	ppbv		17	2.4	1.3	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.80	0.29	ppbv		ND	3.3	1.2	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.80	0.32	ppbv		ND	2.9	1.2	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.80	0.28	ppbv		ND	3.3	1.1	ug/m3
91-20-3	128.17	Naphthalene	1.6	0.80	0.51	ppbv		8.4	4.2	2.7	ug/m3
109-66-0	72	Pentane	0.71	0.80	0.55	ppbv	J	2.1	2.4	1.6	ug/m3
103-65-1	120	n-Propylbenzene	ND	0.80	0.36	ppbv		ND	3.9	1.8	ug/m3
115-07-1	42	Propylene	ND	2.0	0.57	ppbv		ND	3.4	0.98	ug/m3
100-42-5	104.1	Styrene	ND	0.80	0.47	ppbv		ND	3.4	2.0	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	1.1	0.80	0.15	ppbv		6.0	4.4	0.82	ug/m3
79-34-5	167.85	1,1,2,2-Tetrachloroethane	ND	0.80	0.19	ppbv		ND	5.5	1.3	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.80	0.15	ppbv		ND	4.4	0.82	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.80	0.48	ppbv		ND	5.9	3.6	ug/m3
95-63-6	120.19	1,2,4-Trimethylbenzene	ND	0.80	0.35	ppbv		ND	3.9	1.7	ug/m3
108-67-8	120.19	1,3,5-Trimethylbenzene	ND	0.80	0.32	ppbv		ND	3.9	1.6	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	0.80	0.38	ppbv		ND	3.7	1.8	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	0.91	0.80	0.37	ppbv		2.8	2.4	1.1	ug/m3
127-18-4	165.8	Tetrachloroethylene	25.9	0.16	0.056	ppbv		176	1.1	0.38	ug/m3
109-99-9	72.11	Tetrahydrofuran	ND	0.80	0.36	ppbv		ND	2.4	1.1	ug/m3
108-88-3	92.14	Toluene	ND	0.80	0.23	ppbv		ND	3.0	0.87	ug/m3
79-01-6	131.4	Trichloroethylene	9.1	0.16	0.076	ppbv		49	0.86	0.41	ug/m3
75-69-4	137.4	Trichlorofluoromethane	ND	0.80	0.14	ppbv		ND	4.5	0.79	ug/m3

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	DUP-02_032923		
Lab Sample ID:	JD63360-6	**Date Sampled:**	03/29/23
Matrix:	AIR - Soil Vapor Comp. Summa ID: A1983	**Date Received:**	04/03/23
Method:	TO-15	**Percent Solids:**	n/a
Project:	AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
75-01-4	62.5	Vinyl chloride	ND	0.80	0.28	ppbv		ND	2.0	0.72	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.80	0.45	ppbv		ND	2.8	1.6	ug/m3
	106.2	m,p-Xylene	ND	0.80	0.56	ppbv		ND	3.5	2.4	ug/m3
95-47-6	106.2	o-Xylene	ND	0.80	0.31	ppbv		ND	3.5	1.3	ug/m3
1330-20-7	106.2	Xylenes (total)	ND	0.80	0.31	ppbv		ND	3.5	1.3	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	100%		65-128%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SSMP-401_033123		
Lab Sample ID:	JD63360-7	**Date Sampled:**	03/31/23
Matrix:	AIR - Soil Vapor Comp. Summa ID: A1431	**Date Received:**	04/03/23
Method:	TO-15	**Percent Solids:**	n/a
Project:	AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3W80072.D	1	04/11/23 22:28	TCH	n/a	n/a	V3W3157
Run #2							

	Initial Volume
Run #1	100 ml
Run #2	

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
67-64-1	58.08	Acetone (2-Propanone)	2.9	0.80	0.58	ppbv		6.9	1.9	1.4	ug/m3
107-02-8	56	Acrolein	ND	0.80	0.35	ppbv		ND	1.8	0.80	ug/m3
107-13-1	53	Acrylonitrile	ND	0.80	0.36	ppbv		ND	1.7	0.78	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.80	0.34	ppbv		ND	1.8	0.75	ug/m3
71-43-2	78.11	Benzene	ND	0.80	0.25	ppbv		ND	2.6	0.80	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.80	0.12	ppbv		ND	5.4	0.80	ug/m3
75-25-2	252.8	Bromoform	ND	0.80	0.28	ppbv		ND	8.3	2.9	ug/m3
74-83-9	94.94	Bromomethane	ND	0.80	0.28	ppbv		ND	3.1	1.1	ug/m3
593-60-2	106.9	Bromoethene	ND	0.80	0.24	ppbv		ND	3.5	1.0	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.80	0.50	ppbv		ND	4.1	2.6	ug/m3
104-51-8	134	n-Butylbenzene	ND	0.80	0.42	ppbv		ND	4.4	2.3	ug/m3
135-98-8	134	sec-Butylbenzene	ND	0.80	0.32	ppbv		ND	4.4	1.8	ug/m3
75-15-0	76.14	Carbon disulfide	ND	0.80	0.18	ppbv		ND	2.5	0.56	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.80	0.30	ppbv		ND	3.7	1.4	ug/m3
75-00-3	64.52	Chloroethane	ND	0.80	0.27	ppbv		ND	2.1	0.71	ug/m3
67-66-3	119.4	Chloroform	2.0	0.80	0.15	ppbv		9.8	3.9	0.73	ug/m3
74-87-3	50.49	Chloromethane	ND	0.80	0.36	ppbv		ND	1.7	0.74	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.80	0.33	ppbv		ND	2.5	1.0	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.80	0.16	ppbv		ND	5.0	1.0	ug/m3
110-82-7	84.16	Cyclohexane	ND	0.80	0.44	ppbv		ND	2.8	1.5	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.80	0.23	ppbv		ND	3.2	0.93	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.80	0.24	ppbv		ND	3.2	0.95	ug/m3
106-93-4	187.9	1,2-Dibromoethane (EDB)	ND	0.80	0.39	ppbv		ND	6.1	3.0	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.80	0.28	ppbv		ND	3.2	1.1	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.80	0.25	ppbv		ND	3.7	1.2	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.80	0.47	ppbv		ND	2.9	1.7	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.60	0.80	0.13	ppbv	J	3.0	4.0	0.64	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.80	0.21	ppbv		ND	6.8	1.8	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.80	0.28	ppbv		ND	3.2	1.1	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.80	0.31	ppbv		ND	3.2	1.2	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.80	0.25	ppbv		ND	3.6	1.1	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.80	0.16	ppbv		ND	4.8	0.96	ug/m3

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

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

Report of Analysis

Client Sample ID:	SSMP-401_033123		
Lab Sample ID:	JD63360-7	**Date Sampled:**	03/31/23
Matrix:	AIR - Soil Vapor Comp. Summa ID: A1431	**Date Received:**	04/03/23
Method:	TO-15	**Percent Solids:**	n/a
Project:	AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
95-50-1	147	o-Dichlorobenzene	ND	0.80	0.62	ppbv		ND	4.8	3.7	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.80	0.76	ppbv		ND	4.8	4.6	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.80	0.40	ppbv		ND	3.6	1.8	ug/m3
108-20-3	102	Di-Isopropyl ether	ND	0.80	0.33	ppbv		ND	3.3	1.4	ug/m3
64-17-5	46.07	Ethanol	244	2.0	1.6	ppbv	E	460	3.8	3.0	ug/m3
100-41-4	106.2	Ethylbenzene	ND	0.80	0.24	ppbv		ND	3.5	1.0	ug/m3
141-78-6	88	Ethyl Acetate	1.5	0.80	0.42	ppbv		5.4	2.9	1.5	ug/m3
622-96-8	120.19	4-Ethyltoluene	ND	0.80	0.38	ppbv		ND	3.9	1.9	ug/m3
76-13-1	187.4	Freon 113	ND	0.80	0.12	ppbv		ND	6.1	0.92	ug/m3
76-14-2	170.9	Freon 114	ND	0.80	0.20	ppbv		ND	5.6	1.4	ug/m3
142-82-5	100.2	Heptane	ND	0.80	0.37	ppbv		ND	3.3	1.5	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.80	0.25	ppbv		ND	8.5	2.7	ug/m3
110-54-3	86.18	Hexane	ND	0.80	0.45	ppbv		ND	2.8	1.6	ug/m3
591-78-6	100	2-Hexanone	ND	0.80	0.58	ppbv		ND	3.3	2.4	ug/m3
98-82-8	120	Isopropylbenzene	ND	0.80	0.26	ppbv		ND	3.9	1.3	ug/m3
67-63-0	60.1	Isopropyl Alcohol	20.0	0.80	0.56	ppbv		49.2	2.0	1.4	ug/m3
99-87-6	134	p-Isopropyltoluene	ND	0.80	0.32	ppbv		ND	4.4	1.8	ug/m3
75-09-2	84.94	Methylene chloride	ND	0.80	0.22	ppbv		ND	2.8	0.76	ug/m3
78-93-3	72.11	Methyl ethyl ketone	0.50	0.80	0.44	ppbv	J	1.5	2.4	1.3	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.80	0.29	ppbv		ND	3.3	1.2	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.80	0.32	ppbv		ND	2.9	1.2	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.80	0.28	ppbv		ND	3.3	1.1	ug/m3
91-20-3	128.17	Naphthalene	ND	0.80	0.51	ppbv		ND	4.2	2.7	ug/m3
109-66-0	72	Pentane	ND	0.80	0.55	ppbv		ND	2.4	1.6	ug/m3
103-65-1	120	n-Propylbenzene	ND	0.80	0.36	ppbv		ND	3.9	1.8	ug/m3
115-07-1	42	Propylene	ND	2.0	0.57	ppbv		ND	3.4	0.98	ug/m3
100-42-5	104.1	Styrene	ND	0.80	0.47	ppbv		ND	3.4	2.0	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.80	0.15	ppbv		ND	4.4	0.82	ug/m3
79-34-5	167.85	1,1,2,2-Tetrachloroethane	ND	0.80	0.19	ppbv		ND	5.5	1.3	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.80	0.15	ppbv		ND	4.4	0.82	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.80	0.48	ppbv		ND	5.9	3.6	ug/m3
95-63-6	120.19	1,2,4-Trimethylbenzene	ND	0.80	0.35	ppbv		ND	3.9	1.7	ug/m3
108-67-8	120.19	1,3,5-Trimethylbenzene	ND	0.80	0.32	ppbv		ND	3.9	1.6	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	0.80	0.38	ppbv		ND	3.7	1.8	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	0.80	0.37	ppbv		ND	2.4	1.1	ug/m3
127-18-4	165.8	Tetrachloroethylene	0.46	0.16	0.056	ppbv		3.1	1.1	0.38	ug/m3
109-99-9	72.11	Tetrahydrofuran	0.43	0.80	0.36	ppbv	J	1.3	2.4	1.1	ug/m3
108-88-3	92.14	Toluene	ND	0.80	0.23	ppbv		ND	3.0	0.87	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.16	0.076	ppbv		ND	0.86	0.41	ug/m3
75-69-4	137.4	Trichlorofluoromethane	1.8	0.80	0.14	ppbv		10	4.5	0.79	ug/m3

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SSMP-401_033123		
Lab Sample ID:	JD63360-7	**Date Sampled:**	03/31/23
Matrix:	AIR - Soil Vapor Comp. Summa ID: A1431	**Date Received:**	04/03/23
Method:	TO-15	**Percent Solids:**	n/a
Project:	AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
75-01-4	62.5	Vinyl chloride	ND	0.80	0.28	ppbv		ND	2.0	0.72	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.80	0.45	ppbv		ND	2.8	1.6	ug/m3
	106.2	m,p-Xylene	ND	0.80	0.56	ppbv		ND	3.5	2.4	ug/m3
95-47-6	106.2	o-Xylene	ND	0.80	0.31	ppbv		ND	3.5	1.3	ug/m3
1330-20-7	106.2	Xylenes (total)	ND	0.80	0.31	ppbv		ND	3.5	1.3	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	92%		65-128%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	IA_01-GILMORE302R_033123		
Lab Sample ID:	JD63360-8	**Date Sampled:**	03/31/23
Matrix:	AIR - Ambient Air Comp. Summa ID: A1692	**Date Received:**	04/03/23
Method:	TO-15	**Percent Solids:**	n/a
Project:	AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3W80073.D	1	04/11/23 23:14	TCH	n/a	n/a	V3W3157
Run #2							

	Initial Volume
Run #1	400 ml
Run #2	

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
67-64-1	58.08	Acetone (2-Propanone)	8.6	0.20	0.15	ppbv		20	0.48	0.36	ug/m3
107-02-8	56	Acrolein	0.28	0.20	0.088	ppbv		0.64	0.46	0.20	ug/m3
107-13-1	53	Acrylonitrile	ND	0.20	0.091	ppbv		ND	0.43	0.20	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.20	0.084	ppbv		ND	0.44	0.19	ug/m3
71-43-2	78.11	Benzene	0.87	0.20	0.062	ppbv		2.8	0.64	0.20	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.20	0.030	ppbv		ND	1.3	0.20	ug/m3
75-25-2	252.8	Bromoform	ND	0.20	0.071	ppbv		ND	2.1	0.73	ug/m3
74-83-9	94.94	Bromomethane	ND	0.20	0.069	ppbv		ND	0.78	0.27	ug/m3
593-60-2	106.9	Bromoethene	ND	0.20	0.061	ppbv		ND	0.87	0.27	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.20	0.13	ppbv		ND	1.0	0.67	ug/m3
104-51-8	134	n-Butylbenzene	ND	0.20	0.11	ppbv		ND	1.1	0.60	ug/m3
135-98-8	134	sec-Butylbenzene	ND	0.20	0.081	ppbv		ND	1.1	0.44	ug/m3
75-15-0	76.14	Carbon disulfide	ND	0.20	0.045	ppbv		ND	0.62	0.14	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.20	0.074	ppbv		ND	0.92	0.34	ug/m3
75-00-3	64.52	Chloroethane	ND	0.20	0.068	ppbv		ND	0.53	0.18	ug/m3
67-66-3	119.4	Chloroform	ND	0.20	0.037	ppbv		ND	0.98	0.18	ug/m3
74-87-3	50.49	Chloromethane	0.64	0.20	0.090	ppbv		1.3	0.41	0.19	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.20	0.083	ppbv		ND	0.63	0.26	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.20	0.040	ppbv		ND	1.3	0.25	ug/m3
110-82-7	84.16	Cyclohexane	0.47	0.20	0.11	ppbv		1.6	0.69	0.38	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	0.057	ppbv		ND	0.81	0.23	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	0.059	ppbv		ND	0.79	0.23	ug/m3
106-93-4	187.9	1,2-Dibromoethane (EDB)	ND	0.20	0.097	ppbv		ND	1.5	0.75	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	0.070	ppbv		ND	0.81	0.28	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.20	0.062	ppbv		ND	0.92	0.29	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.20	0.12	ppbv		ND	0.72	0.43	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.41	0.20	0.032	ppbv		2.0	0.99	0.16	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.20	0.052	ppbv		ND	1.7	0.44	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	0.069	ppbv		ND	0.79	0.27	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	0.077	ppbv		ND	0.79	0.31	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.20	0.062	ppbv		ND	0.91	0.28	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.20	0.040	ppbv		ND	1.2	0.24	ug/m3

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: IA_01-GILMORE302R_033123
Lab Sample ID: JD63360-8 **Date Sampled:** 03/31/23
Matrix: AIR - Ambient Air Comp. Summa ID: A1692 **Date Received:** 04/03/23
Method: TO-15 **Percent Solids:** n/a
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
95-50-1	147	o-Dichlorobenzene	ND	0.20	0.15	ppbv		ND	1.2	0.90	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.20	0.19	ppbv		ND	1.2	1.1	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.20	0.10	ppbv		ND	0.91	0.45	ug/m3
108-20-3	102	Di-Isopropyl ether	ND	0.20	0.082	ppbv		ND	0.83	0.34	ug/m3
64-17-5	46.07	Ethanol	28.8	0.50	0.39	ppbv		54.3	0.94	0.73	ug/m3
100-41-4	106.2	Ethylbenzene	0.19	0.20	0.061	ppbv	J	0.83	0.87	0.26	ug/m3
141-78-6	88	Ethyl Acetate	1.7	0.20	0.10	ppbv		6.1	0.72	0.36	ug/m3
622-96-8	120.19	4-Ethyltoluene	ND	0.20	0.095	ppbv		ND	0.98	0.47	ug/m3
76-13-1	187.4	Freon 113	ND	0.20	0.031	ppbv		ND	1.5	0.24	ug/m3
76-14-2	170.9	Freon 114	ND	0.20	0.050	ppbv		ND	1.4	0.35	ug/m3
142-82-5	100.2	Heptane	0.56	0.20	0.092	ppbv		2.3	0.82	0.38	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.20	0.062	ppbv		ND	2.1	0.66	ug/m3
110-54-3	86.18	Hexane	2.3	0.20	0.11	ppbv		8.1	0.70	0.39	ug/m3
591-78-6	100	2-Hexanone	ND	0.20	0.15	ppbv		ND	0.82	0.61	ug/m3
98-82-8	120	Isopropylbenzene	ND	0.20	0.064	ppbv		ND	0.98	0.31	ug/m3
67-63-0	60.1	Isopropyl Alcohol	1.7	0.20	0.14	ppbv		4.2	0.49	0.34	ug/m3
99-87-6	134	p-Isopropyltoluene	ND	0.20	0.080	ppbv		ND	1.1	0.44	ug/m3
75-09-2	84.94	Methylene chloride	0.24	0.20	0.056	ppbv		0.83	0.69	0.19	ug/m3
78-93-3	72.11	Methyl ethyl ketone	0.95	0.20	0.11	ppbv		2.8	0.59	0.32	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.20	0.073	ppbv		ND	0.82	0.30	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.20	0.080	ppbv		ND	0.72	0.29	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.20	0.070	ppbv		ND	0.82	0.29	ug/m3
91-20-3	128.17	Naphthalene	ND	0.20	0.13	ppbv		ND	1.0	0.68	ug/m3
109-66-0	72	Pentane	7.8	0.20	0.14	ppbv		23	0.59	0.41	ug/m3
103-65-1	120	n-Propylbenzene	ND	0.20	0.091	ppbv		ND	0.98	0.45	ug/m3
115-07-1	42	Propylene	ND	0.50	0.14	ppbv		ND	0.86	0.24	ug/m3
100-42-5	104.1	Styrene	ND	0.20	0.12	ppbv		ND	0.85	0.51	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.20	0.037	ppbv		ND	1.1	0.20	ug/m3
79-34-5	167.85	1,1,2,2-Tetrachloroethane	ND	0.20	0.048	ppbv		ND	1.4	0.33	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	0.038	ppbv		ND	1.1	0.21	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.20	0.12	ppbv		ND	1.5	0.89	ug/m3
95-63-6	120.19	1,2,4-Trimethylbenzene	0.19	0.20	0.087	ppbv	J	0.93	0.98	0.43	ug/m3
108-67-8	120.19	1,3,5-Trimethylbenzene	ND	0.20	0.080	ppbv		ND	0.98	0.39	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	0.95	0.20	0.095	ppbv		4.4	0.93	0.44	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	0.20	0.093	ppbv		ND	0.61	0.28	ug/m3
127-18-4	165.8	Tetrachloroethylene	0.051	0.040	0.014	ppbv		0.35	0.27	0.095	ug/m3
109-99-9	72.11	Tetrahydrofuran	0.17	0.20	0.090	ppbv	J	0.50	0.59	0.27	ug/m3
108-88-3	92.14	Toluene	1.8	0.20	0.057	ppbv		6.8	0.75	0.21	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	0.10	ug/m3
75-69-4	137.4	Trichlorofluoromethane	0.23	0.20	0.036	ppbv		1.3	1.1	0.20	ug/m3

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	IA_01-GILMORE302R_033123		
Lab Sample ID:	JD63360-8	**Date Sampled:**	03/31/23
Matrix:	AIR - Ambient Air Comp. Summa ID: A1692	**Date Received:**	04/03/23
Method:	TO-15	**Percent Solids:**	n/a
Project:	AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
75-01-4	62.5	Vinyl chloride	ND	0.20	0.069	ppbv		ND	0.51	0.18	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.20	0.11	ppbv		ND	0.70	0.39	ug/m3
	106.2	m,p-Xylene	0.61	0.20	0.14	ppbv		2.6	0.87	0.61	ug/m3
95-47-6	106.2	o-Xylene	0.23	0.20	0.077	ppbv		1.0	0.87	0.33	ug/m3
1330-20-7	106.2	Xylenes (total)	0.84	0.20	0.077	ppbv		3.6	0.87	0.33	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	97%		65-128%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SSMP-302R_033123		
Lab Sample ID:	JD63360-9	**Date Sampled:**	03/31/23
Matrix:	AIR - Soil Vapor Comp. Summa ID: A1892	**Date Received:**	04/03/23
Method:	TO-15	**Percent Solids:**	n/a
Project:	AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3W80074.D	1	04/11/23 23:53	TCH	n/a	n/a	V3W3157
Run #2	2W64580.D	1.55	04/18/23 16:44	TCH	n/a	n/a	V2W2873

	Initial Volume
Run #1	100 ml
Run #2	5.0 ml

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
67-64-1	58.08	Acetone (2-Propanone)	ND	0.80	0.58	ppbv		ND	1.9	1.4	ug/m3
107-02-8	56	Acrolein	ND	0.80	0.35	ppbv		ND	1.8	0.80	ug/m3
107-13-1	53	Acrylonitrile	ND	0.80	0.36	ppbv		ND	1.7	0.78	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.80	0.34	ppbv		ND	1.8	0.75	ug/m3
71-43-2	78.11	Benzene	6.2	0.80	0.25	ppbv		20	2.6	0.80	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.80	0.12	ppbv		ND	5.4	0.80	ug/m3
75-25-2	252.8	Bromoform	ND	0.80	0.28	ppbv		ND	8.3	2.9	ug/m3
74-83-9	94.94	Bromomethane	ND	0.80	0.28	ppbv		ND	3.1	1.1	ug/m3
593-60-2	106.9	Bromoethene	ND	0.80	0.24	ppbv		ND	3.5	1.0	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.80	0.50	ppbv		ND	4.1	2.6	ug/m3
104-51-8	134	n-Butylbenzene	ND	0.80	0.42	ppbv		ND	4.4	2.3	ug/m3
135-98-8	134	sec-Butylbenzene	ND	0.80	0.32	ppbv		ND	4.4	1.8	ug/m3
75-15-0	76.14	Carbon disulfide	ND	0.80	0.18	ppbv		ND	2.5	0.56	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.80	0.30	ppbv		ND	3.7	1.4	ug/m3
75-00-3	64.52	Chloroethane	ND	0.80	0.27	ppbv		ND	2.1	0.71	ug/m3
67-66-3	119.4	Chloroform	ND	0.80	0.15	ppbv		ND	3.9	0.73	ug/m3
74-87-3	50.49	Chloromethane	0.74	0.80	0.36	ppbv	J	1.5	1.7	0.74	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.80	0.33	ppbv		ND	2.5	1.0	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.80	0.16	ppbv		ND	5.0	1.0	ug/m3
110-82-7	84.16	Cyclohexane	52.2	0.80	0.44	ppbv		180	2.8	1.5	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.80	0.23	ppbv		ND	3.2	0.93	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.80	0.24	ppbv		ND	3.2	0.95	ug/m3
106-93-4	187.9	1,2-Dibromoethane (EDB)	ND	0.80	0.39	ppbv		ND	6.1	3.0	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.80	0.28	ppbv		ND	3.2	1.1	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.80	0.25	ppbv		ND	3.7	1.2	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.80	0.47	ppbv		ND	2.9	1.7	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.41	0.80	0.13	ppbv	J	2.0	4.0	0.64	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.80	0.21	ppbv		ND	6.8	1.8	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.80	0.28	ppbv		ND	3.2	1.1	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.80	0.31	ppbv		ND	3.2	1.2	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.80	0.25	ppbv		ND	3.6	1.1	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.80	0.16	ppbv		ND	4.8	0.96	ug/m3

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

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

Report of Analysis

Client Sample ID:	SSMP-302R_033123		
Lab Sample ID:	JD63360-9	**Date Sampled:**	03/31/23
Matrix:	AIR - Soil Vapor Comp. Summa ID: A1892	**Date Received:**	04/03/23
Method:	TO-15	**Percent Solids:**	n/a
Project:	AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
95-50-1	147	o-Dichlorobenzene	ND	0.80	0.62	ppbv		ND	4.8	3.7	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.80	0.76	ppbv		ND	4.8	4.6	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.80	0.40	ppbv		ND	3.6	1.8	ug/m3
108-20-3	102	Di-Isopropyl ether	ND	0.80	0.33	ppbv		ND	3.3	1.4	ug/m3
64-17-5	46.07	Ethanol	19.6	2.0	1.6	ppbv		36.9	3.8	3.0	ug/m3
100-41-4	106.2	Ethylbenzene	ND	0.80	0.24	ppbv		ND	3.5	1.0	ug/m3
141-78-6	88	Ethyl Acetate	ND	0.80	0.42	ppbv		ND	2.9	1.5	ug/m3
622-96-8	120.19	4-Ethyltoluene	ND	0.80	0.38	ppbv		ND	3.9	1.9	ug/m3
76-13-1	187.4	Freon 113	ND	0.80	0.12	ppbv		ND	6.1	0.92	ug/m3
76-14-2	170.9	Freon 114	ND	0.80	0.20	ppbv		ND	5.6	1.4	ug/m3
142-82-5	100.2	Heptane	35.2	0.80	0.37	ppbv		144	3.3	1.5	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.80	0.25	ppbv		ND	8.5	2.7	ug/m3
110-54-3	86.18	Hexane	285 [a]	25	14	ppbv		1000 [a]	88	49	ug/m3
591-78-6	100	2-Hexanone	ND	0.80	0.58	ppbv		ND	3.3	2.4	ug/m3
98-82-8	120	Isopropylbenzene	ND	0.80	0.26	ppbv		ND	3.9	1.3	ug/m3
67-63-0	60.1	Isopropyl Alcohol	43.5	0.80	0.56	ppbv		107	2.0	1.4	ug/m3
99-87-6	134	p-Isopropyltoluene	ND	0.80	0.32	ppbv		ND	4.4	1.8	ug/m3
75-09-2	84.94	Methylene chloride	ND	0.80	0.22	ppbv		ND	2.8	0.76	ug/m3
78-93-3	72.11	Methyl ethyl ketone	ND	0.80	0.44	ppbv		ND	2.4	1.3	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.80	0.29	ppbv		ND	3.3	1.2	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.80	0.32	ppbv		ND	2.9	1.2	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.80	0.28	ppbv		ND	3.3	1.1	ug/m3
91-20-3	128.17	Naphthalene	ND	0.80	0.51	ppbv		ND	4.2	2.7	ug/m3
109-66-0	72	Pentane	1610 [a]	25	17	ppbv		4740 [a]	74	50	ug/m3
103-65-1	120	n-Propylbenzene	ND	0.80	0.36	ppbv		ND	3.9	1.8	ug/m3
115-07-1	42	Propylene	3.8	2.0	0.57	ppbv		6.5	3.4	0.98	ug/m3
100-42-5	104.1	Styrene	ND	0.80	0.47	ppbv		ND	3.4	2.0	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.80	0.15	ppbv		ND	4.4	0.82	ug/m3
79-34-5	167.85	1,1,2,2-Tetrachloroethane	ND	0.80	0.19	ppbv		ND	5.5	1.3	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.80	0.15	ppbv		ND	4.4	0.82	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.80	0.48	ppbv		ND	5.9	3.6	ug/m3
95-63-6	120.19	1,2,4-Trimethylbenzene	ND	0.80	0.35	ppbv		ND	3.9	1.7	ug/m3
108-67-8	120.19	1,3,5-Trimethylbenzene	ND	0.80	0.32	ppbv		ND	3.9	1.6	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	15.9	0.80	0.38	ppbv		74.3	3.7	1.8	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	0.80	0.37	ppbv		ND	2.4	1.1	ug/m3
127-18-4	165.8	Tetrachloroethylene	0.33	0.16	0.056	ppbv		2.2	1.1	0.38	ug/m3
109-99-9	72.11	Tetrahydrofuran	ND	0.80	0.36	ppbv		ND	2.4	1.1	ug/m3
108-88-3	92.14	Toluene	2.2	0.80	0.23	ppbv		8.3	3.0	0.87	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.16	0.076	ppbv		ND	0.86	0.41	ug/m3
75-69-4	137.4	Trichlorofluoromethane	ND	0.80	0.14	ppbv		ND	4.5	0.79	ug/m3

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SSMP-302R_033123		
Lab Sample ID:	JD63360-9	**Date Sampled:**	03/31/23
Matrix:	AIR - Soil Vapor Comp. Summa ID: A1892	**Date Received:**	04/03/23
Method:	TO-15	**Percent Solids:**	n/a
Project:	AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
75-01-4	62.5	Vinyl chloride	ND	0.80	0.28	ppbv		ND	2.0	0.72	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.80	0.45	ppbv		ND	2.8	1.6	ug/m3
	106.2	m,p-Xylene	1.3	0.80	0.56	ppbv		5.6	3.5	2.4	ug/m3
95-47-6	106.2	o-Xylene	ND	0.80	0.31	ppbv		ND	3.5	1.3	ug/m3
1330-20-7	106.2	Xylenes (total)	1.3	0.80	0.31	ppbv		5.6	3.5	1.3	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	98%	94%	65-128%

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Summa Canister and Flow Controller Log

CHAIN OF CUSTODY - AIR

PAGE 1 OF 1

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX 732-329-3499
www.sgs.com/ehsusa

Air

FED-EX Tracking # 5894 7372 0900
SGS Quote #
Bottle Order Control # BN-031327-145
SGS Job # JD63360

Client / Reporting Information

Company Name: ARCADIS
Address: 28550 CABOT DR.
City: NOVI State: MI Zip: 48377
Project Contact: CHRISTINA.WEAVER@ARCADIS.COM
E-mail:
Phone #: 248-832-0008
Sampler(s) Name(s): S. FILIPAK 248-722-8861

Project Information

Project Name: UNIVAR GRAND RAPIDS
Street: STAFFORD
City: WYOMING State: MI
Project #: 30164040.00700
Client Purchase Order #

Weather Parameters

Temperature (Fahrenheit)
Start: Maximum:
Stop: Minimum:
Atmoshpheric Pressure (inches of Hg)
Start: Maximum:
Stop: Minimum:
Other weather comment:

Lab Sample #	Field ID / Point of Collection	Air Type: Ind (I) Soil Vap (SV) Amb (A)	Air Type: Res (R) Non-Res (NR)	Sampling Equipment Info: Canister Serial #	Canister Size 6L or 1L	Flow Controller Serial #	Start Sampling Information: Date	Time (24hr clock)	Canister Pressure ("Hg)	Interior Temp (F)	Sampler Init.	Stop Sampling Information: Date	Time (24hr clock)	Canister Pressure ("Hg)	Interior Temp (F)	Sampler Init.	Requested Analysis: SVOC
1	SSMP-510_032923	SV	NR	A1580	1L	FC252	3-29-23	0822	30.0	65	SF	3-29-23	0835	5.0	65	SF	X
2	FloorDrain-02_032923	SV	NR	A1899	1L	FC861	"	1056	28.0	65	SF	"	1108	5.0	65	SF	X
3	FloorDrain-01_032923	SV	NR	A1922	1L	FC981	"	1110	27.5	65	SF	"	1124	4.5	65	SF	X
4	SSMP-13_032923	SV	NR	A1430	1L	FC945	"	1414	29.0	65	SF	"	1427	5.0	65	SF	X
5	Dup-01_032923	SV	NR	A1439	1L	FC1235	"	—	27.5	65	SF	"	—	4.5	65	SF	X
6	Dup-02_032923	SV	NR	A1983	1L	FC935	"	—	30.0	65	SF	"	—	5.0	65	SF	X
7	SSMP-401_032123	SV	NR	A1431	1L	FC254	3-31-23	0950	30.0	62	SF	3-31-23	1000	5.0	62	SF	X
8	IA-01-GW&RE302R_032123	A	NR	A1672	6L	FC872	"	0630	29.0	62	SF	"	1400	7.0	62	SF	X
9	SSMP-302R_032123	SV	NR	A1892	1L	FC642	"	1520	28.0	62	SF	"	1532	5.0	62	SF	X

Turnaround Time (Business days)

- 15 Business Days
- 10 Business Days
- 5 Business Days
- 3 Business Days *
- 2 Business Days *
- 1 Business Day *
- Other

Approved By:
Date:
* Approval needed for 1-3 Business Day TAT

Data Deliverable Information

All NJDEP TO-15 is mandatory Full T1

- Comm A
- Comm B
- Reduced T2
- Full T1
- Other:
- DKQP reporting

Comments / Remarks

"UNIVAR 4.4"

Sample inventory is verified upon receipt in the Laboratory

Sample Custody must be documented below each time samples change possession including courier delivery.

Relinquished by Sampler	Date / Time		Received By	Relinquished By	Date / Time	Received By
1	3/31/23	1700	1	2	4/3/23	2
Relinquished by: 3	Date / Time:		Received By: 3	Relinquished By: 4	Date / Time:	Received By: 4
Relinquished by: 5	Date / Time:		Received By: 5	Custody Seal #		

http://www.sgs.com/en/terms-and-conditions

Initial Assessment BBH

Label Verification

EHSA-QAC-0022-01-FORM-Dayton-Air COC
Rev.date:1/15/2021

SGS Sample Receipt Summary

Job Number: JD63360 **Client:** ARCADIS **Project:** AGMMIS: UNIVAR GRAND RAPIDS, 2940 ST

Date / Time Received: 4/3/2023 4:39:00 PM **Delivery Method:** **Airbill #'s:**

Cooler Temps (Raw Measured) °C:

Cooler Temps (Corrected) °C:

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☐		☐
2. Cooler temp verification:	N/A		
3. Cooler media:	N/A		
4. No. Coolers:	N/A		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	☑
2. Trip Blank listed on COC:	☐		☐	☑
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☐

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Test Strip Lot #s: pH 1-12: 231619 pH 12+: 203117A Other: (Specify)

Comments: Did not receive FC254 for -7 or FC642 for -9, please advise

Responded to by: Beth Stopen

Response Date: 4/10/23

OK to proceed as noted

JD63360: Chain of Custody
Page 3 of 3

Summa Canister and Flow Controller Log

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI
Received: 04/03/23

SUMMA CANISTERS

Shipping							Receiving					
Summa ID	L	Vac " Hg	Date Out	By	SCC Batch	SCC FileID	Sample Number	Date In	By	Vac " Hg	Pres psig	Final psig	Dil Fact
A1500	1.4	29.4	03/22/23	ML	CP12016	2W62459.D	JD63360-1	04/07/23	DG	4			1
A1899	1.4	29.4	03/22/23	ML	CP12009	3W78427.D	JD63360-2	04/07/23	DG	5.5			1
A1422	1.4	29.4	03/22/23	ML	CP12016	2W62459.D	JD63360-3	04/07/23	DG	5.5			1
A1430	1.4	29.4	03/22/23	ML	CP12009	3W78427.D	JD63360-4	04/07/23	DG	7			1
A1439	1.4	29.4	03/22/23	ML	CP12009	3W78427.D	JD63360-5	04/07/23	DG	3			1
A1983	1.4	29.4	03/22/23	ML	CP12016	2W62459.D	JD63360-6	04/07/23	DG	5			1
A1431	1.4	29.4	03/22/23	ML	CP12004	3W78345.D	JD63360-7	04/07/23	DG	4			1
A1692	6	29.4	03/22/23	ML	CP12111	7W00536.D	JD63360-8	04/07/23	DG	7			1
A1892	1.4	29.4	03/22/23	ML	CP12004	3W78345.D	JD63360-9	04/07/23	DG	7.5			1

FLOW CONTROLLERS / OTHER

Shipping					Receiving				
Flow Crtl ID	Date Out	By	cc/ min	Time hrs.	Date In	By	cc/ min	Flow RPD	Equipment Type
FC252	03/22/23	ML	83	.1667	04/10/23	DG	79	4.9	Flow Controller
FC832	03/22/23	ML	10.4	8	04/10/23	DG	10.3	1	Flow Controller
FC861	03/22/23	ML	83	.1667	04/10/23	DG	82	1.2	Flow Controller
FC945	03/22/23	ML	84	.1667	04/10/23	DG	81	3.6	Flow Controller
FC975	03/22/23	ML	83	.1667	04/10/23	DG	81	2.4	Flow Controller
FC981	03/22/23	ML	83	.1667	04/10/23	DG	79	4.9	Flow Controller
FC1235	03/22/23	ML	84	.1667	04/10/23	DG	81	3.6	Flow Controller

SGS Bottle Order(s):
BW-031323-145

Prep Date	Room Temp(F)	Bar Pres "Hg
03/22/23	70	29.92

MS Volatiles

6

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W3157-MB	3W80060.D	1	04/11/23	TCH	n/a	n/a	V3W3157

The QC reported here applies to the following samples: **Method:** TO-15

JD63360-1, JD63360-2, JD63360-3, JD63360-4, JD63360-5, JD63360-6, JD63360-7, JD63360-8, JD63360-9

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
67-64-1	Acetone (2-Propanone)	ND	0.20	0.15	ppbv		ND	0.48	ug/m3
107-02-8	Acrolein	ND	0.20	0.088	ppbv		ND	0.46	ug/m3
107-13-1	Acrylonitrile	ND	0.20	0.091	ppbv		ND	0.43	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	0.084	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	0.062	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	0.030	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	0.071	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	0.069	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
104-51-8	n-Butylbenzene	ND	0.20	0.11	ppbv		ND	1.1	ug/m3
135-98-8	sec-Butylbenzene	ND	0.20	0.081	ppbv		ND	1.1	ug/m3
75-15-0	Carbon disulfide	ND	0.20	0.045	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	0.074	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	0.068	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	0.037	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	0.090	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	0.083	ppbv		ND	0.63	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	0.040	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	0.11	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	0.057	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.059	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane (EDB)	ND	0.20	0.097	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	0.070	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	0.062	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	0.12	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	0.032	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	0.052	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.069	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.077	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	0.062	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	0.040	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	0.15	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	0.19	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	0.10	ppbv		ND	0.91	ug/m3
108-20-3	Di-Isopropyl ether	ND	0.20	0.082	ppbv		ND	0.83	ug/m3

Method Blank Summary

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W3157-MB	3W80060.D	1	04/11/23	TCH	n/a	n/a	V3W3157

The QC reported here applies to the following samples: **Method:** TO-15

JD63360-1, JD63360-2, JD63360-3, JD63360-4, JD63360-5, JD63360-6, JD63360-7, JD63360-8, JD63360-9

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
64-17-5	Ethanol	ND	0.50	0.39	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	0.10	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	0.095	ppbv		ND	0.98	ug/m3
76-13-1	Freon 113	ND	0.20	0.031	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	0.050	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	0.092	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	0.062	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	0.15	ppbv		ND	0.82	ug/m3
98-82-8	Isopropylbenzene	ND	0.20	0.064	ppbv		ND	0.98	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	0.14	ppbv		ND	0.49	ug/m3
99-87-6	p-Isopropyltoluene	ND	0.20	0.080	ppbv		ND	1.1	ug/m3
75-09-2	Methylene chloride	ND	0.20	0.056	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	0.11	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	0.073	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	0.080	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	0.070	ppbv		ND	0.82	ug/m3
91-20-3	Naphthalene	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
109-66-0	Pentane	ND	0.20	0.14	ppbv		ND	0.59	ug/m3
103-65-1	n-Propylbenzene	ND	0.20	0.091	ppbv		ND	0.98	ug/m3
115-07-1	Propylene	ND	0.50	0.14	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	0.12	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.037	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.048	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.038	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	0.12	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	0.087	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	0.080	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	0.095	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	0.093	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	0.014	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	0.090	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	0.057	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	0.036	ppbv		ND	1.1	ug/m3

Method Blank Summary

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W3157-MB	3W80060.D	1	04/11/23	TCH	n/a	n/a	V3W3157

The QC reported here applies to the following samples: **Method:** TO-15

JD63360-1, JD63360-2, JD63360-3, JD63360-4, JD63360-5, JD63360-6, JD63360-7, JD63360-8, JD63360-9

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
75-01-4	Vinyl chloride	ND	0.20	0.069	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	0.14	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	0.077	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	0.077	ppbv		ND	0.87	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	90%	65-128%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
124-38-9	Carbon dioxide	4.09	23	ppbv	JN
	Total TIC, Volatile		0	ppbv	

Method Blank Summary

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2W2873-MB	2W64578.D	1	04/18/23	TCH	n/a	n/a	V2W2873

The QC reported here applies to the following samples: **Method:** TO-15

JD63360-9

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
110-54-3	Hexane	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
109-66-0	Pentane	ND	0.20	0.14	ppbv		ND	0.59	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	98%	65-128%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
124-38-9	Carbon dioxide	1.68	2.6	ppbv	JN
	Total TIC, Volatile		0	ppbv	

Method Blank Summary

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W1162-MB	6W27616.D	1	12/11/22	TCH	n/a	n/a	V6W1162

The QC reported here applies to the following samples: **Method:** TO-15

V6W1162-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
67-64-1	Acetone (2-Propanone)	ND	0.20	0.15	ppbv		ND	0.48	ug/m3
107-02-8	Acrolein	ND	0.20	0.088	ppbv		ND	0.46	ug/m3
107-13-1	Acrylonitrile	ND	0.20	0.091	ppbv		ND	0.43	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	0.084	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	0.062	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	0.030	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	0.071	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	0.069	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
104-51-8	n-Butylbenzene	ND	0.20	0.11	ppbv		ND	1.1	ug/m3
135-98-8	sec-Butylbenzene	ND	0.20	0.081	ppbv		ND	1.1	ug/m3
75-15-0	Carbon disulfide	ND	0.20	0.045	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	0.074	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	0.068	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	0.037	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	0.090	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	0.083	ppbv		ND	0.63	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	0.040	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	0.11	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	0.057	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.059	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane (EDB)	ND	0.20	0.097	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	0.070	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	0.062	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	0.12	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	0.032	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	0.052	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.069	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.077	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	0.062	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	0.040	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	0.15	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	0.19	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	0.10	ppbv		ND	0.91	ug/m3
108-20-3	Di-Isopropyl ether	ND	0.20	0.082	ppbv		ND	0.83	ug/m3

Method Blank Summary

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W1162-MB	6W27616.D	1	12/11/22	TCH	n/a	n/a	V6W1162

The QC reported here applies to the following samples: **Method:** TO-15

V6W1162-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
64-17-5	Ethanol	ND	0.50	0.39	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	0.10	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	0.095	ppbv		ND	0.98	ug/m3
76-13-1	Freon 113	ND	0.20	0.031	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	0.050	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	0.092	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	0.062	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	0.15	ppbv		ND	0.82	ug/m3
98-82-8	Isopropylbenzene	ND	0.20	0.064	ppbv		ND	0.98	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	0.14	ppbv		ND	0.49	ug/m3
99-87-6	p-Isopropyltoluene	ND	0.20	0.080	ppbv		ND	1.1	ug/m3
75-09-2	Methylene chloride	ND	0.20	0.056	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	0.11	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	0.073	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	0.080	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	0.070	ppbv		ND	0.82	ug/m3
91-20-3	Naphthalene	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
109-66-0	Pentane	ND	0.20	0.14	ppbv		ND	0.59	ug/m3
103-65-1	n-Propylbenzene	ND	0.20	0.091	ppbv		ND	0.98	ug/m3
115-07-1	Propylene	ND	0.50	0.14	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	0.12	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.037	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.048	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.038	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	0.12	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	0.087	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	0.080	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	0.095	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	0.093	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	0.014	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	0.090	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	0.057	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	0.036	ppbv		ND	1.1	ug/m3

Method Blank Summary

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W1162-MB	6W27616.D	1	12/11/22	TCH	n/a	n/a	V6W1162

The QC reported here applies to the following samples: **Method:** TO-15

V6W1162-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
75-01-4	Vinyl chloride	ND	0.20	0.069	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	0.14	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	0.077	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	0.077	ppbv		ND	0.87	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	95%	65-128%

Method Blank Summary

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W3088-MB	3W78409.D	1	12/14/22	TCH	n/a	n/a	V3W3088

The QC reported here applies to the following samples: **Method:** TO-15

V3W3088-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
67-64-1	Acetone (2-Propanone)	ND	0.20	0.15	ppbv		ND	0.48	ug/m3
107-02-8	Acrolein	ND	0.20	0.088	ppbv		ND	0.46	ug/m3
107-13-1	Acrylonitrile	ND	0.20	0.091	ppbv		ND	0.43	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	0.084	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	0.062	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	0.030	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.10	0.071	ppbv		ND	1.0	ug/m3
74-83-9	Bromomethane	ND	0.20	0.069	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
104-51-8	n-Butylbenzene	ND	0.20	0.11	ppbv		ND	1.1	ug/m3
135-98-8	sec-Butylbenzene	ND	0.20	0.081	ppbv		ND	1.1	ug/m3
75-15-0	Carbon disulfide	ND	0.20	0.045	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	0.074	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	0.068	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	0.037	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	0.090	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	0.083	ppbv		ND	0.63	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	0.040	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	0.11	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	0.057	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.059	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane (EDB)	ND	0.20	0.097	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	0.070	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	0.062	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	0.12	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	0.032	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	0.052	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.069	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.10	0.077	ppbv		ND	0.40	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	0.062	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	0.040	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	0.15	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	0.19	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	0.10	ppbv		ND	0.91	ug/m3
108-20-3	Di-Isopropyl ether	ND	0.20	0.082	ppbv		ND	0.83	ug/m3

Method Blank Summary

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W3088-MB	3W78409.D	1	12/14/22	TCH	n/a	n/a	V3W3088

The QC reported here applies to the following samples: **Method:** TO-15

V3W3088-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
64-17-5	Ethanol	ND	0.50	0.39	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	0.10	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	0.095	ppbv		ND	0.98	ug/m3
76-13-1	Freon 113	ND	0.20	0.031	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	0.050	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	0.092	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	0.062	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	0.15	ppbv		ND	0.82	ug/m3
98-82-8	Isopropylbenzene	ND	0.20	0.064	ppbv		ND	0.98	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	0.14	ppbv		ND	0.49	ug/m3
99-87-6	p-Isopropyltoluene	ND	0.20	0.080	ppbv		ND	1.1	ug/m3
75-09-2	Methylene chloride	ND	0.20	0.056	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	0.11	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	0.073	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	0.080	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	0.070	ppbv		ND	0.82	ug/m3
91-20-3	Naphthalene	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
109-66-0	Pentane	ND	0.20	0.14	ppbv		ND	0.59	ug/m3
103-65-1	n-Propylbenzene	ND	0.20	0.091	ppbv		ND	0.98	ug/m3
115-07-1	Propylene	ND	0.50	0.14	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	0.12	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.037	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.048	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.038	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	0.12	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	0.087	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	0.080	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	0.095	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	0.093	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	0.014	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	0.090	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	0.057	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	0.036	ppbv		ND	1.1	ug/m3

Method Blank Summary

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W3088-MB	3W78409.D	1	12/14/22	TCH	n/a	n/a	V3W3088

The QC reported here applies to the following samples: **Method:** TO-15

V3W3088-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
75-01-4	Vinyl chloride	ND	0.10	0.069	ppbv		ND	0.26	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	0.14	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	0.077	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	0.077	ppbv		ND	0.87	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	100%	65-128%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
124-38-9	Carbon dioxide	4.16	31	ppbv	JN
	Total TIC, Volatile		0	ppbv	

Method Blank Summary

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2W2780-MB	2W62455.D	1	12/20/22	TCH	n/a	n/a	V2W2780

The QC reported here applies to the following samples: **Method:** TO-15

V2W2780-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
67-64-1	Acetone (2-Propanone)	ND	0.20	0.15	ppbv		ND	0.48	ug/m3
107-02-8	Acrolein	ND	0.20	0.088	ppbv		ND	0.46	ug/m3
107-13-1	Acrylonitrile	ND	0.20	0.091	ppbv		ND	0.43	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	0.084	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	0.062	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	0.030	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	0.071	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	0.069	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
104-51-8	n-Butylbenzene	ND	0.20	0.11	ppbv		ND	1.1	ug/m3
135-98-8	sec-Butylbenzene	ND	0.20	0.081	ppbv		ND	1.1	ug/m3
75-15-0	Carbon disulfide	ND	0.20	0.045	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	0.074	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	0.068	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	0.037	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	0.090	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	0.083	ppbv		ND	0.63	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	0.040	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	0.11	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	0.057	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.059	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane (EDB)	ND	0.20	0.097	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	0.070	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	0.062	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	0.12	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	0.032	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	0.052	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.069	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.077	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	0.062	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	0.040	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	0.15	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	0.19	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	0.10	ppbv		ND	0.91	ug/m3
108-20-3	Di-Isopropyl ether	ND	0.20	0.082	ppbv		ND	0.83	ug/m3

Method Blank Summary

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2W2780-MB	2W62455.D	1	12/20/22	TCH	n/a	n/a	V2W2780

The QC reported here applies to the following samples: **Method:** TO-15

V2W2780-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
64-17-5	Ethanol	ND	0.50	0.39	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	0.10	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	0.095	ppbv		ND	0.98	ug/m3
76-13-1	Freon 113	ND	0.20	0.031	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	0.050	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	0.092	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	0.062	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	0.15	ppbv		ND	0.82	ug/m3
98-82-8	Isopropylbenzene	ND	0.20	0.064	ppbv		ND	0.98	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	0.14	ppbv		ND	0.49	ug/m3
99-87-6	p-Isopropyltoluene	ND	0.20	0.080	ppbv		ND	1.1	ug/m3
75-09-2	Methylene chloride	ND	0.20	0.056	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	0.11	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	0.073	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	0.080	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	0.070	ppbv		ND	0.82	ug/m3
91-20-3	Naphthalene	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
109-66-0	Pentane	ND	0.20	0.14	ppbv		ND	0.59	ug/m3
103-65-1	n-Propylbenzene	ND	0.20	0.091	ppbv		ND	0.98	ug/m3
115-07-1	Propylene	ND	0.50	0.14	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	0.12	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.037	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.048	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.038	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	0.12	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	0.087	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	0.080	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	0.095	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	0.093	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	0.014	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	0.090	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	0.057	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	0.036	ppbv		ND	1.1	ug/m3

Method Blank Summary

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2W2780-MB	2W62455.D	1	12/20/22	TCH	n/a	n/a	V2W2780

The QC reported here applies to the following samples: **Method:** TO-15

V2W2780-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
75-01-4	Vinyl chloride	ND	0.20	0.069	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	0.14	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	0.077	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	0.077	ppbv		ND	0.87	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	102%	65-128%

Method Blank Summary

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V7W27-MB	7W00518.D	1	02/20/23	TCH	n/a	n/a	V7W27

The QC reported here applies to the following samples: **Method:** TO-15

V7W27-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
67-64-1	Acetone (2-Propanone)	ND	0.20	0.15	ppbv		ND	0.48	ug/m3
107-02-8	Acrolein	ND	0.20	0.088	ppbv		ND	0.46	ug/m3
107-13-1	Acrylonitrile	ND	0.20	0.091	ppbv		ND	0.43	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	0.084	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	0.062	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	0.030	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	0.071	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	0.069	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
104-51-8	n-Butylbenzene	ND	0.20	0.11	ppbv		ND	1.1	ug/m3
135-98-8	sec-Butylbenzene	ND	0.20	0.081	ppbv		ND	1.1	ug/m3
75-15-0	Carbon disulfide	ND	0.20	0.045	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	0.074	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	0.068	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	0.037	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	0.090	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	0.083	ppbv		ND	0.63	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	0.040	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	0.11	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	0.057	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.059	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane (EDB)	ND	0.20	0.097	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	0.070	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	0.062	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	0.12	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	0.032	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	0.052	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.069	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.077	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	0.062	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	0.040	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	0.15	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	0.19	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	0.10	ppbv		ND	0.91	ug/m3
108-20-3	Di-Isopropyl ether	ND	0.20	0.082	ppbv		ND	0.83	ug/m3

Method Blank Summary

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V7W27-MB	7W00518.D	1	02/20/23	TCH	n/a	n/a	V7W27

The QC reported here applies to the following samples: **Method:** TO-15

V7W27-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
64-17-5	Ethanol	ND	0.50	0.39	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	0.10	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	0.095	ppbv		ND	0.98	ug/m3
76-13-1	Freon 113	ND	0.20	0.031	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	0.050	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	0.092	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	0.062	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	0.15	ppbv		ND	0.82	ug/m3
98-82-8	Isopropylbenzene	ND	0.20	0.064	ppbv		ND	0.98	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	0.14	ppbv		ND	0.49	ug/m3
99-87-6	p-Isopropyltoluene	ND	0.20	0.080	ppbv		ND	1.1	ug/m3
75-09-2	Methylene chloride	ND	0.20	0.056	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	0.11	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	0.073	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	0.080	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	0.070	ppbv		ND	0.82	ug/m3
91-20-3	Naphthalene	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
109-66-0	Pentane	ND	0.20	0.14	ppbv		ND	0.59	ug/m3
103-65-1	n-Propylbenzene	ND	0.20	0.091	ppbv		ND	0.98	ug/m3
115-07-1	Propylene	ND	0.50	0.14	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	0.12	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.037	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.048	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.038	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	0.12	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	0.087	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	0.080	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	0.095	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	0.093	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	0.014	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	0.090	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	0.057	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	0.036	ppbv		ND	1.1	ug/m3

Method Blank Summary

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V7W27-MB	7W00518.D	1	02/20/23	TCH	n/a	n/a	V7W27

The QC reported here applies to the following samples: **Method:** TO-15

V7W27-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
75-01-4	Vinyl chloride	ND	0.20	0.069	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	0.14	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	0.077	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	0.077	ppbv		ND	0.87	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	96%	65-128%

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W3157-BS	3W80057.D	1	04/11/23	TCH	n/a	n/a	V3W3157
V3W3157-BSD	3W80058.D	1	04/11/23	TCH	n/a	n/a	V3W3157

The QC reported here applies to the following samples: **Method:** TO-15

JD63360-1, JD63360-2, JD63360-3, JD63360-4, JD63360-5, JD63360-6, JD63360-7, JD63360-8, JD63360-9

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone (2-Propanone)	10	9.2	92	9.2	92	0	70-130/30
107-02-8	Acrolein	10	8.7	87	8.5	85	2	70-130/30
107-13-1	Acrylonitrile	10	9.2	92	9.1	91	1	70-130/30
106-99-0	1,3-Butadiene	10	12.4	124	12.0	120	3	70-130/30
71-43-2	Benzene	10	8.9	89	8.8	88	1	70-130/30
75-27-4	Bromodichloromethane	10	9.7	97	9.6	96	1	70-130/30
75-25-2	Bromoform	10	10.7	107	11.2	112	5	70-130/30
74-83-9	Bromomethane	10	12.2	122	11.7	117	4	70-130/30
593-60-2	Bromoethene	10	12.7	127	12.4	124	2	70-130/30
100-44-7	Benzyl Chloride	10	11.0	110	11.7	117	6	70-130/30
104-51-8	n-Butylbenzene	10	11.5	115	12.0	120	4	50-150/30 [a]
135-98-8	sec-Butylbenzene	10	10.1	101	10.5	105	4	50-150/30 [a]
75-15-0	Carbon disulfide	10	8.6	86	8.5	85	1	70-130/30
108-90-7	Chlorobenzene	10	9.0	90	9.5	95	5	70-130/30
75-00-3	Chloroethane	10	12.5	125	12.3	123	2	70-130/30
67-66-3	Chloroform	10	8.6	86	8.5	85	1	70-130/30
74-87-3	Chloromethane	10	9.8	98	9.9	99	1	70-130/30
107-05-1	3-Chloropropene	10	8.6	86	8.4	84	2	70-130/30
56-23-5	Carbon tetrachloride	10	9.4	94	9.3	93	1	70-130/30
110-82-7	Cyclohexane	10	8.6	86	8.6	86	0	70-130/30
75-34-3	1,1-Dichloroethane	10	8.3	83	8.2	82	1	70-130/30
75-35-4	1,1-Dichloroethylene	10	8.4	84	8.3	83	1	70-130/30
106-93-4	1,2-Dibromoethane (EDB)	10	9.3	93	9.8	98	5	70-130/30
107-06-2	1,2-Dichloroethane	10	9.7	97	9.5	95	2	70-130/30
78-87-5	1,2-Dichloropropane	10	8.7	87	8.7	87	0	70-130/30
123-91-1	1,4-Dioxane	10	9.7	97	9.7	97	0	70-130/30
75-71-8	Dichlorodifluoromethane	10	9.5	95	9.3	93	2	70-130/30
124-48-1	Dibromochloromethane	10	9.2	92	9.7	97	5	70-130/30
156-60-5	trans-1,2-Dichloroethylene	10	8.5	85	8.4	84	1	70-130/30
156-59-2	cis-1,2-Dichloroethylene	10	8.5	85	8.4	84	1	70-130/30
10061-01-5	cis-1,3-Dichloropropene	10	9.5	95	9.4	94	1	70-130/30
541-73-1	m-Dichlorobenzene	10	12.0	120	12.6	126	5	70-130/30
95-50-1	o-Dichlorobenzene	10	11.0	110	11.5	115	4	70-130/30
106-46-7	p-Dichlorobenzene	10	11.9	119	12.5	125	5	70-130/30
10061-02-6	trans-1,3-Dichloropropene	10	9.6	96	9.6	96	0	70-130/30
108-20-3	Di-Isopropyl ether	10	10.1	101	10.1	101	0	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W3157-BS	3W80057.D	1	04/11/23	TCH	n/a	n/a	V3W3157
V3W3157-BSD	3W80058.D	1	04/11/23	TCH	n/a	n/a	V3W3157

The QC reported here applies to the following samples: **Method:** TO-15

JD63360-1, JD63360-2, JD63360-3, JD63360-4, JD63360-5, JD63360-6, JD63360-7, JD63360-8, JD63360-9

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
64-17-5	Ethanol	10	13.0	130	12.7	127	2	70-130/30
100-41-4	Ethylbenzene	10	8.8	88	9.3	93	6	70-130/30
141-78-6	Ethyl Acetate	10	9.8	98	9.6	96	2	70-130/30
622-96-8	4-Ethyltoluene	10	10.2	102	10.7	107	5	70-130/30
76-13-1	Freon 113	10	9.3	93	9.2	92	1	70-130/30
76-14-2	Freon 114	10	11.5	115	11.5	115	0	70-130/30
142-82-5	Heptane	10	9.4	94	9.4	94	0	70-130/30
87-68-3	Hexachlorobutadiene	10	12.2	122	13.0	130	6	70-130/30
110-54-3	Hexane	10	9.0	90	8.9	89	1	70-130/30
591-78-6	2-Hexanone	10	9.2	92	9.7	97	5	70-130/30
98-82-8	Isopropylbenzene	10	10	100	10.6	106	6	70-130/30
67-63-0	Isopropyl Alcohol	10	8.7	87	8.6	86	1	70-130/30
99-87-6	p-Isopropyltoluene	10	11.2	112	11.6	116	4	70-130/30
75-09-2	Methylene chloride	10	8.1	81	8.0	80	1	70-130/30
78-93-3	Methyl ethyl ketone	10	9.0	90	8.8	88	2	70-130/30
108-10-1	Methyl Isobutyl Ketone	10	9.9	99	9.8	98	1	70-130/30
1634-04-4	Methyl Tert Butyl Ether	10	7.9	79	7.8	78	1	70-130/30
80-62-6	Methylmethacrylate	10	8.3	83	8.4	84	1	70-130/30
91-20-3	Naphthalene	10	10.2	102	11.0	110	8	70-130/30
109-66-0	Pentane	10	8.4	84	8.3	83	1	70-130/30
103-65-1	n-Propylbenzene	10	10	100	10.5	105	5	50-150/30 [a]
115-07-1	Propylene	10	8.1	81	8.0	80	1	70-130/30
100-42-5	Styrene	10	9.5	95	9.9	99	4	70-130/30
71-55-6	1,1,1-Trichloroethane	10	8.8	88	8.6	86	2	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	10	9.7	97	10.2	102	5	70-130/30
79-00-5	1,1,2-Trichloroethane	10	9.3	93	9.3	93	0	70-130/30
120-82-1	1,2,4-Trichlorobenzene	10	9.4	94	10.1	101	7	70-130/30
95-63-6	1,2,4-Trimethylbenzene	10	10.9	109	11.4	114	4	70-130/30
108-67-8	1,3,5-Trimethylbenzene	10	9.6	96	10.2	102	6	70-130/30
540-84-1	2,2,4-Trimethylpentane	10	9.7	97	9.7	97	0	70-130/30
75-65-0	Tertiary Butyl Alcohol	10	9.0	90	8.9	89	1	70-130/30
127-18-4	Tetrachloroethylene	10	10	100	10.6	106	6	70-130/30
109-99-9	Tetrahydrofuran	10	8.7	87	8.6	86	1	70-130/30
108-88-3	Toluene	10	9.5	95	9.5	95	0	70-130/30
79-01-6	Trichloroethylene	10	9.8	98	9.8	98	0	70-130/30
75-69-4	Trichlorofluoromethane	10	9.6	96	9.4	94	2	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W3157-BS	3W80057.D	1	04/11/23	TCH	n/a	n/a	V3W3157
V3W3157-BSD	3W80058.D	1	04/11/23	TCH	n/a	n/a	V3W3157

The QC reported here applies to the following samples: **Method:** TO-15

JD63360-1, JD63360-2, JD63360-3, JD63360-4, JD63360-5, JD63360-6, JD63360-7, JD63360-8, JD63360-9

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
75-01-4	Vinyl chloride	10	12.2	122	12.2	122	0	70-130/30
108-05-4	Vinyl Acetate	10	9.7	97	9.6	96	1	70-130/30
	m,p-Xylene	20	18.7	94	19.8	99	6	70-130/30
95-47-6	o-Xylene	10	9.6	96	10.1	101	5	70-130/30
1330-20-7	Xylenes (total)	30	28.3	94	30.0	100	6	70-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	103%	104%	65-128%

(a) Advisory control limits.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2W2873-BS	2W64575.D	1	04/18/23	TCH	n/a	n/a	V2W2873
V2W2873-BSD	2W64576.D	1	04/18/23	TCH	n/a	n/a	V2W2873

The QC reported here applies to the following samples: **Method:** TO-15

JD63360-9

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
110-54-3	Hexane	10	9.5	95	9.7	97	2	70-130/30
109-66-0	Pentane	10	8.6	86	8.5	85	1	70-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	102%	101%	65-128%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W1162-BS	6W27613.D	1	12/11/22	TCH	n/a	n/a	V6W1162
V6W1162-BSD	6W27614.D	1	12/11/22	TCH	n/a	n/a	V6W1162

The QC reported here applies to the following samples: **Method:** TO-15

V6W1162-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone (2-Propanone)	10	9.1	91	9.3	93	2	70-130/30
107-02-8	Acrolein	10	9.9	99	9.7	97	2	70-130/30
107-13-1	Acrylonitrile	10	10.5	105	10.4	104	1	70-130/30
106-99-0	1,3-Butadiene	10	11.1	111	10.7	107	4	70-130/30
71-43-2	Benzene	10	9.4	94	9.4	94	0	70-130/30
75-27-4	Bromodichloromethane	10	10.3	103	10.4	104	1	70-130/30
75-25-2	Bromoform	10	10.8	108	10.7	107	1	70-130/30
74-83-9	Bromomethane	10	10.7	107	10.6	106	1	70-130/30
593-60-2	Bromoethene	10	10.5	105	10.6	106	1	70-130/30
100-44-7	Benzyl Chloride	10	9.3	93	9.6	96	3	70-130/30
104-51-8	n-Butylbenzene	10	11.3	113	11.2	112	1	50-150/30 [a]
135-98-8	sec-Butylbenzene	10	11.6	116	11.6	116	0	50-150/30 [a]
75-15-0	Carbon disulfide	10	10.0	100	10.7	107	7	70-130/30
108-90-7	Chlorobenzene	10	10.5	105	10.4	104	1	70-130/30
75-00-3	Chloroethane	10	10.5	105	10.5	105	0	70-130/30
67-66-3	Chloroform	10	10.2	102	10.0	100	2	70-130/30
74-87-3	Chloromethane	10	10.4	104	9.4	94	10	70-130/30
107-05-1	3-Chloropropene	10	10.5	105	10.6	106	1	70-130/30
56-23-5	Carbon tetrachloride	10	10.6	106	10.8	108	2	70-130/30
110-82-7	Cyclohexane	10	9.9	99	10.2	102	3	70-130/30
75-34-3	1,1-Dichloroethane	10	9.6	96	10.2	102	6	70-130/30
75-35-4	1,1-Dichloroethylene	10	10.3	103	10.3	103	0	70-130/30
106-93-4	1,2-Dibromoethane (EDB)	10	10.9	109	10.5	105	4	70-130/30
107-06-2	1,2-Dichloroethane	10	10.7	107	9.9	99	8	70-130/30
78-87-5	1,2-Dichloropropane	10	9.6	96	9.7	97	1	70-130/30
123-91-1	1,4-Dioxane	10	10.5	105	9.9	99	6	70-130/30
75-71-8	Dichlorodifluoromethane	10	11.0	110	10.4	104	6	70-130/30
124-48-1	Dibromochloromethane	10	11.2	112	10.7	107	5	70-130/30
156-60-5	trans-1,2-Dichloroethylene	10	9.8	98	10.3	103	5	70-130/30
156-59-2	cis-1,2-Dichloroethylene	10	9.8	98	9.8	98	0	70-130/30
10061-01-5	cis-1,3-Dichloropropene	10	10.9	109	10.5	105	4	70-130/30
541-73-1	m-Dichlorobenzene	10	11.4	114	11.3	113	1	70-130/30
95-50-1	o-Dichlorobenzene	10	11.4	114	11.2	112	2	70-130/30
106-46-7	p-Dichlorobenzene	10	11.5	115	11.5	115	0	70-130/30
10061-02-6	trans-1,3-Dichloropropene	10	10.9	109	10.6	106	3	70-130/30
108-20-3	Di-Isopropyl ether	10	9.4	94	9.4	94	0	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W1162-BS	6W27613.D	1	12/11/22	TCH	n/a	n/a	V6W1162
V6W1162-BSD	6W27614.D	1	12/11/22	TCH	n/a	n/a	V6W1162

The QC reported here applies to the following samples: **Method:** TO-15

V6W1162-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
64-17-5	Ethanol	10	10.1	101	10.2	102	1	70-130/30
100-41-4	Ethylbenzene	10	9.3	93	9.3	93	0	70-130/30
141-78-6	Ethyl Acetate	10	10.4	104	10.5	105	1	70-130/30
622-96-8	4-Ethyltoluene	10	11.6	116	11.5	115	1	70-130/30
76-13-1	Freon 113	10	10.4	104	10.5	105	1	70-130/30
76-14-2	Freon 114	10	10.8	108	10.2	102	6	70-130/30
142-82-5	Heptane	10	11.0	110	10.5	105	5	70-130/30
87-68-3	Hexachlorobutadiene	10	11.0	110	10.8	108	2	70-130/30
110-54-3	Hexane	10	9.6	96	9.5	95	1	70-130/30
591-78-6	2-Hexanone	10	11.7	117	11.3	113	3	70-130/30
98-82-8	Isopropylbenzene	10	11.2	112	11.1	111	1	70-130/30
67-63-0	Isopropyl Alcohol	10	9.9	99	10.0	100	1	70-130/30
99-87-6	p-Isopropyltoluene	10	11.9	119	11.8	118	1	70-130/30
75-09-2	Methylene chloride	10	9.5	95	9.6	96	1	70-130/30
78-93-3	Methyl ethyl ketone	10	10.2	102	10	100	2	70-130/30
108-10-1	Methyl Isobutyl Ketone	10	11.5	115	11.0	110	4	70-130/30
1634-04-4	Methyl Tert Butyl Ether	10	9.7	97	10.2	102	5	70-130/30
80-62-6	Methylmethacrylate	10	11.3	113	10.9	109	4	70-130/30
91-20-3	Naphthalene	10	11.4	114	11.3	113	1	70-130/30
109-66-0	Pentane	10	10.2	102	10.1	101	1	70-130/30
103-65-1	n-Propylbenzene	10	11.5	115	11.6	116	1	50-150/30 [a]
115-07-1	Propylene	10	10.7	107	10.7	107	0	70-130/30
100-42-5	Styrene	10	11.4	114	11.4	114	0	70-130/30
71-55-6	1,1,1-Trichloroethane	10	10.6	106	10.3	103	3	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	10	10.4	104	10.4	104	0	70-130/30
79-00-5	1,1,2-Trichloroethane	10	10.5	105	10.2	102	3	70-130/30
120-82-1	1,2,4-Trichlorobenzene	10	11.3	113	11.4	114	1	70-130/30
95-63-6	1,2,4-Trimethylbenzene	10	11.4	114	11.5	115	1	70-130/30
108-67-8	1,3,5-Trimethylbenzene	10	11.9	119	11.8	118	1	70-130/30
540-84-1	2,2,4-Trimethylpentane	10	10.7	107	10.2	102	5	70-130/30
75-65-0	Tertiary Butyl Alcohol	10	10.5	105	10.6	106	1	70-130/30
127-18-4	Tetrachloroethylene	10	11.2	112	10.8	108	4	70-130/30
109-99-9	Tetrahydrofuran	10	11.0	110	10.2	102	8	70-130/30
108-88-3	Toluene	10	10.4	104	10.1	101	3	70-130/30
79-01-6	Trichloroethylene	10	10.3	103	10.1	101	2	70-130/30
75-69-4	Trichlorofluoromethane	10	10.6	106	10.6	106	0	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W1162-BS	6W27613.D	1	12/11/22	TCH	n/a	n/a	V6W1162
V6W1162-BSD	6W27614.D	1	12/11/22	TCH	n/a	n/a	V6W1162

The QC reported here applies to the following samples: **Method:** TO-15

V6W1162-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
75-01-4	Vinyl chloride	10	10.8	108	10.3	103	5	70-130/30
108-05-4	Vinyl Acetate	10	9.7	97	9.9	99	2	70-130/30
	m,p-Xylene	20	19.7	99	19.7	99	0	70-130/30
95-47-6	o-Xylene	10	9.9	99	9.9	99	0	70-130/30
1330-20-7	Xylenes (total)	30	29.6	99	29.6	99	0	70-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	100%	100%	65-128%

(a) Advisory control limits.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W3088-BS	3W78406.D	1	12/14/22	TCH	n/a	n/a	V3W3088
V3W3088-BSD	3W78407.D	1	12/14/22	TCH	n/a	n/a	V3W3088

The QC reported here applies to the following samples: **Method:** TO-15

V3W3088-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone (2-Propanone)	10	8.2	82	7.3	73	12	70-130/30
107-02-8	Acrolein	10	8.6	86	8.6	86	0	70-130/30
107-13-1	Acrylonitrile	10	11.0	110	11.1	111	1	70-130/30
106-99-0	1,3-Butadiene	10	8.0	80	8.3	83	4	70-130/30
71-43-2	Benzene	10	10.2	102	10.1	101	1	70-130/30
75-27-4	Bromodichloromethane	10	10.5	105	10.5	105	0	70-130/30
75-25-2	Bromoform	10	10.4	104	10.3	103	1	70-130/30
74-83-9	Bromomethane	10	8.5	85	8.6	86	1	70-130/30
593-60-2	Bromoethene	10	8.9	89	8.9	89	0	70-130/30
100-44-7	Benzyl Chloride	10	12.7	127	12.7	127	0	70-130/30
104-51-8	n-Butylbenzene	10	10.2	102	9.9	99	3	50-150/30 [a]
135-98-8	sec-Butylbenzene	10	9.3	93	9.2	92	1	50-150/30 [a]
75-15-0	Carbon disulfide	10	10.7	107	10.7	107	0	70-130/30
108-90-7	Chlorobenzene	10	9.2	92	9.1	91	1	70-130/30
75-00-3	Chloroethane	10	9.4	94	9.4	94	0	70-130/30
67-66-3	Chloroform	10	11.1	111	11.2	112	1	70-130/30
74-87-3	Chloromethane	10	8.7	87	8.9	89	2	70-130/30
107-05-1	3-Chloropropene	10	11.0	110	10.9	109	1	70-130/30
56-23-5	Carbon tetrachloride	10	11.5	115	11.7	117	2	70-130/30
110-82-7	Cyclohexane	10	9.6	96	9.4	94	2	70-130/30
75-34-3	1,1-Dichloroethane	10	10.9	109	10.8	108	1	70-130/30
75-35-4	1,1-Dichloroethylene	10	10.3	103	10.2	102	1	70-130/30
106-93-4	1,2-Dibromoethane (EDB)	10	9.9	99	9.8	98	1	70-130/30
107-06-2	1,2-Dichloroethane	10	11.7	117	11.8	118	1	70-130/30
78-87-5	1,2-Dichloropropane	10	9.6	96	9.6	96	0	70-130/30
123-91-1	1,4-Dioxane	10	10.9	109	10.8	108	1	70-130/30
75-71-8	Dichlorodifluoromethane	10	10.6	106	10.8	108	2	70-130/30
124-48-1	Dibromochloromethane	10	9.9	99	9.7	97	2	70-130/30
156-60-5	trans-1,2-Dichloroethylene	10	10.8	108	10.6	106	2	70-130/30
156-59-2	cis-1,2-Dichloroethylene	10	10.8	108	10.9	109	1	70-130/30
10061-01-5	cis-1,3-Dichloropropene	10	10.6	106	10.5	105	1	70-130/30
541-73-1	m-Dichlorobenzene	10	9.7	97	9.7	97	0	70-130/30
95-50-1	o-Dichlorobenzene	10	9.8	98	9.6	96	2	70-130/30
106-46-7	p-Dichlorobenzene	10	9.9	99	10	100	1	70-130/30
10061-02-6	trans-1,3-Dichloropropene	10	11.1	111	11.0	110	1	70-130/30
108-20-3	Di-Isopropyl ether	10	10.4	104	10.3	103	1	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W3088-BS	3W78406.D	1	12/14/22	TCH	n/a	n/a	V3W3088
V3W3088-BSD	3W78407.D	1	12/14/22	TCH	n/a	n/a	V3W3088

The QC reported here applies to the following samples: **Method:** TO-15

V3W3088-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
64-17-5	Ethanol	10	8.1	81	8.1	81	0	70-130/30
100-41-4	Ethylbenzene	10	9.1	91	9.0	90	1	70-130/30
141-78-6	Ethyl Acetate	10	10.5	105	10.8	108	3	70-130/30
622-96-8	4-Ethyltoluene	10	9.9	99	9.8	98	1	70-130/30
76-13-1	Freon 113	10	10.5	105	10.3	103	2	70-130/30
76-14-2	Freon 114	10	9.2	92	9.4	94	2	70-130/30
142-82-5	Heptane	10	9.3	93	9.4	94	1	70-130/30
87-68-3	Hexachlorobutadiene	10	12.2	122	12.6	126	3	70-130/30
110-54-3	Hexane	10	10.4	104	10.4	104	0	70-130/30
591-78-6	2-Hexanone	10	11.1	111	11.2	112	1	70-130/30
98-82-8	Isopropylbenzene	10	9.6	96	9.3	93	3	70-130/30
67-63-0	Isopropyl Alcohol	10	9.6	96	9.7	97	1	70-130/30
99-87-6	p-Isopropyltoluene	10	8.5	85	8.4	84	1	70-130/30
75-09-2	Methylene chloride	10	9.7	97	9.6	96	1	70-130/30
78-93-3	Methyl ethyl ketone	10	11.4	114	11.4	114	0	70-130/30
108-10-1	Methyl Isobutyl Ketone	10	10.5	105	10.6	106	1	70-130/30
1634-04-4	Methyl Tert Butyl Ether	10	11.2	112	11.1	111	1	70-130/30
80-62-6	Methylmethacrylate	10	10.6	106	10.7	107	1	70-130/30
91-20-3	Naphthalene	10	12.2	122	12.4	124	2	70-130/30
109-66-0	Pentane	10	9.5	95	9.6	96	1	70-130/30
103-65-1	n-Propylbenzene	10	9.7	97	9.5	95	2	50-150/30 [a]
115-07-1	Propylene	10	9.2	92	9.5	95	3	70-130/30
100-42-5	Styrene	10	10.1	101	9.9	99	2	70-130/30
71-55-6	1,1,1-Trichloroethane	10	11.4	114	11.5	115	1	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	10	9.5	95	9.3	93	2	70-130/30
79-00-5	1,1,2-Trichloroethane	10	10	100	9.9	99	1	70-130/30
120-82-1	1,2,4-Trichlorobenzene	10	12.2	122	12.7	127	4	70-130/30
95-63-6	1,2,4-Trimethylbenzene	10	10	100	9.9	99	1	70-130/30
108-67-8	1,3,5-Trimethylbenzene	10	10	100	9.9	99	1	70-130/30
540-84-1	2,2,4-Trimethylpentane	10	10	100	9.9	99	1	70-130/30
75-65-0	Tertiary Butyl Alcohol	10	10.9	109	11.0	110	1	70-130/30
127-18-4	Tetrachloroethylene	10	9.2	92	9.1	91	1	70-130/30
109-99-9	Tetrahydrofuran	10	11.3	113	11.7	117	3	70-130/30
108-88-3	Toluene	10	9.7	97	9.5	95	2	70-130/30
79-01-6	Trichloroethylene	10	9.9	99	9.8	98	1	70-130/30
75-69-4	Trichlorofluoromethane	10	10.7	107	10.7	107	0	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W3088-BS	3W78406.D	1	12/14/22	TCH	n/a	n/a	V3W3088
V3W3088-BSD	3W78407.D	1	12/14/22	TCH	n/a	n/a	V3W3088

The QC reported here applies to the following samples: **Method:** TO-15

V3W3088-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
75-01-4	Vinyl chloride	10	8.6	86	9.0	90	5	70-130/30
108-05-4	Vinyl Acetate	10	11.7	117	11.3	113	3	70-130/30
	m,p-Xylene	20	17.7	89	17.3	87	2	70-130/30
95-47-6	o-Xylene	10	9.0	90	8.8	88	2	70-130/30
1330-20-7	Xylenes (total)	30	26.6	89	26.0	87	2	70-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	102%	101%	65-128%

(a) Advisory control limits.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2W2780-BS	2W62450.D	1	12/20/22	TCH	n/a	n/a	V2W2780
V2W2780-BSD	2W62451.D	1	12/20/22	TCH	n/a	n/a	V2W2780

The QC reported here applies to the following samples: **Method:** TO-15

V2W2780-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone (2-Propanone)	10	8.8	88	8.7	87	1	70-130/30
107-02-8	Acrolein	10	9.6	96	9.4	94	2	70-130/30
107-13-1	Acrylonitrile	10	9.9	99	9.9	99	0	70-130/30
106-99-0	1,3-Butadiene	10	9.9	99	9.7	97	2	70-130/30
71-43-2	Benzene	10	9.3	93	9.4	94	1	70-130/30
75-27-4	Bromodichloromethane	10	10.8	108	10.7	107	1	70-130/30
75-25-2	Bromoform	10	11.0	110	10.9	109	1	70-130/30
74-83-9	Bromomethane	10	9.3	93	9.2	92	1	70-130/30
593-60-2	Bromoethene	10	9.6	96	9.5	95	1	70-130/30
100-44-7	Benzyl Chloride	10	9.4	94	9.6	96	2	70-130/30
104-51-8	n-Butylbenzene	10	10.1	101	10.3	103	2	50-150/30 [a]
135-98-8	sec-Butylbenzene	10	9.9	99	10.1	101	2	50-150/30 [a]
75-15-0	Carbon disulfide	10	9.4	94	9.3	93	1	70-130/30
108-90-7	Chlorobenzene	10	10.0	100	10.1	101	1	70-130/30
75-00-3	Chloroethane	10	10.2	102	10.0	100	2	70-130/30
67-66-3	Chloroform	10	10	100	10.0	100	0	70-130/30
74-87-3	Chloromethane	10	10.2	102	10.0	100	2	70-130/30
107-05-1	3-Chloropropene	10	9.5	95	9.4	94	1	70-130/30
56-23-5	Carbon tetrachloride	10	10.5	105	10.5	105	0	70-130/30
110-82-7	Cyclohexane	10	10.1	101	10.1	101	0	70-130/30
75-34-3	1,1-Dichloroethane	10	10.3	103	10.3	103	0	70-130/30
75-35-4	1,1-Dichloroethylene	10	9.2	92	9.1	91	1	70-130/30
106-93-4	1,2-Dibromoethane (EDB)	10	10.1	101	10.2	102	1	70-130/30
107-06-2	1,2-Dichloroethane	10	10.4	104	10.4	104	0	70-130/30
78-87-5	1,2-Dichloropropane	10	10.2	102	10.3	103	1	70-130/30
123-91-1	1,4-Dioxane	10	9.9	99	10.2	102	3	70-130/30
75-71-8	Dichlorodifluoromethane	10	9.6	96	9.5	95	1	70-130/30
124-48-1	Dibromochloromethane	10	10.7	107	10.7	107	0	70-130/30
156-60-5	trans-1,2-Dichloroethylene	10	9.7	97	9.7	97	0	70-130/30
156-59-2	cis-1,2-Dichloroethylene	10	10.1	101	10.1	101	0	70-130/30
10061-01-5	cis-1,3-Dichloropropene	10	11.1	111	11.1	111	0	70-130/30
541-73-1	m-Dichlorobenzene	10	10.2	102	10.2	102	0	70-130/30
95-50-1	o-Dichlorobenzene	10	10.2	102	10.2	102	0	70-130/30
106-46-7	p-Dichlorobenzene	10	10.3	103	10.3	103	0	70-130/30
10061-02-6	trans-1,3-Dichloropropene	10	10.7	107	10.6	106	1	70-130/30
108-20-3	Di-Isopropyl ether	10	10.2	102	10.1	101	1	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2W2780-BS	2W62450.D	1	12/20/22	TCH	n/a	n/a	V2W2780
V2W2780-BSD	2W62451.D	1	12/20/22	TCH	n/a	n/a	V2W2780

The QC reported here applies to the following samples: **Method:** TO-15

V2W2780-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
64-17-5	Ethanol	10	9.4	94	9.4	94	0	70-130/30
100-41-4	Ethylbenzene	10	9.3	93	9.3	93	0	70-130/30
141-78-6	Ethyl Acetate	10	10.1	101	10.1	101	0	70-130/30
622-96-8	4-Ethyltoluene	10	10.6	106	10.7	107	1	70-130/30
76-13-1	Freon 113	10	8.9	89	8.8	88	1	70-130/30
76-14-2	Freon 114	10	9.7	97	9.6	96	1	70-130/30
142-82-5	Heptane	10	10.2	102	10.3	103	1	70-130/30
87-68-3	Hexachlorobutadiene	10	8.9	89	9.1	91	2	70-130/30
110-54-3	Hexane	10	9.9	99	9.9	99	0	70-130/30
591-78-6	2-Hexanone	10	10.5	105	10.8	108	3	70-130/30
98-82-8	Isopropylbenzene	10	9.8	98	9.8	98	0	70-130/30
67-63-0	Isopropyl Alcohol	10	9.4	94	9.3	93	1	70-130/30
99-87-6	p-Isopropyltoluene	10	10.0	100	10.0	100	0	70-130/30
75-09-2	Methylene chloride	10	8.1	81	8.0	80	1	70-130/30
78-93-3	Methyl ethyl ketone	10	10.2	102	10.1	101	1	70-130/30
108-10-1	Methyl Isobutyl Ketone	10	10.4	104	10.6	106	2	70-130/30
1634-04-4	Methyl Tert Butyl Ether	10	9.8	98	9.9	99	1	70-130/30
80-62-6	Methylmethacrylate	10	10.3	103	10.3	103	0	70-130/30
91-20-3	Naphthalene	10	8.6	86	8.8	88	2	70-130/30
109-66-0	Pentane	10	9.4	94	9.2	92	2	70-130/30
103-65-1	n-Propylbenzene	10	9.8	98	10	100	2	50-150/30 [a]
115-07-1	Propylene	10	10.4	104	10.1	101	3	70-130/30
100-42-5	Styrene	10	10.2	102	10.1	101	1	70-130/30
71-55-6	1,1,1-Trichloroethane	10	10.1	101	10.1	101	0	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	10	10.5	105	10.6	106	1	70-130/30
79-00-5	1,1,2-Trichloroethane	10	10.1	101	9.9	99	2	70-130/30
120-82-1	1,2,4-Trichlorobenzene	10	9.1	91	9.4	94	3	70-130/30
95-63-6	1,2,4-Trimethylbenzene	10	10.3	103	10.3	103	0	70-130/30
108-67-8	1,3,5-Trimethylbenzene	10	10.3	103	10.5	105	2	70-130/30
540-84-1	2,2,4-Trimethylpentane	10	10.4	104	10.4	104	0	70-130/30
75-65-0	Tertiary Butyl Alcohol	10	8.7	87	8.5	85	2	70-130/30
127-18-4	Tetrachloroethylene	10	10.0	100	10.1	101	1	70-130/30
109-99-9	Tetrahydrofuran	10	10.1	101	10.3	103	2	70-130/30
108-88-3	Toluene	10	9.4	94	9.5	95	1	70-130/30
79-01-6	Trichloroethylene	10	10.1	101	10.2	102	1	70-130/30
75-69-4	Trichlorofluoromethane	10	9.4	94	9.3	93	1	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2W2780-BS	2W62450.D	1	12/20/22	TCH	n/a	n/a	V2W2780
V2W2780-BSD	2W62451.D	1	12/20/22	TCH	n/a	n/a	V2W2780

The QC reported here applies to the following samples: **Method:** TO-15

V2W2780-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
75-01-4	Vinyl chloride	10	10.1	101	9.9	99	2	70-130/30
108-05-4	Vinyl Acetate	10	8.4	84	8.1	81	4	70-130/30
	m,p-Xylene	20	19.0	95	19.0	95	0	70-130/30
95-47-6	o-Xylene	10	9.4	94	9.4	94	0	70-130/30
1330-20-7	Xylenes (total)	30	28.3	94	28.4	95	0	70-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	103%	101%	65-128%

(a) Advisory control limits.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V7W27-BS	7W00515.D	1	02/20/23	TCH	n/a	n/a	V7W27
V7W27-BSD	7W00516.D	1	02/20/23	TCH	n/a	n/a	V7W27

The QC reported here applies to the following samples: **Method:** TO-15

V7W27-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone (2-Propanone)	10	9.9	99	9.6	96	3	70-130/30
107-02-8	Acrolein	10	10.8	108	10.4	104	4	70-130/30
107-13-1	Acrylonitrile	10	10.6	106	10.5	105	1	70-130/30
106-99-0	1,3-Butadiene	10	10.5	105	10.5	105	0	70-130/30
71-43-2	Benzene	10	8.9	89	9.0	90	1	70-130/30
75-27-4	Bromodichloromethane	10	10	100	10	100	0	70-130/30
75-25-2	Bromoform	10	9.9	99	9.9	99	0	70-130/30
74-83-9	Bromomethane	10	9.7	97	9.8	98	1	70-130/30
593-60-2	Bromoethene	10	9.3	93	9.4	94	1	70-130/30
100-44-7	Benzyl Chloride	10	7.4	74	7.5	75	1	70-130/30
104-51-8	n-Butylbenzene	10	10.4	104	10.6	106	2	50-150/30 [a]
135-98-8	sec-Butylbenzene	10	10.2	102	10.4	104	2	50-150/30 [a]
75-15-0	Carbon disulfide	10	10.1	101	10.0	100	1	70-130/30
108-90-7	Chlorobenzene	10	10	100	10.1	101	1	70-130/30
75-00-3	Chloroethane	10	10.4	104	10.5	105	1	70-130/30
67-66-3	Chloroform	10	9.6	96	9.6	96	0	70-130/30
74-87-3	Chloromethane	10	11.7	117	11.5	115	2	70-130/30
107-05-1	3-Chloropropene	10	10.4	104	10.5	105	1	70-130/30
56-23-5	Carbon tetrachloride	10	9.0	90	9.0	90	0	70-130/30
110-82-7	Cyclohexane	10	9.7	97	9.8	98	1	70-130/30
75-34-3	1,1-Dichloroethane	10	9.6	96	9.6	96	0	70-130/30
75-35-4	1,1-Dichloroethylene	10	9.8	98	9.7	97	1	70-130/30
106-93-4	1,2-Dibromoethane (EDB)	10	9.8	98	9.9	99	1	70-130/30
107-06-2	1,2-Dichloroethane	10	9.3	93	9.5	95	2	70-130/30
78-87-5	1,2-Dichloropropane	10	9.5	95	9.5	95	0	70-130/30
123-91-1	1,4-Dioxane	10	9.5	95	9.7	97	2	70-130/30
75-71-8	Dichlorodifluoromethane	10	10.4	104	10.2	102	2	70-130/30
124-48-1	Dibromochloromethane	10	9.7	97	9.8	98	1	70-130/30
156-60-5	trans-1,2-Dichloroethylene	10	9.2	92	9.3	93	1	70-130/30
156-59-2	cis-1,2-Dichloroethylene	10	9.4	94	9.5	95	1	70-130/30
10061-01-5	cis-1,3-Dichloropropene	10	9.4	94	9.4	94	0	70-130/30
541-73-1	m-Dichlorobenzene	10	10	100	10	100	0	70-130/30
95-50-1	o-Dichlorobenzene	10	9.9	99	10	100	1	70-130/30
106-46-7	p-Dichlorobenzene	10	9.8	98	9.8	98	0	70-130/30
10061-02-6	trans-1,3-Dichloropropene	10	9.4	94	9.5	95	1	70-130/30
108-20-3	Di-Isopropyl ether	10	9.6	96	9.7	97	1	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V7W27-BS	7W00515.D	1	02/20/23	TCH	n/a	n/a	V7W27
V7W27-BSD	7W00516.D	1	02/20/23	TCH	n/a	n/a	V7W27

The QC reported here applies to the following samples: **Method:** TO-15

V7W27-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
64-17-5	Ethanol	10	10.9	109	10.9	109	0	70-130/30
100-41-4	Ethylbenzene	10	9.2	92	9.3	93	1	70-130/30
141-78-6	Ethyl Acetate	10	9.9	99	10.3	103	4	70-130/30
622-96-8	4-Ethyltoluene	10	10.1	101	10.3	103	2	70-130/30
76-13-1	Freon 113	10	9.4	94	9.3	93	1	70-130/30
76-14-2	Freon 114	10	9.9	99	9.9	99	0	70-130/30
142-82-5	Heptane	10	10.0	100	10.2	102	2	70-130/30
87-68-3	Hexachlorobutadiene	10	8.8	88	8.9	89	1	70-130/30
110-54-3	Hexane	10	9.9	99	10	100	1	70-130/30
591-78-6	2-Hexanone	10	9.4	94	9.6	96	2	70-130/30
98-82-8	Isopropylbenzene	10	9.6	96	9.8	98	2	70-130/30
67-63-0	Isopropyl Alcohol	10	10.6	106	10.8	108	2	70-130/30
99-87-6	p-Isopropyltoluene	10	10.4	104	10.4	104	0	70-130/30
75-09-2	Methylene chloride	10	9.7	97	9.7	97	0	70-130/30
78-93-3	Methyl ethyl ketone	10	9.3	93	9.3	93	0	70-130/30
108-10-1	Methyl Isobutyl Ketone	10	9.3	93	9.4	94	1	70-130/30
1634-04-4	Methyl Tert Butyl Ether	10	8.6	86	8.8	88	2	70-130/30
80-62-6	Methylmethacrylate	10	9.4	94	9.6	96	2	70-130/30
91-20-3	Naphthalene	10	9.7	97	9.7	97	0	70-130/30
109-66-0	Pentane	10	12.2	122	12.2	122	0	70-130/30
103-65-1	n-Propylbenzene	10	10.1	101	10.3	103	2	50-150/30 [a]
115-07-1	Propylene	10	10.9	109	11.0	110	1	70-130/30
100-42-5	Styrene	10	9.9	99	10.1	101	2	70-130/30
71-55-6	1,1,1-Trichloroethane	10	9.2	92	9.3	93	1	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	10	10.6	106	10.7	107	1	70-130/30
79-00-5	1,1,2-Trichloroethane	10	9.7	97	9.8	98	1	70-130/30
120-82-1	1,2,4-Trichlorobenzene	10	8.1	81	8.0	80	1	70-130/30
95-63-6	1,2,4-Trimethylbenzene	10	10.2	102	10.4	104	2	70-130/30
108-67-8	1,3,5-Trimethylbenzene	10	9.9	99	10.1	101	2	70-130/30
540-84-1	2,2,4-Trimethylpentane	10	9.9	99	10.0	100	1	70-130/30
75-65-0	Tertiary Butyl Alcohol	10	10.6	106	10.4	104	2	70-130/30
127-18-4	Tetrachloroethylene	10	8.9	89	9.0	90	1	70-130/30
109-99-9	Tetrahydrofuran	10	9.5	95	9.6	96	1	70-130/30
108-88-3	Toluene	10	8.4	84	8.6	86	2	70-130/30
79-01-6	Trichloroethylene	10	9.5	95	9.7	97	2	70-130/30
75-69-4	Trichlorofluoromethane	10	9.6	96	9.5	95	1	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V7W27-BS	7W00515.D	1	02/20/23	TCH	n/a	n/a	V7W27
V7W27-BSD	7W00516.D	1	02/20/23	TCH	n/a	n/a	V7W27

The QC reported here applies to the following samples: **Method:** TO-15

V7W27-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
75-01-4	Vinyl chloride	10	10.6	106	10.5	105	1	70-130/30
108-05-4	Vinyl Acetate	10	8.6	86	8.9	89	3	70-130/30
	m,p-Xylene	20	18.6	93	18.9	95	2	70-130/30
95-47-6	o-Xylene	10	9.3	93	9.4	94	1	70-130/30
1330-20-7	Xylenes (total)	30	27.9	93	28.3	94	1	70-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	103%	104%	65-128%

(a) Advisory control limits.

* = Outside of Control Limits.

Duplicate Summary

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD62665-10DUP	3W80062.D	1	04/11/23	TCH	n/a	n/a	V3W3157
JD62665-10	3W80061.D	1	04/11/23	TCH	n/a	n/a	V3W3157

The QC reported here applies to the following samples: **Method:** TO-15

JD63360-1, JD63360-2, JD63360-3, JD63360-4, JD63360-5, JD63360-6, JD63360-7, JD63360-8, JD63360-9

CAS No.	Compound	JD62665-10 ppbv	Q	DUP ppbv	Q	RPD	Limits
67-64-1	Acetone (2-Propanone)	64.1		65.5		2	25
107-02-8	Acrolein	1.0		1.2		18	25
107-13-1	Acrylonitrile	ND		ND		nc	25
106-99-0	1,3-Butadiene	ND		ND		nc	25
71-43-2	Benzene	ND		ND		nc	25
75-27-4	Bromodichloromethane	ND		ND		nc	25
75-25-2	Bromoform	ND		ND		nc	25
74-83-9	Bromomethane	ND		ND		nc	25
593-60-2	Bromoethene	ND		ND		nc	25
100-44-7	Benzyl Chloride	ND		ND		nc	25
104-51-8	n-Butylbenzene	ND		ND		nc	30 [a]
135-98-8	sec-Butylbenzene	ND		ND		nc	30 [a]
75-15-0	Carbon disulfide	ND		ND		nc	25
108-90-7	Chlorobenzene	ND		ND		nc	25
75-00-3	Chloroethane	ND		ND		nc	25
67-66-3	Chloroform	1.2		1.2		0	25
74-87-3	Chloromethane	ND		ND		nc	25
107-05-1	3-Chloropropene	ND		ND		nc	25
56-23-5	Carbon tetrachloride	ND		ND		nc	25
110-82-7	Cyclohexane	ND		ND		nc	25
75-34-3	1,1-Dichloroethane	ND		ND		nc	25
75-35-4	1,1-Dichloroethylene	ND		ND		nc	25
106-93-4	1,2-Dibromoethane (EDB)	ND		ND		nc	25
107-06-2	1,2-Dichloroethane	ND		ND		nc	25
78-87-5	1,2-Dichloropropane	ND		ND		nc	25
123-91-1	1,4-Dioxane	ND		ND		nc	25
75-71-8	Dichlorodifluoromethane	0.43	J	0.45	J	5	25
124-48-1	Dibromochloromethane	ND		ND		nc	25
156-60-5	trans-1,2-Dichloroethylene	ND		ND		nc	25
156-59-2	cis-1,2-Dichloroethylene	ND		ND		nc	25
10061-01-5	cis-1,3-Dichloropropene	ND		ND		nc	25
541-73-1	m-Dichlorobenzene	ND		ND		nc	25
95-50-1	o-Dichlorobenzene	ND		ND		nc	25
106-46-7	p-Dichlorobenzene	ND		ND		nc	25
10061-02-6	trans-1,3-Dichloropropene	ND		ND		nc	25
108-20-3	Di-Isopropyl ether	ND		ND		nc	25

* = Outside of Control Limits.

Duplicate Summary

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD62665-10DUP	3W80062.D	1	04/11/23	TCH	n/a	n/a	V3W3157
JD62665-10	3W80061.D	1	04/11/23	TCH	n/a	n/a	V3W3157

The QC reported here applies to the following samples: **Method:** TO-15

JD63360-1, JD63360-2, JD63360-3, JD63360-4, JD63360-5, JD63360-6, JD63360-7, JD63360-8, JD63360-9

CAS No.	Compound	JD62665-10 ppbv	Q	DUP ppbv	Q	RPD	Limits
64-17-5	Ethanol	66.1		65.9		0	25
100-41-4	Ethylbenzene	ND		ND		nc	25
141-78-6	Ethyl Acetate	4.1		4.2		2	25
622-96-8	4-Ethyltoluene	ND		ND		nc	25
76-13-1	Freon 113	ND		ND		nc	25
76-14-2	Freon 114	ND		ND		nc	25
142-82-5	Heptane	ND		ND		nc	25
87-68-3	Hexachlorobutadiene	ND		ND		nc	25
110-54-3	Hexane	ND		ND		nc	25
591-78-6	2-Hexanone	ND		ND		nc	25
98-82-8	Isopropylbenzene	ND		ND		nc	25
67-63-0	Isopropyl Alcohol	14.5		14.7		1	25
99-87-6	p-Isopropyltoluene	ND		ND		nc	25
75-09-2	Methylene chloride	ND		ND		nc	25
78-93-3	Methyl ethyl ketone	4.0		4.2		5	25
108-10-1	Methyl Isobutyl Ketone	0.49	J	0.49	J	0	25
1634-04-4	Methyl Tert Butyl Ether	ND		ND		nc	25
80-62-6	Methylmethacrylate	ND		ND		nc	25
91-20-3	Naphthalene	ND		ND		nc	25
109-66-0	Pentane	ND		ND		nc	25
103-65-1	n-Propylbenzene	ND		ND		nc	30 [a]
115-07-1	Propylene	0.70	J	0.74	J	6	25
100-42-5	Styrene	ND		ND		nc	25
71-55-6	1,1,1-Trichloroethane	ND		ND		nc	25
79-34-5	1,1,2,2-Tetrachloroethane	ND		ND		nc	25
79-00-5	1,1,2-Trichloroethane	ND		ND		nc	25
120-82-1	1,2,4-Trichlorobenzene	2.4		2.3		4	25
95-63-6	1,2,4-Trimethylbenzene	0.54	J	0.52	J	4	25
108-67-8	1,3,5-Trimethylbenzene	ND		ND		nc	25
540-84-1	2,2,4-Trimethylpentane	ND		ND		nc	25
75-65-0	Tertiary Butyl Alcohol	5.2		5.4		4	25
127-18-4	Tetrachloroethylene	0.60		0.63		5	25
109-99-9	Tetrahydrofuran	0.61	J	0.65	J	6	25
108-88-3	Toluene	0.85		0.87		2	25
79-01-6	Trichloroethylene	0.16		0.13	J	21	25
75-69-4	Trichlorofluoromethane	ND		ND		nc	25

* = Outside of Control Limits.

Duplicate Summary

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD62665-10DUP	3W80062.D	1	04/11/23	TCH	n/a	n/a	V3W3157
JD62665-10	3W80061.D	1	04/11/23	TCH	n/a	n/a	V3W3157

The QC reported here applies to the following samples: **Method:** TO-15

JD63360-1, JD63360-2, JD63360-3, JD63360-4, JD63360-5, JD63360-6, JD63360-7, JD63360-8, JD63360-9

CAS No.	Compound	JD62665-10 ppbv	Q	DUP ppbv	Q	RPD	Limits
75-01-4	Vinyl chloride	ND		ND		nc	25
108-05-4	Vinyl Acetate	ND		ND		nc	25
	m,p-Xylene	1.0		1.1		10	25
95-47-6	o-Xylene	0.42	J	0.42	J	0	25
1330-20-7	Xylenes (total)	1.4		1.5		7	25

CAS No.	Surrogate Recoveries	DUP	JD62665-10	Limits
460-00-4	4-Bromofluorobenzene	95%	96%	65-128%

(a) Advisory control limits.

* = Outside of Control Limits.

Duplicate Summary

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD63724-13DUP	2W64584.D	1	04/18/23	TCH	n/a	n/a	V2W2873
JD63724-13	2W64583.D	1	04/18/23	TCH	n/a	n/a	V2W2873

The QC reported here applies to the following samples: **Method:** TO-15

JD63360-9

CAS No.	Compound	JD63724-13 ppbv	Q	DUP ppbv	Q	RPD	Limits
110-54-3	Hexane	ND		ND		nc	25
109-66-0	Pentane	ND		0.64	J	200* [a]	25

CAS No.	Surrogate Recoveries	DUP	JD63724-13	Limits
460-00-4	4-Bromofluorobenzene	98%	97%	65-128%

(a) RPD acceptable due to low DUP and sample concentrations.

* = Outside of Control Limits.

Summa Cleaning Certification

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W1162-SCC	6W27619.D	1	12/11/22	TCH	n/a	n/a	V6W1162

The QC reported here (Summa A1921) applies to the following samples: **Method:** TO-15

Batch CP12004 cleaned 12/07/22: JD63360-7(A1431), JD63360-9(A1892)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
67-64-1	Acetone (2-Propanone)	ND	0.20	0.15	ppbv		ND	0.48	ug/m3
107-02-8	Acrolein	ND	0.20	0.088	ppbv		ND	0.46	ug/m3
107-13-1	Acrylonitrile	ND	0.20	0.091	ppbv		ND	0.43	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	0.084	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	0.062	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	0.030	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	0.071	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	0.069	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
104-51-8	n-Butylbenzene	ND	0.20	0.11	ppbv		ND	1.1	ug/m3
135-98-8	sec-Butylbenzene	ND	0.20	0.081	ppbv		ND	1.1	ug/m3
75-15-0	Carbon disulfide	ND	0.20	0.045	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	0.074	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	0.068	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	0.037	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	0.090	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	0.083	ppbv		ND	0.63	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	0.040	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	0.11	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	0.057	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.059	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane (EDB)	ND	0.20	0.097	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	0.070	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	0.062	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	0.12	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	0.032	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	0.052	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.069	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.077	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	0.062	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	0.040	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	0.15	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	0.19	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	0.10	ppbv		ND	0.91	ug/m3
108-20-3	Di-Isopropyl ether	ND	0.20	0.082	ppbv		ND	0.83	ug/m3

Summa Cleaning Certification

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W1162-SCC	6W27619.D	1	12/11/22	TCH	n/a	n/a	V6W1162

The QC reported here (Summa A1921) applies to the following samples: **Method:** TO-15

Batch CP12004 cleaned 12/07/22: JD63360-7(A1431), JD63360-9(A1892)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
64-17-5	Ethanol	ND	0.50	0.39	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	0.10	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	0.095	ppbv		ND	0.98	ug/m3
76-13-1	Freon 113	ND	0.20	0.031	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	0.050	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	0.092	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	0.062	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	0.15	ppbv		ND	0.82	ug/m3
98-82-8	Isopropylbenzene	ND	0.20	0.064	ppbv		ND	0.98	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	0.14	ppbv		ND	0.49	ug/m3
99-87-6	p-Isopropyltoluene	ND	0.20	0.080	ppbv		ND	1.1	ug/m3
75-09-2	Methylene chloride	ND	0.20	0.056	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	0.11	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	0.073	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	0.080	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	0.070	ppbv		ND	0.82	ug/m3
91-20-3	Naphthalene	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
109-66-0	Pentane	ND	0.20	0.14	ppbv		ND	0.59	ug/m3
103-65-1	n-Propylbenzene	ND	0.20	0.091	ppbv		ND	0.98	ug/m3
115-07-1	Propylene	ND	0.50	0.14	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	0.12	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.037	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.048	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.038	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	0.12	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	0.087	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	0.080	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	0.095	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	0.093	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	0.014	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	0.090	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	0.057	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	0.036	ppbv		ND	1.1	ug/m3

Summa Cleaning Certification

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W1162-SCC	6W27619.D	1	12/11/22	TCH	n/a	n/a	V6W1162

The QC reported here (Summa A1921) applies to the following samples: **Method:** TO-15

Batch CP12004 cleaned 12/07/22: JD63360-7(A1431), JD63360-9(A1892)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
75-01-4	Vinyl chloride	ND	0.20	0.069	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	0.14	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	0.077	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	0.077	ppbv		ND	0.87	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	94%	65-128%

Summa Cleaning Certification

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W3088-SCC	3W78425.D	1	12/15/22	TCH	n/a	n/a	V3W3088

The QC reported here (Summa A1879) applies to the following samples: **Method:** TO-15

Batch CP12009 cleaned 12/10/22: JD63360-2(A1899), JD63360-4(A1430), JD63360-5(A1439)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
67-64-1	Acetone (2-Propanone)	ND	0.20	0.15	ppbv		ND	0.48	ug/m3
107-02-8	Acrolein	ND	0.20	0.088	ppbv		ND	0.46	ug/m3
107-13-1	Acrylonitrile	ND	0.20	0.091	ppbv		ND	0.43	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	0.084	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	0.062	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	0.030	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	0.071	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	0.069	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
104-51-8	n-Butylbenzene	ND	0.20	0.11	ppbv		ND	1.1	ug/m3
135-98-8	sec-Butylbenzene	ND	0.20	0.081	ppbv		ND	1.1	ug/m3
75-15-0	Carbon disulfide	ND	0.20	0.045	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	0.074	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	0.068	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	0.037	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	0.090	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	0.083	ppbv		ND	0.63	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	0.040	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	0.11	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	0.057	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.059	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane (EDB)	ND	0.20	0.097	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	0.070	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	0.062	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	0.12	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	0.032	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	0.052	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.069	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.077	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	0.062	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	0.040	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	0.15	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	0.19	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	0.10	ppbv		ND	0.91	ug/m3
108-20-3	Di-Isopropyl ether	ND	0.20	0.082	ppbv		ND	0.83	ug/m3

Summa Cleaning Certification

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W3088-SCC	3W78425.D	1	12/15/22	TCH	n/a	n/a	V3W3088

The QC reported here (Summa A1879) applies to the following samples: **Method:** TO-15

Batch CP12009 cleaned 12/10/22: JD63360-2(A1899), JD63360-4(A1430), JD63360-5(A1439)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
64-17-5	Ethanol	ND	0.50	0.39	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	0.10	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	0.095	ppbv		ND	0.98	ug/m3
76-13-1	Freon 113	ND	0.20	0.031	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	0.050	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	0.092	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	0.062	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	0.15	ppbv		ND	0.82	ug/m3
98-82-8	Isopropylbenzene	ND	0.20	0.064	ppbv		ND	0.98	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	0.14	ppbv		ND	0.49	ug/m3
99-87-6	p-Isopropyltoluene	ND	0.20	0.080	ppbv		ND	1.1	ug/m3
75-09-2	Methylene chloride	ND	0.20	0.056	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	0.11	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	0.073	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	0.080	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	0.070	ppbv		ND	0.82	ug/m3
91-20-3	Naphthalene	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
109-66-0	Pentane	ND	0.20	0.14	ppbv		ND	0.59	ug/m3
103-65-1	n-Propylbenzene	ND	0.20	0.091	ppbv		ND	0.98	ug/m3
115-07-1	Propylene	ND	0.50	0.14	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	0.12	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.037	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.048	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.038	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	0.12	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	0.087	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	0.080	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	0.095	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	0.093	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	0.014	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	0.090	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	0.057	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	0.036	ppbv		ND	1.1	ug/m3

Summa Cleaning Certification

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W3088-SCC	3W78425.D	1	12/15/22	TCH	n/a	n/a	V3W3088

The QC reported here (Summa A1879) applies to the following samples: **Method:** TO-15

Batch CP12009 cleaned 12/10/22: JD63360-2(A1899), JD63360-4(A1430), JD63360-5(A1439)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
75-01-4	Vinyl chloride	ND	0.20	0.069	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	0.14	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	0.077	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	0.077	ppbv		ND	0.87	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	100%	65-128%

Summa Cleaning Certification

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2W2780-SCC	2W62457.D	1	12/20/22	TCH	n/a	n/a	V2W2780

The QC reported here (Summa A1506) applies to the following samples: **Method:** TO-15

Batch CP12016 cleaned 12/15/22: JD63360-1(A1500), JD63360-3(A1422), JD63360-6(A1983)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
67-64-1	Acetone (2-Propanone)	ND	0.80	0.58	ppbv		ND	1.9	ug/m3
107-02-8	Acrolein	ND	0.80	0.35	ppbv		ND	1.8	ug/m3
107-13-1	Acrylonitrile	ND	0.80	0.36	ppbv		ND	1.7	ug/m3
106-99-0	1,3-Butadiene	ND	0.80	0.34	ppbv		ND	1.8	ug/m3
71-43-2	Benzene	ND	0.80	0.25	ppbv		ND	2.6	ug/m3
75-27-4	Bromodichloromethane	ND	0.80	0.12	ppbv		ND	5.4	ug/m3
75-25-2	Bromoform	ND	0.80	0.28	ppbv		ND	8.3	ug/m3
74-83-9	Bromomethane	ND	0.80	0.28	ppbv		ND	3.1	ug/m3
593-60-2	Bromoethene	ND	0.80	0.24	ppbv		ND	3.5	ug/m3
100-44-7	Benzyl Chloride	ND	0.80	0.50	ppbv		ND	4.1	ug/m3
104-51-8	n-Butylbenzene	ND	0.80	0.42	ppbv		ND	4.4	ug/m3
135-98-8	sec-Butylbenzene	ND	0.80	0.32	ppbv		ND	4.4	ug/m3
75-15-0	Carbon disulfide	ND	0.80	0.18	ppbv		ND	2.5	ug/m3
108-90-7	Chlorobenzene	ND	0.80	0.30	ppbv		ND	3.7	ug/m3
75-00-3	Chloroethane	ND	0.80	0.27	ppbv		ND	2.1	ug/m3
67-66-3	Chloroform	ND	0.80	0.15	ppbv		ND	3.9	ug/m3
74-87-3	Chloromethane	ND	0.80	0.36	ppbv		ND	1.7	ug/m3
107-05-1	3-Chloropropene	ND	0.80	0.33	ppbv		ND	2.5	ug/m3
56-23-5	Carbon tetrachloride	ND	0.80	0.16	ppbv		ND	5.0	ug/m3
110-82-7	Cyclohexane	ND	0.80	0.44	ppbv		ND	2.8	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.80	0.23	ppbv		ND	3.2	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.80	0.24	ppbv		ND	3.2	ug/m3
106-93-4	1,2-Dibromoethane (EDB)	ND	0.80	0.39	ppbv		ND	6.1	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.80	0.28	ppbv		ND	3.2	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.80	0.25	ppbv		ND	3.7	ug/m3
123-91-1	1,4-Dioxane	ND	0.80	0.47	ppbv		ND	2.9	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.80	0.13	ppbv		ND	4.0	ug/m3
124-48-1	Dibromochloromethane	ND	0.80	0.21	ppbv		ND	6.8	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.80	0.28	ppbv		ND	3.2	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.80	0.31	ppbv		ND	3.2	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.80	0.25	ppbv		ND	3.6	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.80	0.16	ppbv		ND	4.8	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.80	0.62	ppbv		ND	4.8	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.80	0.76	ppbv		ND	4.8	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.80	0.40	ppbv		ND	3.6	ug/m3
108-20-3	Di-Isopropyl ether	ND	0.80	0.33	ppbv		ND	3.3	ug/m3

Summa Cleaning Certification

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2W2780-SCC	2W62457.D	1	12/20/22	TCH	n/a	n/a	V2W2780

The QC reported here (Summa A1506) applies to the following samples: **Method:** TO-15

Batch CP12016 cleaned 12/15/22: JD63360-1(A1500), JD63360-3(A1422), JD63360-6(A1983)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
64-17-5	Ethanol	ND	2.0	1.6	ppbv		ND	3.8	ug/m3
100-41-4	Ethylbenzene	ND	0.80	0.24	ppbv		ND	3.5	ug/m3
141-78-6	Ethyl Acetate	ND	0.80	0.42	ppbv		ND	2.9	ug/m3
622-96-8	4-Ethyltoluene	ND	0.80	0.38	ppbv		ND	3.9	ug/m3
76-13-1	Freon 113	ND	0.80	0.12	ppbv		ND	6.1	ug/m3
76-14-2	Freon 114	ND	0.80	0.20	ppbv		ND	5.6	ug/m3
142-82-5	Heptane	ND	0.80	0.37	ppbv		ND	3.3	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.80	0.25	ppbv		ND	8.5	ug/m3
110-54-3	Hexane	ND	0.80	0.45	ppbv		ND	2.8	ug/m3
591-78-6	2-Hexanone	ND	0.80	0.58	ppbv		ND	3.3	ug/m3
98-82-8	Isopropylbenzene	ND	0.80	0.26	ppbv		ND	3.9	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.80	0.56	ppbv		ND	2.0	ug/m3
99-87-6	p-Isopropyltoluene	ND	0.80	0.32	ppbv		ND	4.4	ug/m3
75-09-2	Methylene chloride	ND	0.80	0.22	ppbv		ND	2.8	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.80	0.44	ppbv		ND	2.4	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.80	0.29	ppbv		ND	3.3	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.80	0.32	ppbv		ND	2.9	ug/m3
80-62-6	Methylmethacrylate	ND	0.80	0.28	ppbv		ND	3.3	ug/m3
91-20-3	Naphthalene	ND	0.80	0.51	ppbv		ND	4.2	ug/m3
109-66-0	Pentane	ND	0.80	0.55	ppbv		ND	2.4	ug/m3
103-65-1	n-Propylbenzene	ND	0.80	0.36	ppbv		ND	3.9	ug/m3
115-07-1	Propylene	ND	2.0	0.57	ppbv		ND	3.4	ug/m3
100-42-5	Styrene	ND	0.80	0.47	ppbv		ND	3.4	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.80	0.15	ppbv		ND	4.4	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.80	0.19	ppbv		ND	5.5	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.80	0.15	ppbv		ND	4.4	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.80	0.48	ppbv		ND	5.9	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.80	0.35	ppbv		ND	3.9	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.80	0.32	ppbv		ND	3.9	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.80	0.38	ppbv		ND	3.7	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.80	0.37	ppbv		ND	2.4	ug/m3
127-18-4	Tetrachloroethylene	ND	0.16	0.056	ppbv		ND	1.1	ug/m3
109-99-9	Tetrahydrofuran	ND	0.80	0.36	ppbv		ND	2.4	ug/m3
108-88-3	Toluene	ND	0.80	0.23	ppbv		ND	3.0	ug/m3
79-01-6	Trichloroethylene	ND	0.16	0.076	ppbv		ND	0.86	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.80	0.14	ppbv		ND	4.5	ug/m3

Summa Cleaning Certification

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2W2780-SCC	2W62457.D	1	12/20/22	TCH	n/a	n/a	V2W2780

The QC reported here (Summa A1506) applies to the following samples: **Method:** TO-15

Batch CP12016 cleaned 12/15/22: JD63360-1(A1500), JD63360-3(A1422), JD63360-6(A1983)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
75-01-4	Vinyl chloride	ND	0.80	0.28	ppbv		ND	2.0	ug/m3
108-05-4	Vinyl Acetate	ND	0.80	0.45	ppbv		ND	2.8	ug/m3
	m,p-Xylene	ND	0.80	0.56	ppbv		ND	3.5	ug/m3
95-47-6	o-Xylene	ND	0.80	0.31	ppbv		ND	3.5	ug/m3
1330-20-7	Xylenes (total)	ND	0.80	0.31	ppbv		ND	3.5	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	101%	65-128%

Summa Cleaning Certification

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V7W27-SCC	7W00536.D	1	02/20/23	TCH	n/a	n/a	V7W27

The QC reported here (Summa A2033) applies to the following samples: **Method:** TO-15

Batch CP12111 cleaned 02/19/23: JD63360-8(A1692)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
67-64-1	Acetone (2-Propanone)	ND	0.20	0.15	ppbv		ND	0.48	ug/m3
107-02-8	Acrolein	ND	0.20	0.088	ppbv		ND	0.46	ug/m3
107-13-1	Acrylonitrile	ND	0.20	0.091	ppbv		ND	0.43	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	0.084	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	0.062	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	0.030	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	0.071	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	0.069	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
104-51-8	n-Butylbenzene	ND	0.20	0.11	ppbv		ND	1.1	ug/m3
135-98-8	sec-Butylbenzene	ND	0.20	0.081	ppbv		ND	1.1	ug/m3
75-15-0	Carbon disulfide	ND	0.20	0.045	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	0.074	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	0.068	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	0.037	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	0.090	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	0.083	ppbv		ND	0.63	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	0.040	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	0.11	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	0.057	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.059	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane (EDB)	ND	0.20	0.097	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	0.070	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	0.062	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	0.12	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	0.032	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	0.052	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.069	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.077	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	0.062	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	0.040	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	0.15	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	0.19	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	0.10	ppbv		ND	0.91	ug/m3
108-20-3	Di-Isopropyl ether	ND	0.20	0.082	ppbv		ND	0.83	ug/m3

Summa Cleaning Certification

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V7W27-SCC	7W00536.D	1	02/20/23	TCH	n/a	n/a	V7W27

The QC reported here (Summa A2033) applies to the following samples: **Method:** TO-15

Batch CP12111 cleaned 02/19/23: JD63360-8(A1692)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
64-17-5	Ethanol	ND	0.50	0.39	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	0.10	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	0.095	ppbv		ND	0.98	ug/m3
76-13-1	Freon 113	ND	0.20	0.031	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	0.050	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	0.092	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	0.062	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	0.15	ppbv		ND	0.82	ug/m3
98-82-8	Isopropylbenzene	ND	0.20	0.064	ppbv		ND	0.98	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	0.14	ppbv		ND	0.49	ug/m3
99-87-6	p-Isopropyltoluene	ND	0.20	0.080	ppbv		ND	1.1	ug/m3
75-09-2	Methylene chloride	ND	0.20	0.056	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	0.11	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	0.073	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	0.080	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	0.070	ppbv		ND	0.82	ug/m3
91-20-3	Naphthalene	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
109-66-0	Pentane	ND	0.20	0.14	ppbv		ND	0.59	ug/m3
103-65-1	n-Propylbenzene	ND	0.20	0.091	ppbv		ND	0.98	ug/m3
115-07-1	Propylene	ND	0.50	0.14	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	0.12	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.037	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.048	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.038	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	0.12	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	0.087	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	0.080	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	0.095	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	0.093	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	0.014	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	0.090	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	0.057	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	0.036	ppbv		ND	1.1	ug/m3

Summa Cleaning Certification

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V7W27-SCC	7W00536.D	1	02/20/23	TCH	n/a	n/a	V7W27

The QC reported here (Summa A2033) applies to the following samples: **Method:** TO-15

Batch CP12111 cleaned 02/19/23: JD63360-8(A1692)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
75-01-4	Vinyl chloride	ND	0.20	0.069	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	0.14	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	0.077	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	0.077	ppbv		ND	0.87	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	95%	65-128%

Instrument Performance Check (BFB)

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample:	V2W2776-BFB	**Injection Date:**	12/14/22
Lab File ID:	2W62382.D	**Injection Time:**	17:23
Instrument ID:	GCMS2W		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	13015	22.8		Pass
75	30.0 - 66.0% of mass 95	30880	54.0		Pass
95	Base peak, 100% relative abundance	57157	100.0		Pass
96	5.0 - 9.0% of mass 95	3907	6.84		Pass
173	Less than 2.0% of mass 174	242	0.42	(0.57) [a]	Pass
174	50.0 - 120.0% of mass 95	42512	74.4		Pass
175	4.0 - 9.01% of mass 174	3043	5.32	(7.16) [a]	Pass
176	93.0 - 101.0% of mass 174	40504	70.9	(95.3) [a]	Pass
177	5.0 - 9.0% of mass 176	2767	4.84	(6.83) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2W2776-IC2776	2W62383.D	12/14/22	17:55	00:32	Initial cal 0.04
V2W2776-IC2776	2W62384.D	12/14/22	18:28	01:05	Initial cal 0.1
V2W2776-IC2776	2W62385.D	12/14/22	18:59	01:36	Initial cal 0.2
V2W2776-IC2776	2W62386.D	12/14/22	19:31	02:08	Initial cal 0.5
V2W2776-IC2776	2W62388.D	12/14/22	20:33	03:10	Initial cal 5
V2W2776-ICC2776	2W62389.D	12/14/22	21:05	03:42	Initial cal 10
V2W2776-IC2776	2W62390.D	12/14/22	21:37	04:14	Initial cal 20
V2W2776-IC2776	2W62391.D	12/14/22	22:12	04:49	Initial cal 40
V2W2776-IC2776	2W62392.D	12/14/22	22:47	05:24	Initial cal 50
V2W2776-ICV2776	2W62395.D	12/15/22	00:22	06:59	Initial cal verification 10

Instrument Performance Check (BFB)

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample: V2W2780-BFB
Lab File ID: 2W62447.D
Instrument ID: GCMS2W
Injection Date: 12/20/22
Injection Time: 07:29

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	16304	22.4		Pass
75	30.0 - 66.0% of mass 95	40299	55.4		Pass
95	Base peak, 100% relative abundance	72744	100.0		Pass
96	5.0 - 9.0% of mass 95	4974	6.84		Pass
173	Less than 2.0% of mass 174	268	0.37	(0.52) [a]	Pass
174	50.0 - 120.0% of mass 95	51211	70.4		Pass
175	4.0 - 9.01% of mass 174	3623	4.98	(7.07) [a]	Pass
176	93.0 - 101.0% of mass 174	48629	66.8	(95.0) [a]	Pass
177	5.0 - 9.0% of mass 176	3208	4.41	(6.60) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2W2780-CC2776	2W62449.D	12/20/22	09:05	01:36	Continuing cal 10
V2W2780-BS	2W62450.D	12/20/22	11:37	04:08	Blank Spike
V2W2780-BSD	2W62451.D	12/20/22	12:09	04:40	Blank Spike Duplicate
V2W2780-MB	2W62455.D	12/20/22	15:07	07:38	Method Blank
V2W2780-SCC	2W62456.D	12/20/22	16:18	08:49	Summa Cleaning Certification
V2W2780-SCC	2W62457.D	12/20/22	16:50	09:21	Summa Cleaning Certification
V2W2780-SCC	2W62458.D	12/20/22	17:22	09:53	Summa Cleaning Certification
V2W2780-SCC	2W62459.D	12/20/22	17:53	10:24	Summa Cleaning Certification
ZZZZZZ	2W62460.D	12/20/22	18:25	10:56	(unrelated sample)
JD57480-2	2W62461.D	12/20/22	18:57	11:28	(used for QC only; not part of job JD63360)
JD57480-2DUP	2W62462.D	12/20/22	19:29	12:00	Duplicate
ZZZZZZ	2W62463.D	12/20/22	20:01	12:32	(unrelated sample)
ZZZZZZ	2W62464.D	12/20/22	20:33	13:04	(unrelated sample)
ZZZZZZ	2W62465.D	12/20/22	21:05	13:36	(unrelated sample)
ZZZZZZ	2W62466.D	12/20/22	21:37	14:08	(unrelated sample)
ZZZZZZ	2W62467.D	12/20/22	22:08	14:39	(unrelated sample)
ZZZZZZ	2W62468.D	12/20/22	22:40	15:11	(unrelated sample)
ZZZZZZ	2W62469.D	12/20/22	23:11	15:42	(unrelated sample)
ZZZZZZ	2W62470.D	12/20/22	23:42	16:13	(unrelated sample)
ZZZZZZ	2W62471.D	12/21/22	00:14	16:45	(unrelated sample)
ZZZZZZ	2W62472.D	12/21/22	00:45	17:16	(unrelated sample)
ZZZZZZ	2W62473.D	12/21/22	01:16	17:47	(unrelated sample)
V2W2780-SCC	2W62474.D	12/21/22	01:48	18:19	Summa Cleaning Certification
V2W2780-SCC	2W62475.D	12/21/22	02:19	18:50	Summa Cleaning Certification

Instrument Performance Check (BFB)

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample:	V2W2780-BFB	**Injection Date:**	12/20/22
Lab File ID:	2W62447.D	**Injection Time:**	07:29
Instrument ID:	GCMS2W		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2W2780-SCC	2W62476.D	12/21/22	02:51	19:22	Summa Cleaning Certification

Instrument Performance Check (BFB)

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample:	V2W2872-BFB	**Injection Date:**	04/17/23
Lab File ID:	2W64558.D	**Injection Time:**	18:39
Instrument ID:	GCMS2W		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	26827	22.8		Pass
75	30.0 - 66.0% of mass 95	61197	51.9		Pass
95	Base peak, 100% relative abundance	117909	100.0		Pass
96	5.0 - 9.0% of mass 95	8886	7.54		Pass
173	Less than 2.0% of mass 174	475	0.40	(0.41) [a]	Pass
174	50.0 - 120.0% of mass 95	116779	99.0		Pass
175	4.0 - 9.01% of mass 174	7928	6.72	(6.79) [a]	Pass
176	93.0 - 101.0% of mass 174	108877	92.3	(93.2) [a]	Pass
177	5.0 - 9.0% of mass 176	7101	6.02	(6.52) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2W2872-IC2872	2W64559.D	04/17/23	19:14	00:35	Initial cal 0.04
V2W2872-IC2872	2W64560.D	04/17/23	19:50	01:11	Initial cal 0.1
V2W2872-IC2872	2W64561.D	04/17/23	20:25	01:46	Initial cal 0.2
V2W2872-IC2872	2W64562.D	04/17/23	21:03	02:24	Initial cal 0.5
V2W2872-IC2872	2W64564.D	04/17/23	22:12	03:33	Initial cal 5
V2W2872-ICC2872	2W64565.D	04/17/23	22:49	04:10	Initial cal 10
V2W2872-IC2872	2W64566.D	04/17/23	23:27	04:48	Initial cal 20
V2W2872-IC2872	2W64567.D	04/18/23	00:10	05:31	Initial cal 40
V2W2872-IC2872	2W64568.D	04/18/23	00:54	06:15	Initial cal 50
V2W2872-ICV2872	2W64571.D	04/18/23	02:44	08:05	Initial cal verification 10

Instrument Performance Check (BFB)

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample: V2W2873-BFB
Lab File ID: 2W64573.D
Instrument ID: GCMS2W
Injection Date: 04/18/23
Injection Time: 10:48

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	28136	22.4		Pass
75	30.0 - 66.0% of mass 95	65408	52.0		Pass
95	Base peak, 100% relative abundance	125739	100.0		Pass
96	5.0 - 9.0% of mass 95	8057	6.41		Pass
173	Less than 2.0% of mass 174	594	0.47	(0.50) [a]	Pass
174	50.0 - 120.0% of mass 95	119043	94.7		Pass
175	4.0 - 9.01% of mass 174	8538	6.79	(7.17) [a]	Pass
176	93.0 - 101.0% of mass 174	115602	91.9	(97.1) [a]	Pass
177	5.0 - 9.0% of mass 176	7371	5.86	(6.38) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2W2873-CC2872	2W64574.D	04/18/23	11:25	00:37	Continuing cal 10
V2W2873-BS	2W64575.D	04/18/23	12:56	02:08	Blank Spike
V2W2873-BSD	2W64576.D	04/18/23	13:33	02:45	Blank Spike Duplicate
V2W2873-MB	2W64578.D	04/18/23	15:20	04:32	Method Blank
ZZZZZZ	2W64579.D	04/18/23	16:08	05:20	(unrelated sample)
JD63360-9	2W64580.D	04/18/23	16:44	05:56	SSMP-302R_033123
ZZZZZZ	2W64581.D	04/18/23	17:19	06:31	(unrelated sample)
ZZZZZZ	2W64582.D	04/18/23	17:55	07:07	(unrelated sample)
JD63724-13	2W64583.D	04/18/23	18:32	07:44	(used for QC only; not part of job JD63360)
JD63724-13DUP	2W64584.D	04/18/23	19:09	08:21	Duplicate
ZZZZZZ	2W64585.D	04/18/23	19:55	09:07	(unrelated sample)
ZZZZZZ	2W64586.D	04/18/23	20:31	09:43	(unrelated sample)
ZZZZZZ	2W64587.D	04/18/23	21:07	10:19	(unrelated sample)
ZZZZZZ	2W64588.D	04/18/23	21:43	10:55	(unrelated sample)
ZZZZZZ	2W64589.D	04/18/23	22:19	11:31	(unrelated sample)
ZZZZZZ	2W64590.D	04/18/23	22:55	12:07	(unrelated sample)
ZZZZZZ	2W64591.D	04/18/23	23:32	12:44	(unrelated sample)
ZZZZZZ	2W64592.D	04/19/23	00:09	13:21	(unrelated sample)
ZZZZZZ	2W64593.D	04/19/23	00:47	13:59	(unrelated sample)
ZZZZZZ	2W64594.D	04/19/23	01:24	14:36	(unrelated sample)
ZZZZZZ	2W64595.D	04/19/23	02:01	15:13	(unrelated sample)
ZZZZZZ	2W64596.D	04/19/23	02:38	15:50	(unrelated sample)
ZZZZZZ	2W64598.D	04/19/23	04:08	17:20	(unrelated sample)
ZZZZZZ	2W64600.D	04/19/23	05:40	18:52	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample:	V2W2873-BFB	**Injection Date:**	04/18/23
Lab File ID:	2W64573.D	**Injection Time:**	10:48
Instrument ID:	GCMS2W		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	2W64602.D	04/19/23	07:14	20:26	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample:	V3W3055-BFB	**Injection Date:**	11/03/22
Lab File ID:	3W77566.D	**Injection Time:**	02:37
Instrument ID:	GCMS3W		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	29547	21.0		Pass
75	30.0 - 66.0% of mass 95	73547	52.3		Pass
95	Base peak, 100% relative abundance	140547	100.0		Pass
96	5.0 - 9.0% of mass 95	9241	6.58		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	124965	88.9		Pass
175	4.0 - 9.01% of mass 174	10222	7.27	(8.18) [a]	Pass
176	93.0 - 101.0% of mass 174	121805	86.7	(97.5) [a]	Pass
177	5.0 - 9.0% of mass 176	8004	5.69	(6.57) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V3W3055-IC3055	3W77567.D	11/03/22	03:16	00:39	Initial cal 0.04
V3W3055-IC3055	3W77568.D	11/03/22	03:54	01:17	Initial cal 0.1
V3W3055-IC3055	3W77569.D	11/03/22	04:34	01:57	Initial cal 0.2
V3W3055-IC3055	3W77571.D	11/03/22	05:54	03:17	Initial cal 0.5
V3W3055-IC3055	3W77572.D	11/03/22	06:33	03:56	Initial cal 5
V3W3055-ICC3055	3W77573.D	11/03/22	07:12	04:35	Initial cal 10
V3W3055-IC3055	3W77574.D	11/03/22	07:54	05:17	Initial cal 20
V3W3055-IC3055	3W77575.D	11/03/22	08:38	06:01	Initial cal 40
V3W3055-IC3055	3W77576.D	11/03/22	09:25	06:48	Initial cal 50

Instrument Performance Check (BFB)

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample:	V3W3055-BFB	**Injection Date:**	11/06/22
Lab File ID:	3W77583.D	**Injection Time:**	15:04
Instrument ID:	GCMS3W		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	44243	25.1		Pass
75	30.0 - 66.0% of mass 95	96336	54.7		Pass
95	Base peak, 100% relative abundance	176213	100.0		Pass
96	5.0 - 9.0% of mass 95	11902	6.75		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	163328	92.7		Pass
175	4.0 - 9.01% of mass 174	13564	7.70	(8.30) [a]	Pass
176	93.0 - 101.0% of mass 174	156501	88.8	(95.8) [a]	Pass
177	5.0 - 9.0% of mass 176	10917	6.20	(6.98) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V3W3055-ICV3055	3W77585.D	11/06/22	16:46	01:42	Initial cal verification 10
V3W3056-CC3055	3W77586.D	11/06/22	21:11	06:07	Continuing cal 10
V3W3056-BS	3W77587.D	11/06/22	21:50	06:46	Blank Spike
V3W3056-BSD	3W77588.D	11/06/22	22:32	07:28	Blank Spike Duplicate
V3W3056-MB	3W77590.D	11/06/22	23:56	08:52	Method Blank
V3W3056-SCC	3W77591.D	11/07/22	00:41	09:37	Summa Cleaning Certification
V3W3056-SCC	3W77592.D	11/07/22	01:26	10:22	Summa Cleaning Certification
V3W3056-SCC	3W77594.D	11/07/22	02:56	11:52	Summa Cleaning Certification
V3W3056-SCC	3W77595.D	11/07/22	03:41	12:37	Summa Cleaning Certification
V3W3056-SCC	3W77596.D	11/07/22	04:26	13:22	Summa Cleaning Certification
V3W3056-SCC	3W77597.D	11/07/22	05:10	14:06	Summa Cleaning Certification
V3W3056-SCC	3W77598.D	11/07/22	05:56	14:52	Summa Cleaning Certification
V3W3056-SCC	3W77599.D	11/07/22	06:40	15:36	Summa Cleaning Certification
V3W3056-SCC	3W77600.D	11/07/22	07:26	16:22	Summa Cleaning Certification
V3W3056-SCC	3W77601.D	11/07/22	08:10	17:06	Summa Cleaning Certification
V3W3056-SCC	3W77602.D	11/07/22	08:55	17:51	Summa Cleaning Certification
V3W3056-SCC	3W77605.D	11/07/22	11:10	20:06	Summa Cleaning Certification
V3W3056-SCC	3W77606.D	11/07/22	11:55	20:51	Summa Cleaning Certification
V3W3056-SCC	3W77607.D	11/07/22	12:40	21:36	Summa Cleaning Certification
V3W3056-SCC	3W77608.D	11/07/22	13:24	22:20	Summa Cleaning Certification

Instrument Performance Check (BFB)

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample: V3W3088-BFB
Lab File ID: 3W78403.D
Instrument ID: GCMS3W
Injection Date: 12/14/22
Injection Time: 08:28

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	38299	20.4		Pass
75	30.0 - 66.0% of mass 95	104832	55.8		Pass
95	Base peak, 100% relative abundance	187861	100.0		Pass
96	5.0 - 9.0% of mass 95	12557	6.68		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	164309	87.5		Pass
175	4.0 - 9.01% of mass 174	13944	7.42	(8.49) [a]	Pass
176	93.0 - 101.0% of mass 174	160533	85.5	(97.7) [a]	Pass
177	5.0 - 9.0% of mass 176	11087	5.90	(6.91) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V3W3088-CC3055	3W78404.D	12/14/22	09:08	00:40	Continuing cal 10
V3W3088-BS	3W78406.D	12/14/22	11:26	02:58	Blank Spike
V3W3088-BSD	3W78407.D	12/14/22	12:46	04:18	Blank Spike Duplicate
V3W3088-MB	3W78409.D	12/14/22	14:42	06:14	Method Blank
ZZZZZZ	3W78410.D	12/14/22	15:40	07:12	(unrelated sample)
ZZZZZZ	3W78411.D	12/14/22	16:19	07:51	(unrelated sample)
ZZZZZZ	3W78412.D	12/14/22	17:04	08:36	(unrelated sample)
JD57036-2	3W78413.D	12/14/22	17:49	09:21	(used for QC only; not part of job JD63360)
JD57036-2DUP	3W78414.D	12/14/22	18:34	10:06	Duplicate
ZZZZZZ	3W78415.D	12/14/22	19:19	10:51	(unrelated sample)
ZZZZZZ	3W78416.D	12/14/22	20:04	11:36	(unrelated sample)
ZZZZZZ	3W78417.D	12/14/22	20:48	12:20	(unrelated sample)
ZZZZZZ	3W78418.D	12/14/22	21:37	13:09	(unrelated sample)
ZZZZZZ	3W78419.D	12/14/22	22:26	13:58	(unrelated sample)
ZZZZZZ	3W78420.D	12/14/22	23:14	14:46	(unrelated sample)
ZZZZZZ	3W78421.D	12/15/22	00:00	15:32	(unrelated sample)
ZZZZZZ	3W78422.D	12/15/22	00:45	16:17	(unrelated sample)
ZZZZZZ	3W78423.D	12/15/22	01:30	17:02	(unrelated sample)
ZZZZZZ	3W78424.D	12/15/22	02:15	17:47	(unrelated sample)
V3W3088-SCC	3W78425.D	12/15/22	02:55	18:27	Summa Cleaning Certification
V3W3088-SCC	3W78426.D	12/15/22	03:36	19:08	Summa Cleaning Certification
V3W3088-SCC	3W78427.D	12/15/22	04:15	19:47	Summa Cleaning Certification
V3W3088-SCC	3W78428.D	12/15/22	04:55	20:27	Summa Cleaning Certification
V3W3088-SCC	3W78429.D	12/15/22	05:35	21:07	Summa Cleaning Certification

Instrument Performance Check (BFB)

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample:	V3W3088-BFB	**Injection Date:**	12/14/22
Lab File ID:	3W78403.D	**Injection Time:**	08:28
Instrument ID:	GCMS3W		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V3W3088-SCC	3W78430.D	12/15/22	06:15	21:47	Summa Cleaning Certification

Instrument Performance Check (BFB)

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample:	V3W3146-BFB	**Injection Date:**	03/30/23
Lab File ID:	3W79755.D	**Injection Time:**	19:26
Instrument ID:	GCMS3W		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	25131	21.4		Pass
75	30.0 - 66.0% of mass 95	55896	47.7		Pass
95	Base peak, 100% relative abundance	117229	100.0		Pass
96	5.0 - 9.0% of mass 95	7739	6.60		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	102621	87.5		Pass
175	4.0 - 9.01% of mass 174	7732	6.60	(7.53) [a]	Pass
176	93.0 - 101.0% of mass 174	97333	83.0	(94.8) [a]	Pass
177	5.0 - 9.0% of mass 176	6716	5.73	(6.90) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V3W3146-IC3146	3W79756.D	03/30/23	20:04	00:38	Initial cal 0.04
V3W3146-IC3146	3W79757.D	03/30/23	20:41	01:15	Initial cal 0.1
V3W3146-IC3146	3W79758.D	03/30/23	21:20	01:54	Initial cal 0.2
V3W3146-IC3146	3W79759.D	03/30/23	22:00	02:34	Initial cal 0.5
V3W3146-IC3146	3W79761.D	03/30/23	23:16	03:50	Initial cal 5
V3W3146-ICC3146	3W79762.D	03/30/23	23:55	04:29	Initial cal 10
V3W3146-IC3146	3W79763.D	03/31/23	00:35	05:09	Initial cal 20
V3W3146-IC3146	3W79764.D	03/31/23	01:20	05:54	Initial cal 40
V3W3146-IC3146	3W79765.D	03/31/23	02:05	06:39	Initial cal 50
V3W3146-ICV3146	3W79768.D	03/31/23	04:02	08:36	Initial cal verification 10

Instrument Performance Check (BFB)

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample: V3W3157-BFB
Lab File ID: 3W80055.D
Instrument ID: GCMS3W
Injection Date: 04/11/23
Injection Time: 10:19

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	28997	25.0		Pass
75	30.0 - 66.0% of mass 95	59797	51.6		Pass
95	Base peak, 100% relative abundance	115915	100.0		Pass
96	5.0 - 9.0% of mass 95	7542	6.51		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	120557	104.0		Pass
175	4.0 - 9.01% of mass 174	9056	7.81	(7.51) [a]	Pass
176	93.0 - 101.0% of mass 174	116739	100.7	(96.8) [a]	Pass
177	5.0 - 9.0% of mass 176	7900	6.82	(6.77) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V3W3157-CC3146	3W80056.D	04/11/23	11:00	00:41	Continuing cal 10
V3W3157-BS	3W80057.D	04/11/23	11:50	01:31	Blank Spike
V3W3157-BSD	3W80058.D	04/11/23	12:31	02:12	Blank Spike Duplicate
V3W3157-MB	3W80060.D	04/11/23	14:02	03:43	Method Blank
JD62665-10	3W80061.D	04/11/23	15:05	04:46	(used for QC only; not part of job JD63360)
JD62665-10DUP	3W80062.D	04/11/23	15:46	05:27	Duplicate
ZZZZZZ	3W80063.D	04/11/23	16:32	06:13	(unrelated sample)
ZZZZZZ	3W80064.D	04/11/23	17:12	06:53	(unrelated sample)
ZZZZZZ	3W80065.D	04/11/23	17:52	07:33	(unrelated sample)
JD63360-1	3W80066.D	04/11/23	18:32	08:13	SSMP-510_032923
JD63360-2	3W80067.D	04/11/23	19:11	08:52	FLOORDRAIN-02_032923
JD63360-3	3W80068.D	04/11/23	19:51	09:32	FLOORDRAIN-01_032923
JD63360-4	3W80069.D	04/11/23	20:30	10:11	SSMP-13_032923
JD63360-5	3W80070.D	04/11/23	21:10	10:51	DUP-01_032923
JD63360-6	3W80071.D	04/11/23	21:49	11:30	DUP-02_032923
JD63360-7	3W80072.D	04/11/23	22:28	12:09	SSMP-401_033123
JD63360-8	3W80073.D	04/11/23	23:14	12:55	IA_01-GILMORE302R_033123
JD63360-9	3W80074.D	04/11/23	23:53	13:34	SSMP-302R_033123
ZZZZZZ	3W80076.D	04/12/23	01:11	14:52	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample:	V6W1158-BFB	**Injection Date:**	12/05/22
Lab File ID:	6W27499.D	**Injection Time:**	21:18
Instrument ID:	GCMS6W		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	13227	24.7		Pass
75	30.0 - 66.0% of mass 95	26331	49.2		Pass
95	Base peak, 100% relative abundance	53568	100.0		Pass
96	5.0 - 9.0% of mass 95	3417	6.38		Pass
173	Less than 2.0% of mass 174	420	0.78	(0.97) [a]	Pass
174	50.0 - 120.0% of mass 95	43253	80.7		Pass
175	4.0 - 9.01% of mass 174	3129	5.84	(7.23) [a]	Pass
176	93.0 - 101.0% of mass 174	41891	78.2	(96.9) [a]	Pass
177	5.0 - 9.0% of mass 176	2804	5.23	(6.69) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V6W1158-IC1158	6W27500.D	12/05/22	21:51	00:33	Initial cal 0.04
V6W1158-IC1158	6W27501.D	12/05/22	22:24	01:06	Initial cal 0.1
V6W1158-IC1158	6W27502.D	12/05/22	22:57	01:39	Initial cal 0.2
V6W1158-IC1158	6W27503.D	12/05/22	23:30	02:12	Initial cal 0.5
V6W1158-IC1158	6W27505.D	12/06/22	00:35	03:17	Initial cal 5
V6W1158-ICC1158	6W27506.D	12/06/22	01:07	03:49	Initial cal 10
V6W1158-IC1158	6W27507.D	12/06/22	01:39	04:21	Initial cal 20
V6W1158-IC1158	6W27508.D	12/06/22	02:12	04:54	Initial cal 40
V6W1158-IC1158	6W27509.D	12/06/22	02:47	05:29	Initial cal 50

Instrument Performance Check (BFB)

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample:	V6W1158-BFB	**Injection Date:**	12/07/22
Lab File ID:	6W27516.D	**Injection Time:**	13:49
Instrument ID:	GCMS6W		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	14161	24.6		Pass
75	30.0 - 66.0% of mass 95	27760	48.3		Pass
95	Base peak, 100% relative abundance	57517	100.0		Pass
96	5.0 - 9.0% of mass 95	3939	6.85		Pass
173	Less than 2.0% of mass 174	345	0.60	(0.75) [a]	Pass
174	50.0 - 120.0% of mass 95	46243	80.4		Pass
175	4.0 - 9.01% of mass 174	3399	5.91	(7.35) [a]	Pass
176	93.0 - 101.0% of mass 174	43488	75.6	(94.0) [a]	Pass
177	5.0 - 9.0% of mass 176	2778	4.83	(6.39) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V6W1158-ICV1158	6W27517.D	12/07/22	14:22	00:33	Initial cal verification 10

Instrument Performance Check (BFB)

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample: V6W1162-BFB
Lab File ID: 6W27611.D
Instrument ID: GCMS6W
Injection Date: 12/11/22
Injection Time: 15:36

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	9691	22.9		Pass
75	30.0 - 66.0% of mass 95	19464	46.1		Pass
95	Base peak, 100% relative abundance	42267	100.0		Pass
96	5.0 - 9.0% of mass 95	2715	6.42		Pass
173	Less than 2.0% of mass 174	331	0.78	(0.93) [a]	Pass
174	50.0 - 120.0% of mass 95	35512	84.0		Pass
175	4.0 - 9.01% of mass 174	2564	6.07	(7.22) [a]	Pass
176	93.0 - 101.0% of mass 174	33715	79.8	(94.9) [a]	Pass
177	5.0 - 9.0% of mass 176	2107	4.98	(6.25) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V6W1162-CC1158	6W27612.D	12/11/22	16:09	00:33	Continuing cal 10
V6W1162-BS	6W27613.D	12/11/22	16:42	01:06	Blank Spike
V6W1162-BSD	6W27614.D	12/11/22	17:15	01:39	Blank Spike Duplicate
V6W1162-MB	6W27616.D	12/11/22	18:21	02:45	Method Blank
V6W1162-SCC	6W27617.D	12/11/22	18:53	03:17	Summa Cleaning Certification
V6W1162-SCC	6W27618.D	12/11/22	19:23	03:47	Summa Cleaning Certification
V6W1162-SCC	6W27619.D	12/11/22	19:56	04:20	Summa Cleaning Certification
V6W1162-SCC	6W27620.D	12/11/22	20:29	04:53	Summa Cleaning Certification
V6W1162-SCC	6W27621.D	12/11/22	21:02	05:26	Summa Cleaning Certification
V6W1162-SCC	6W27622.D	12/11/22	21:36	06:00	Summa Cleaning Certification
V6W1162-SCC	6W27623.D	12/11/22	22:09	06:33	Summa Cleaning Certification
V6W1162-SCC	6W27624.D	12/11/22	22:43	07:07	Summa Cleaning Certification
V6W1162-SCC	6W27625.D	12/11/22	23:16	07:40	Summa Cleaning Certification
V6W1162-SCC	6W27626.D	12/11/22	23:49	08:13	Summa Cleaning Certification
V6W1162-SCC	6W27627.D	12/12/22	00:22	08:46	Summa Cleaning Certification
V6W1162-SCC	6W27628.D	12/12/22	00:55	09:19	Summa Cleaning Certification
V6W1162-SCC	6W27630.D	12/12/22	02:01	10:25	Summa Cleaning Certification
V6W1162-SCC	6W27631.D	12/12/22	02:34	10:58	Summa Cleaning Certification
V6W1162-SCC	6W27632.D	12/12/22	03:07	11:31	Summa Cleaning Certification
V6W1162-SCC	6W27633.D	12/12/22	03:40	12:04	Summa Cleaning Certification
V6W1162-SCC	6W27634.D	12/12/22	04:13	12:37	Summa Cleaning Certification
V6W1162-SCC	6W27635.D	12/12/22	04:45	13:09	Summa Cleaning Certification
V6W1162-SCC	6W27636.D	12/12/22	05:18	13:42	Summa Cleaning Certification
V6W1162-SCC	6W27637.D	12/12/22	05:51	14:15	Summa Cleaning Certification

Instrument Performance Check (BFB)

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample:	V6W1162-BFB	**Injection Date:**	12/11/22
Lab File ID:	6W27611.D	**Injection Time:**	15:36
Instrument ID:	GCMS6W		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V6W1162-SCC	6W27639.D	12/12/22	06:57	15:21	Summa Cleaning Certification
V6W1162-SCC	6W27640.D	12/12/22	07:30	15:54	Summa Cleaning Certification
V6W1162-SCC	6W27641.D	12/12/22	08:03	16:27	Summa Cleaning Certification
V6W1162-SCC	6W27642.D	12/12/22	08:35	16:59	Summa Cleaning Certification
V6W1162-SCC	6W27643.D	12/12/22	09:08	17:32	Summa Cleaning Certification
V6W1162-SCC	6W27644.D	12/12/22	09:41	18:05	Summa Cleaning Certification
V6W1162-SCC	6W27645.D	12/12/22	11:25	19:49	Summa Cleaning Certification
V6W1162-SCC	6W27646.D	12/12/22	11:58	20:22	Summa Cleaning Certification

Instrument Performance Check (BFB)

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample: V7W5-BFB
Lab File ID: 7W00090.D
Instrument ID: GCMS7W
Injection Date: 11/30/22
Injection Time: 09:57

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	15648	20.2		Pass
75	30.0 - 66.0% of mass 95	39362	50.9		Pass
95	Base peak, 100% relative abundance	77379	100.0		Pass
96	5.0 - 9.0% of mass 95	4703	6.08		Pass
173	Less than 2.0% of mass 174	502	0.65	(0.84) [a]	Pass
174	50.0 - 120.0% of mass 95	60048	77.6		Pass
175	4.0 - 9.01% of mass 174	4685	6.05	(7.80) [a]	Pass
176	93.0 - 101.0% of mass 174	59629	77.1	(99.3) [a]	Pass
177	5.0 - 9.0% of mass 176	4038	5.22	(6.77) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V7W5-IC0005	7W00093.D	11/30/22	11:33	01:36	Initial cal 0.04
V7W5-IC0005	7W00094.D	11/30/22	12:06	02:09	Initial cal 0.1
V7W5-IC0005	7W00095.D	11/30/22	12:38	02:41	Initial cal 0.2
V7W5-IC0005	7W00096.D	11/30/22	13:09	03:12	Initial cal 0.5
V7W5-IC0005	7W00098.D	11/30/22	14:12	04:15	Initial cal 5
V7W5-ICC0005	7W00099.D	11/30/22	14:44	04:47	Initial cal 10
V7W5-IC0005	7W00100.D	11/30/22	15:16	05:19	Initial cal 20
V7W5-IC0005	7W00101.D	11/30/22	15:51	05:54	Initial cal 40
V7W5-IC0005	7W00102.D	11/30/22	16:26	06:29	Initial cal 50
V7W5-ICV0005	7W00105.D	11/30/22	17:59	08:02	Initial cal verification 10

Instrument Performance Check (BFB)

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample:	V7W27-BFB	**Injection Date:**	02/20/23
Lab File ID:	7W00513.D	**Injection Time:**	09:10
Instrument ID:	GCMS7W		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	12775	20.7		Pass
75	30.0 - 66.0% of mass 95	30968	50.1		Pass
95	Base peak, 100% relative abundance	61763	100.0		Pass
96	5.0 - 9.0% of mass 95	4342	7.03		Pass
173	Less than 2.0% of mass 174	474	0.77	(1.05) [a]	Pass
174	50.0 - 120.0% of mass 95	45269	73.3		Pass
175	4.0 - 9.01% of mass 174	3172	5.14	(7.01) [a]	Pass
176	93.0 - 101.0% of mass 174	44155	71.5	(97.5) [a]	Pass
177	5.0 - 9.0% of mass 176	2323	3.76	(5.26) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V7W27-CC0005	7W00514.D	02/20/23	09:42	00:32	Continuing cal 10
V7W27-BS	7W00515.D	02/20/23	10:22	01:12	Blank Spike
V7W27-BSD	7W00516.D	02/20/23	10:53	01:43	Blank Spike Duplicate
V7W27-MB	7W00518.D	02/20/23	12:08	02:58	Method Blank
V7W27-SCC	7W00519.D	02/20/23	12:48	03:38	Summa Cleaning Certification
V7W27-SCC	7W00520.D	02/20/23	13:18	04:08	Summa Cleaning Certification
V7W27-SCC	7W00521.D	02/20/23	14:17	05:07	Summa Cleaning Certification
JD60521-1	7W00523.D	02/20/23	15:23	06:13	(used for QC only; not part of job JD63360)
JD60521-1DUP	7W00524.D	02/20/23	15:57	06:47	Duplicate
ZZZZZZ	7W00526.D	02/20/23	17:30	08:20	(unrelated sample)
ZZZZZZ	7W00527.D	02/20/23	18:05	08:55	(unrelated sample)
ZZZZZZ	7W00528.D	02/20/23	18:35	09:25	(unrelated sample)
ZZZZZZ	7W00529.D	02/20/23	19:06	09:56	(unrelated sample)
ZZZZZZ	7W00530.D	02/20/23	19:37	10:27	(unrelated sample)
ZZZZZZ	7W00531.D	02/20/23	20:08	10:58	(unrelated sample)
ZZZZZZ	7W00532.D	02/20/23	20:39	11:29	(unrelated sample)
V7W27-SCC	7W00535.D	02/20/23	22:16	13:06	Summa Cleaning Certification
V7W27-SCC	7W00536.D	02/20/23	22:50	13:40	Summa Cleaning Certification
V7W27-SCC	7W00537.D	02/20/23	23:24	14:14	Summa Cleaning Certification
V7W27-SCC	7W00538.D	02/21/23	00:00	14:50	Summa Cleaning Certification
ZZZZZZ	7W00539.D	02/21/23	00:31	15:21	(unrelated sample)
ZZZZZZ	7W00542.D	02/21/23	02:16	17:06	(unrelated sample)

Surrogate Recovery Summary

Job Number: JD63360
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Method: TO-15 **Matrix:** AIR

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1
JD63360-1	3W80066.D	94
JD63360-2	3W80067.D	94
JD63360-3	3W80068.D	93
JD63360-4	3W80069.D	96
JD63360-5	3W80070.D	91
JD63360-6	3W80071.D	100
JD63360-7	3W80072.D	92
JD63360-8	3W80073.D	97
JD63360-9	2W64580.D	94
JD63360-9	3W80074.D	98
JD62665-10DUP	3W80062.D	95
JD63724-13DUP	2W64584.D	98
V2W2780-SCC	2W62457.D	101
V2W2873-BS	2W64575.D	102
V2W2873-BSD	2W64576.D	101
V2W2873-MB	2W64578.D	98
V3W3088-SCC	3W78425.D	100
V3W3157-BS	3W80057.D	103
V3W3157-BSD	3W80058.D	104
V3W3157-MB	3W80060.D	90
V6W1162-SCC	6W27619.D	94
V7W27-SCC	7W00536.D	95
V2W2780-BS	2W62450.D	103
V2W2780-BSD	2W62451.D	101
V2W2780-MB	2W62455.D	102
V3W3088-BS	3W78406.D	102
V3W3088-BSD	3W78407.D	101
V3W3088-MB	3W78409.D	100
V6W1162-BS	6W27613.D	100
V6W1162-BSD	6W27614.D	100
V6W1162-MB	6W27616.D	95
V7W27-BS	7W00515.D	103
V7W27-BSD	7W00516.D	104
V7W27-MB	7W00518.D	96

Surrogate Compounds	Recovery Limits
S1 = 4-Bromofluorobenzene	65-128%

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

UNIVAR

AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

30164040

SGS Job Number: JD63008

Sampling Date: 03/28/23

Report to:

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Total number of pages in report: 91

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

David Chastain
General Manager

Client Service contact: Beth Stopen 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA(68-00408), RI, SC, TX, UT, VA, WV

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how we can serve you better at:
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SGS North America Inc.

Sample Summary

UNIVAR

Job No: JD63008

AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI
Project No: 30164040

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
JD63008-1	03/28/23	16:00	LJ	03/29/23	AIR	Ambient Air Comp.	AA-01_GILMORE_032823
JD63008-2	03/28/23	14:41	LJ	03/29/23	AIR	Ambient Air Comp.	AA-02_DYNAPLATE_032823
JD63008-3	03/28/23	15:46	LJ	03/29/23	AIR	Indoor Air Comp.	IA-02_GILMORE401_032823
JD63008-4	03/28/23	14:34	LJ	03/29/23	AIR	Indoor Air Comp.	IA-03_DYNAPLATE501_032823

This report contains results reported as ND = Not detected. The following applies:
Organics ND = Not detected above the MDL

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: UNIVAR **Job No:** JD63008

Site: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, **Report Date** 4/12/2023 11:32:42 A

On 03/29/2023, 4 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at SGS North America Inc. An SGS Job Number of JD63008 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

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

MS Volatiles By Method TO-15

Matrix: AIR **Batch ID:** V2W2860

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD62993-1DUP were used as the QC samples indicated.
- The blank spike (BS) recovery(s) of Benzyl Chloride are outside control limits.
- JD63008-4 for Benzyl Chloride: Associated CCV outside of control limits low. This compound in blank spike is outside in house QC limits bias low.
- JD63008-3 for Benzyl Chloride: Associated CCV outside of control limits low. This compound in blank spike is outside in house QC limits bias low.
- JD63008-2 for Benzyl Chloride: Associated CCV outside of control limits low. This compound in blank spike is outside in house QC limits bias low.
- JD63008-1 for Benzyl Chloride: Associated CCV outside of control limits low. This compound in blank spike is outside in house QC limits bias low.
- V2W2860-BS for Benzyl Chloride: Outside in house control limits.

Matrix: AIR **Batch ID:** V3W3153

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD62957-5DUP were used as the QC samples indicated.

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

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

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

Summary of Hits

Job Number: JD63008
Account: UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI
Collected: 03/28/23

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JD63008-1	**AA-01_GILMORE_032823**					
Acetone (2-Propanone)		37.2	0.20	0.15	ppbv	TO-15
Benzene		0.23	0.20	0.062	ppbv	TO-15
Chloromethane		0.53	0.20	0.090	ppbv	TO-15
Cyclohexane		0.12 J	0.20	0.11	ppbv	TO-15
Dichlorodifluoromethane		0.43	0.20	0.032	ppbv	TO-15
Ethanol		3.3	0.50	0.39	ppbv	TO-15
Ethylbenzene		0.21	0.20	0.061	ppbv	TO-15
Ethyl Acetate		10.4	0.20	0.10	ppbv	TO-15
Freon 113		0.067 J	0.20	0.031	ppbv	TO-15
Heptane		5.2	0.20	0.092	ppbv	TO-15
Hexane		0.39	0.20	0.11	ppbv	TO-15
Isopropyl Alcohol		0.73	0.20	0.14	ppbv	TO-15
p-Isopropyltoluene		0.16 J	0.20	0.080	ppbv	TO-15
Methylene chloride		0.46	0.20	0.056	ppbv	TO-15
Methyl ethyl ketone		0.87	0.20	0.11	ppbv	TO-15
Pentane		1.5	0.20	0.14	ppbv	TO-15
Toluene		2.4	0.20	0.057	ppbv	TO-15
Trichlorofluoromethane		0.23	0.20	0.036	ppbv	TO-15
m,p-Xylene		0.34	0.20	0.14	ppbv	TO-15
o-Xylene		0.12 J	0.20	0.077	ppbv	TO-15
Xylenes (total)		0.46	0.20	0.077	ppbv	TO-15
Acetone (2-Propanone)		88.4	0.48	0.36	ug/m3	TO-15
Benzene		0.73	0.64	0.20	ug/m3	TO-15
Chloromethane		1.1	0.41	0.19	ug/m3	TO-15
Cyclohexane		0.41 J	0.69	0.38	ug/m3	TO-15
Dichlorodifluoromethane		2.1	0.99	0.16	ug/m3	TO-15
Ethanol		6.2	0.94	0.73	ug/m3	TO-15
Ethylbenzene		0.91	0.87	0.26	ug/m3	TO-15
Ethyl Acetate		37.4	0.72	0.36	ug/m3	TO-15
Freon 113		0.51 J	1.5	0.24	ug/m3	TO-15
Heptane		21	0.82	0.38	ug/m3	TO-15
Hexane		1.4	0.70	0.39	ug/m3	TO-15
Isopropyl Alcohol		1.8	0.49	0.34	ug/m3	TO-15
p-Isopropyltoluene		0.88 J	1.1	0.44	ug/m3	TO-15
Methylene chloride		1.6	0.69	0.19	ug/m3	TO-15
Methyl ethyl ketone		2.6	0.59	0.32	ug/m3	TO-15
Pentane		4.4	0.59	0.41	ug/m3	TO-15
Toluene		9.0	0.75	0.21	ug/m3	TO-15
Trichlorofluoromethane		1.3	1.1	0.20	ug/m3	TO-15
m,p-Xylene		1.5	0.87	0.61	ug/m3	TO-15
o-Xylene		0.52 J	0.87	0.33	ug/m3	TO-15
Xylenes (total)		2.0	0.87	0.33	ug/m3	TO-15

Summary of Hits

Job Number: JD63008
Account: UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI
Collected: 03/28/23

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JD63008-2	**AA-02_DYNAPLATE_032823**					
Acetone (2-Propanone)		3.5	0.20	0.15	ppbv	TO-15
Benzene		0.29	0.20	0.062	ppbv	TO-15
Chloromethane		0.59	0.20	0.090	ppbv	TO-15
Dichlorodifluoromethane		0.43	0.20	0.032	ppbv	TO-15
Ethanol		4.2	0.50	0.39	ppbv	TO-15
Ethyl Acetate		0.97	0.20	0.10	ppbv	TO-15
Freon 113		0.075 J	0.20	0.031	ppbv	TO-15
Hexane		0.36	0.20	0.11	ppbv	TO-15
Isopropyl Alcohol		0.74	0.20	0.14	ppbv	TO-15
Methylene chloride		0.55	0.20	0.056	ppbv	TO-15
Methyl ethyl ketone		0.76	0.20	0.11	ppbv	TO-15
Pentane		2.8	0.20	0.14	ppbv	TO-15
2,2,4-Trimethylpentane		0.11 J	0.20	0.095	ppbv	TO-15
Tetrachloroethylene		0.045	0.040	0.014	ppbv	TO-15
Toluene		0.59	0.20	0.057	ppbv	TO-15
Trichloroethylene		0.30	0.040	0.019	ppbv	TO-15
Trichlorofluoromethane		0.24	0.20	0.036	ppbv	TO-15
m,p-Xylene		0.24	0.20	0.14	ppbv	TO-15
Xylenes (total)		0.24	0.20	0.077	ppbv	TO-15
Acetone (2-Propanone)		8.3	0.48	0.36	ug/m3	TO-15
Benzene		0.93	0.64	0.20	ug/m3	TO-15
Chloromethane		1.2	0.41	0.19	ug/m3	TO-15
Dichlorodifluoromethane		2.1	0.99	0.16	ug/m3	TO-15
Ethanol		7.9	0.94	0.73	ug/m3	TO-15
Ethyl Acetate		3.5	0.72	0.36	ug/m3	TO-15
Freon 113		0.57 J	1.5	0.24	ug/m3	TO-15
Hexane		1.3	0.70	0.39	ug/m3	TO-15
Isopropyl Alcohol		1.8	0.49	0.34	ug/m3	TO-15
Methylene chloride		1.9	0.69	0.19	ug/m3	TO-15
Methyl ethyl ketone		2.2	0.59	0.32	ug/m3	TO-15
Pentane		8.2	0.59	0.41	ug/m3	TO-15
2,2,4-Trimethylpentane		0.51 J	0.93	0.44	ug/m3	TO-15
Tetrachloroethylene		0.31	0.27	0.095	ug/m3	TO-15
Toluene		2.2	0.75	0.21	ug/m3	TO-15
Trichloroethylene		1.6	0.21	0.10	ug/m3	TO-15
Trichlorofluoromethane		1.3	1.1	0.20	ug/m3	TO-15
m,p-Xylene		1.0	0.87	0.61	ug/m3	TO-15
Xylenes (total)		1.0	0.87	0.33	ug/m3	TO-15
JD63008-3	**IA-02_GILMORE401_032823**					
Acetone (2-Propanone)		74.3	0.80	0.58	ppbv	TO-15
1,3-Butadiene		0.20	0.20	0.084	ppbv	TO-15

Summary of Hits

Job Number: JD63008
Account: UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI
Collected: 03/28/23

Lab Sample ID Client Sample ID Analyte	Result/ Qual	RL	MDL	Units	Method
Benzene	1.0	0.20	0.062	ppbv	TO-15
Chloromethane	0.49	0.20	0.090	ppbv	TO-15
Cyclohexane	0.41	0.20	0.11	ppbv	TO-15
Dichlorodifluoromethane	0.43	0.20	0.032	ppbv	TO-15
Ethanol	42.3	0.50	0.39	ppbv	TO-15
Ethylbenzene	0.62	0.20	0.061	ppbv	TO-15
Ethyl Acetate	1.5	0.20	0.10	ppbv	TO-15
4-Ethyltoluene	0.16 J	0.20	0.095	ppbv	TO-15
Heptane	6.4	0.20	0.092	ppbv	TO-15
Hexane	1.1	0.20	0.11	ppbv	TO-15
Isopropyl Alcohol	0.50	0.20	0.14	ppbv	TO-15
p-Isopropyltoluene	0.67	0.20	0.080	ppbv	TO-15
Methylene chloride	0.47	0.20	0.056	ppbv	TO-15
Methyl ethyl ketone	1.7	0.20	0.11	ppbv	TO-15
Methyl Isobutyl Ketone	0.51	0.20	0.073	ppbv	TO-15
Pentane	5.6	0.20	0.14	ppbv	TO-15
Styrene	0.14 J	0.20	0.12	ppbv	TO-15
1,2,4-Trimethylbenzene	0.50	0.20	0.087	ppbv	TO-15
1,3,5-Trimethylbenzene	0.13 J	0.20	0.080	ppbv	TO-15
2,2,4-Trimethylpentane	0.48	0.20	0.095	ppbv	TO-15
Tetrachloroethylene	0.051	0.040	0.014	ppbv	TO-15
Toluene	5.6	0.20	0.057	ppbv	TO-15
Trichlorofluoromethane	0.23	0.20	0.036	ppbv	TO-15
m,p-Xylene	2.1	0.20	0.14	ppbv	TO-15
o-Xylene	0.68	0.20	0.077	ppbv	TO-15
Xylenes (total)	2.8	0.20	0.077	ppbv	TO-15
Acetone (2-Propanone)	176	1.9	1.4	ug/m3	TO-15
1,3-Butadiene	0.44	0.44	0.19	ug/m3	TO-15
Benzene	3.2	0.64	0.20	ug/m3	TO-15
Chloromethane	1.0	0.41	0.19	ug/m3	TO-15
Cyclohexane	1.4	0.69	0.38	ug/m3	TO-15
Dichlorodifluoromethane	2.1	0.99	0.16	ug/m3	TO-15
Ethanol	79.7	0.94	0.73	ug/m3	TO-15
Ethylbenzene	2.7	0.87	0.26	ug/m3	TO-15
Ethyl Acetate	5.4	0.72	0.36	ug/m3	TO-15
4-Ethyltoluene	0.79 J	0.98	0.47	ug/m3	TO-15
Heptane	26	0.82	0.38	ug/m3	TO-15
Hexane	3.9	0.70	0.39	ug/m3	TO-15
Isopropyl Alcohol	1.2	0.49	0.34	ug/m3	TO-15
p-Isopropyltoluene	3.7	1.1	0.44	ug/m3	TO-15
Methylene chloride	1.6	0.69	0.19	ug/m3	TO-15
Methyl ethyl ketone	5.0	0.59	0.32	ug/m3	TO-15
Methyl Isobutyl Ketone	2.1	0.82	0.30	ug/m3	TO-15
Pentane	16	0.59	0.41	ug/m3	TO-15
Styrene	0.60 J	0.85	0.51	ug/m3	TO-15

Summary of Hits

Job Number: JD63008
Account: UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI
Collected: 03/28/23

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
1,2,4-Trimethylbenzene		2.5	0.98	0.43	ug/m3	TO-15
1,3,5-Trimethylbenzene		0.64 J	0.98	0.39	ug/m3	TO-15
2,2,4-Trimethylpentane		2.2	0.93	0.44	ug/m3	TO-15
Tetrachloroethylene		0.35	0.27	0.095	ug/m3	TO-15
Toluene		21	0.75	0.21	ug/m3	TO-15
Trichlorofluoromethane		1.3	1.1	0.20	ug/m3	TO-15
m,p-Xylene		9.1	0.87	0.61	ug/m3	TO-15
o-Xylene		3.0	0.87	0.33	ug/m3	TO-15
Xylenes (total)		12	0.87	0.33	ug/m3	TO-15
JD63008-4	**IA-03_DYNAPLATE501_032823**					
Acetone (2-Propanone)		9.0	0.20	0.15	ppbv	TO-15
Acrolein		0.60	0.20	0.088	ppbv	TO-15
1,3-Butadiene		0.26	0.20	0.084	ppbv	TO-15
Benzene		0.74	0.20	0.062	ppbv	TO-15
Bromodichloromethane		0.27	0.20	0.030	ppbv	TO-15
Carbon disulfide		9.2	0.20	0.045	ppbv	TO-15
Chloroform		1.3	0.20	0.037	ppbv	TO-15
Chloromethane		0.54	0.20	0.090	ppbv	TO-15
Cyclohexane		0.12 J	0.20	0.11	ppbv	TO-15
1,4-Dioxane		1.3	0.20	0.12	ppbv	TO-15
Dichlorodifluoromethane		0.43	0.20	0.032	ppbv	TO-15
Ethanol		8.5	0.50	0.39	ppbv	TO-15
Ethylbenzene		0.15 J	0.20	0.061	ppbv	TO-15
Ethyl Acetate		1.5	0.20	0.10	ppbv	TO-15
Heptane		0.13 J	0.20	0.092	ppbv	TO-15
Hexane		0.48	0.20	0.11	ppbv	TO-15
Isopropyl Alcohol		2.6	0.20	0.14	ppbv	TO-15
p-Isopropyltoluene		0.65	0.20	0.080	ppbv	TO-15
Methylene chloride		0.95	0.20	0.056	ppbv	TO-15
Methyl ethyl ketone		0.92	0.20	0.11	ppbv	TO-15
Pentane		3.5	0.20	0.14	ppbv	TO-15
1,2,4-Trimethylbenzene		0.098 J	0.20	0.087	ppbv	TO-15
2,2,4-Trimethylpentane		0.46	0.20	0.095	ppbv	TO-15
Tertiary Butyl Alcohol		0.68	0.20	0.093	ppbv	TO-15
Tetrahydrofuran		0.18 J	0.20	0.090	ppbv	TO-15
Toluene		0.92	0.20	0.057	ppbv	TO-15
Trichlorofluoromethane		0.23	0.20	0.036	ppbv	TO-15
m,p-Xylene		0.46	0.20	0.14	ppbv	TO-15
o-Xylene		0.15 J	0.20	0.077	ppbv	TO-15
Xylenes (total)		0.61	0.20	0.077	ppbv	TO-15
Acetone (2-Propanone)		21	0.48	0.36	ug/m3	TO-15
Acrolein		1.4	0.46	0.20	ug/m3	TO-15
1,3-Butadiene		0.58	0.44	0.19	ug/m3	TO-15

Summary of Hits

Job Number: JD63008
Account: UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI
Collected: 03/28/23

Lab Sample ID Client Sample ID Analyte	Result/ Qual	RL	MDL	Units	Method
Benzene	2.4	0.64	0.20	ug/m3	TO-15
Bromodichloromethane	1.8	1.3	0.20	ug/m3	TO-15
Carbon disulfide	29	0.62	0.14	ug/m3	TO-15
Chloroform	6.3	0.98	0.18	ug/m3	TO-15
Chloromethane	1.1	0.41	0.19	ug/m3	TO-15
Cyclohexane	0.41 J	0.69	0.38	ug/m3	TO-15
1,4-Dioxane	4.7	0.72	0.43	ug/m3	TO-15
Dichlorodifluoromethane	2.1	0.99	0.16	ug/m3	TO-15
Ethanol	16	0.94	0.73	ug/m3	TO-15
Ethylbenzene	0.65 J	0.87	0.26	ug/m3	TO-15
Ethyl Acetate	5.4	0.72	0.36	ug/m3	TO-15
Heptane	0.53 J	0.82	0.38	ug/m3	TO-15
Hexane	1.7	0.70	0.39	ug/m3	TO-15
Isopropyl Alcohol	6.4	0.49	0.34	ug/m3	TO-15
p-Isopropyltoluene	3.6	1.1	0.44	ug/m3	TO-15
Methylene chloride	3.3	0.69	0.19	ug/m3	TO-15
Methyl ethyl ketone	2.7	0.59	0.32	ug/m3	TO-15
Pentane	10	0.59	0.41	ug/m3	TO-15
1,2,4-Trimethylbenzene	0.48 J	0.98	0.43	ug/m3	TO-15
2,2,4-Trimethylpentane	2.1	0.93	0.44	ug/m3	TO-15
Tertiary Butyl Alcohol	2.1	0.61	0.28	ug/m3	TO-15
Tetrahydrofuran	0.53 J	0.59	0.27	ug/m3	TO-15
Toluene	3.5	0.75	0.21	ug/m3	TO-15
Trichlorofluoromethane	1.3	1.1	0.20	ug/m3	TO-15
m,p-Xylene	2.0	0.87	0.61	ug/m3	TO-15
o-Xylene	0.65 J	0.87	0.33	ug/m3	TO-15
Xylenes (total)	2.6	0.87	0.33	ug/m3	TO-15

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	AA-01_GILMORE_032823		
Lab Sample ID:	JD63008-1	**Date Sampled:**	03/28/23
Matrix:	AIR - Ambient Air Comp. Summa ID: A1313	**Date Received:**	03/29/23
Method:	TO-15	**Percent Solids:**	n/a
Project:	AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2W64370.D	1	04/07/23 00:56	TCH	n/a	n/a	V2W2860
Run #2							

	Initial Volume
Run #1	400 ml
Run #2	

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
67-64-1	58.08	Acetone (2-Propanone)	37.2	0.20	0.15	ppbv		88.4	0.48	0.36	ug/m3
107-02-8	56	Acrolein	ND	0.20	0.088	ppbv		ND	0.46	0.20	ug/m3
107-13-1	53	Acrylonitrile	ND	0.20	0.091	ppbv		ND	0.43	0.20	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.20	0.084	ppbv		ND	0.44	0.19	ug/m3
71-43-2	78.11	Benzene	0.23	0.20	0.062	ppbv		0.73	0.64	0.20	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.20	0.030	ppbv		ND	1.3	0.20	ug/m3
75-25-2	252.8	Bromoform	ND	0.20	0.071	ppbv		ND	2.1	0.73	ug/m3
74-83-9	94.94	Bromomethane	ND	0.20	0.069	ppbv		ND	0.78	0.27	ug/m3
593-60-2	106.9	Bromoethene	ND	0.20	0.061	ppbv		ND	0.87	0.27	ug/m3
100-44-7	126	Benzyl Chloride [a]	ND	0.20	0.13	ppbv		ND	1.0	0.67	ug/m3
104-51-8	134	n-Butylbenzene	ND	0.20	0.11	ppbv		ND	1.1	0.60	ug/m3
135-98-8	134	sec-Butylbenzene	ND	0.20	0.081	ppbv		ND	1.1	0.44	ug/m3
75-15-0	76.14	Carbon disulfide	ND	0.20	0.045	ppbv		ND	0.62	0.14	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.20	0.074	ppbv		ND	0.92	0.34	ug/m3
75-00-3	64.52	Chloroethane	ND	0.20	0.068	ppbv		ND	0.53	0.18	ug/m3
67-66-3	119.4	Chloroform	ND	0.20	0.037	ppbv		ND	0.98	0.18	ug/m3
74-87-3	50.49	Chloromethane	0.53	0.20	0.090	ppbv		1.1	0.41	0.19	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.20	0.083	ppbv		ND	0.63	0.26	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.20	0.040	ppbv		ND	1.3	0.25	ug/m3
110-82-7	84.16	Cyclohexane	0.12	0.20	0.11	ppbv	J	0.41	0.69	0.38	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	0.057	ppbv		ND	0.81	0.23	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	0.059	ppbv		ND	0.79	0.23	ug/m3
106-93-4	187.9	1,2-Dibromoethane (EDB)	ND	0.20	0.097	ppbv		ND	1.5	0.75	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	0.070	ppbv		ND	0.81	0.28	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.20	0.062	ppbv		ND	0.92	0.29	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.20	0.12	ppbv		ND	0.72	0.43	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.43	0.20	0.032	ppbv		2.1	0.99	0.16	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.20	0.052	ppbv		ND	1.7	0.44	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	0.069	ppbv		ND	0.79	0.27	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	0.077	ppbv		ND	0.79	0.31	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.20	0.062	ppbv		ND	0.91	0.28	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.20	0.040	ppbv		ND	1.2	0.24	ug/m3

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AA-01_GILMORE_032823
Lab Sample ID: JD63008-1 **Date Sampled:** 03/28/23
Matrix: AIR - Ambient Air Comp. Summa ID: A1313 **Date Received:** 03/29/23
Method: TO-15 **Percent Solids:** n/a
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
95-50-1	147	o-Dichlorobenzene	ND	0.20	0.15	ppbv		ND	1.2	0.90	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.20	0.19	ppbv		ND	1.2	1.1	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.20	0.10	ppbv		ND	0.91	0.45	ug/m3
108-20-3	102	Di-Isopropyl ether	ND	0.20	0.082	ppbv		ND	0.83	0.34	ug/m3
64-17-5	46.07	Ethanol	3.3	0.50	0.39	ppbv		6.2	0.94	0.73	ug/m3
100-41-4	106.2	Ethylbenzene	0.21	0.20	0.061	ppbv		0.91	0.87	0.26	ug/m3
141-78-6	88	Ethyl Acetate	10.4	0.20	0.10	ppbv		37.4	0.72	0.36	ug/m3
622-96-8	120.19	4-Ethyltoluene	ND	0.20	0.095	ppbv		ND	0.98	0.47	ug/m3
76-13-1	187.4	Freon 113	0.067	0.20	0.031	ppbv	J	0.51	1.5	0.24	ug/m3
76-14-2	170.9	Freon 114	ND	0.20	0.050	ppbv		ND	1.4	0.35	ug/m3
142-82-5	100.2	Heptane	5.2	0.20	0.092	ppbv		21	0.82	0.38	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.20	0.062	ppbv		ND	2.1	0.66	ug/m3
110-54-3	86.18	Hexane	0.39	0.20	0.11	ppbv		1.4	0.70	0.39	ug/m3
591-78-6	100	2-Hexanone	ND	0.20	0.15	ppbv		ND	0.82	0.61	ug/m3
98-82-8	120	Isopropylbenzene	ND	0.20	0.064	ppbv		ND	0.98	0.31	ug/m3
67-63-0	60.1	Isopropyl Alcohol	0.73	0.20	0.14	ppbv		1.8	0.49	0.34	ug/m3
99-87-6	134	p-Isopropyltoluene	0.16	0.20	0.080	ppbv	J	0.88	1.1	0.44	ug/m3
75-09-2	84.94	Methylene chloride	0.46	0.20	0.056	ppbv		1.6	0.69	0.19	ug/m3
78-93-3	72.11	Methyl ethyl ketone	0.87	0.20	0.11	ppbv		2.6	0.59	0.32	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.20	0.073	ppbv		ND	0.82	0.30	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.20	0.080	ppbv		ND	0.72	0.29	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.20	0.070	ppbv		ND	0.82	0.29	ug/m3
91-20-3	128.17	Naphthalene	ND	0.20	0.13	ppbv		ND	1.0	0.68	ug/m3
109-66-0	72	Pentane	1.5	0.20	0.14	ppbv		4.4	0.59	0.41	ug/m3
103-65-1	120	n-Propylbenzene	ND	0.20	0.091	ppbv		ND	0.98	0.45	ug/m3
115-07-1	42	Propylene	ND	0.50	0.14	ppbv		ND	0.86	0.24	ug/m3
100-42-5	104.1	Styrene	ND	0.20	0.12	ppbv		ND	0.85	0.51	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.20	0.037	ppbv		ND	1.1	0.20	ug/m3
79-34-5	167.85	1,1,2,2-Tetrachloroethane	ND	0.20	0.048	ppbv		ND	1.4	0.33	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	0.038	ppbv		ND	1.1	0.21	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.20	0.12	ppbv		ND	1.5	0.89	ug/m3
95-63-6	120.19	1,2,4-Trimethylbenzene	ND	0.20	0.087	ppbv		ND	0.98	0.43	ug/m3
108-67-8	120.19	1,3,5-Trimethylbenzene	ND	0.20	0.080	ppbv		ND	0.98	0.39	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	0.20	0.095	ppbv		ND	0.93	0.44	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	0.20	0.093	ppbv		ND	0.61	0.28	ug/m3
127-18-4	165.8	Tetrachloroethylene	ND	0.040	0.014	ppbv		ND	0.27	0.095	ug/m3
109-99-9	72.11	Tetrahydrofuran	ND	0.20	0.090	ppbv		ND	0.59	0.27	ug/m3
108-88-3	92.14	Toluene	2.4	0.20	0.057	ppbv		9.0	0.75	0.21	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	0.10	ug/m3
75-69-4	137.4	Trichlorofluoromethane	0.23	0.20	0.036	ppbv		1.3	1.1	0.20	ug/m3

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AA-01_GILMORE_032823		
Lab Sample ID:	JD63008-1	**Date Sampled:**	03/28/23
Matrix:	AIR - Ambient Air Comp. Summa ID: A1313	**Date Received:**	03/29/23
Method:	TO-15	**Percent Solids:**	n/a
Project:	AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
75-01-4	62.5	Vinyl chloride	ND	0.20	0.069	ppbv		ND	0.51	0.18	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.20	0.11	ppbv		ND	0.70	0.39	ug/m3
	106.2	m,p-Xylene	0.34	0.20	0.14	ppbv		1.5	0.87	0.61	ug/m3
95-47-6	106.2	o-Xylene	0.12	0.20	0.077	ppbv	J	0.52	0.87	0.33	ug/m3
1330-20-7	106.2	Xylenes (total)	0.46	0.20	0.077	ppbv		2.0	0.87	0.33	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	94%		65-128%

(a) Associated CCV outside of control limits low. This compound in blank spike is outside in house QC limits bias low.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AA-02_DYNAPLATE_032823		
Lab Sample ID:	JD63008-2	**Date Sampled:**	03/28/23
Matrix:	AIR - Ambient Air Comp. Summa ID: M146	**Date Received:**	03/29/23
Method:	TO-15	**Percent Solids:**	n/a
Project:	AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2W64371.D	1	04/07/23 01:36	TCH	n/a	n/a	V2W2860
Run #2							

	Initial Volume
Run #1	400 ml
Run #2	

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
67-64-1	58.08	Acetone (2-Propanone)	3.5	0.20	0.15	ppbv		8.3	0.48	0.36	ug/m3
107-02-8	56	Acrolein	ND	0.20	0.088	ppbv		ND	0.46	0.20	ug/m3
107-13-1	53	Acrylonitrile	ND	0.20	0.091	ppbv		ND	0.43	0.20	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.20	0.084	ppbv		ND	0.44	0.19	ug/m3
71-43-2	78.11	Benzene	0.29	0.20	0.062	ppbv		0.93	0.64	0.20	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.20	0.030	ppbv		ND	1.3	0.20	ug/m3
75-25-2	252.8	Bromoform	ND	0.20	0.071	ppbv		ND	2.1	0.73	ug/m3
74-83-9	94.94	Bromomethane	ND	0.20	0.069	ppbv		ND	0.78	0.27	ug/m3
593-60-2	106.9	Bromoethene	ND	0.20	0.061	ppbv		ND	0.87	0.27	ug/m3
100-44-7	126	Benzyl Chloride [a]	ND	0.20	0.13	ppbv		ND	1.0	0.67	ug/m3
104-51-8	134	n-Butylbenzene	ND	0.20	0.11	ppbv		ND	1.1	0.60	ug/m3
135-98-8	134	sec-Butylbenzene	ND	0.20	0.081	ppbv		ND	1.1	0.44	ug/m3
75-15-0	76.14	Carbon disulfide	ND	0.20	0.045	ppbv		ND	0.62	0.14	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.20	0.074	ppbv		ND	0.92	0.34	ug/m3
75-00-3	64.52	Chloroethane	ND	0.20	0.068	ppbv		ND	0.53	0.18	ug/m3
67-66-3	119.4	Chloroform	ND	0.20	0.037	ppbv		ND	0.98	0.18	ug/m3
74-87-3	50.49	Chloromethane	0.59	0.20	0.090	ppbv		1.2	0.41	0.19	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.20	0.083	ppbv		ND	0.63	0.26	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.20	0.040	ppbv		ND	1.3	0.25	ug/m3
110-82-7	84.16	Cyclohexane	ND	0.20	0.11	ppbv		ND	0.69	0.38	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	0.057	ppbv		ND	0.81	0.23	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	0.059	ppbv		ND	0.79	0.23	ug/m3
106-93-4	187.9	1,2-Dibromoethane (EDB)	ND	0.20	0.097	ppbv		ND	1.5	0.75	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	0.070	ppbv		ND	0.81	0.28	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.20	0.062	ppbv		ND	0.92	0.29	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.20	0.12	ppbv		ND	0.72	0.43	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.43	0.20	0.032	ppbv		2.1	0.99	0.16	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.20	0.052	ppbv		ND	1.7	0.44	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	0.069	ppbv		ND	0.79	0.27	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	0.077	ppbv		ND	0.79	0.31	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.20	0.062	ppbv		ND	0.91	0.28	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.20	0.040	ppbv		ND	1.2	0.24	ug/m3

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AA-02_DYNAPLATE_032823		
Lab Sample ID:	JD63008-2	**Date Sampled:**	03/28/23
Matrix:	AIR - Ambient Air Comp. Summa ID: M146	**Date Received:**	03/29/23
Method:	TO-15	**Percent Solids:**	n/a
Project:	AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
95-50-1	147	o-Dichlorobenzene	ND	0.20	0.15	ppbv		ND	1.2	0.90	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.20	0.19	ppbv		ND	1.2	1.1	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.20	0.10	ppbv		ND	0.91	0.45	ug/m3
108-20-3	102	Di-Isopropyl ether	ND	0.20	0.082	ppbv		ND	0.83	0.34	ug/m3
64-17-5	46.07	Ethanol	4.2	0.50	0.39	ppbv		7.9	0.94	0.73	ug/m3
100-41-4	106.2	Ethylbenzene	ND	0.20	0.061	ppbv		ND	0.87	0.26	ug/m3
141-78-6	88	Ethyl Acetate	0.97	0.20	0.10	ppbv		3.5	0.72	0.36	ug/m3
622-96-8	120.19	4-Ethyltoluene	ND	0.20	0.095	ppbv		ND	0.98	0.47	ug/m3
76-13-1	187.4	Freon 113	0.075	0.20	0.031	ppbv	J	0.57	1.5	0.24	ug/m3
76-14-2	170.9	Freon 114	ND	0.20	0.050	ppbv		ND	1.4	0.35	ug/m3
142-82-5	100.2	Heptane	ND	0.20	0.092	ppbv		ND	0.82	0.38	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.20	0.062	ppbv		ND	2.1	0.66	ug/m3
110-54-3	86.18	Hexane	0.36	0.20	0.11	ppbv		1.3	0.70	0.39	ug/m3
591-78-6	100	2-Hexanone	ND	0.20	0.15	ppbv		ND	0.82	0.61	ug/m3
98-82-8	120	Isopropylbenzene	ND	0.20	0.064	ppbv		ND	0.98	0.31	ug/m3
67-63-0	60.1	Isopropyl Alcohol	0.74	0.20	0.14	ppbv		1.8	0.49	0.34	ug/m3
99-87-6	134	p-Isopropyltoluene	ND	0.20	0.080	ppbv		ND	1.1	0.44	ug/m3
75-09-2	84.94	Methylene chloride	0.55	0.20	0.056	ppbv		1.9	0.69	0.19	ug/m3
78-93-3	72.11	Methyl ethyl ketone	0.76	0.20	0.11	ppbv		2.2	0.59	0.32	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.20	0.073	ppbv		ND	0.82	0.30	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.20	0.080	ppbv		ND	0.72	0.29	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.20	0.070	ppbv		ND	0.82	0.29	ug/m3
91-20-3	128.17	Naphthalene	ND	0.20	0.13	ppbv		ND	1.0	0.68	ug/m3
109-66-0	72	Pentane	2.8	0.20	0.14	ppbv		8.2	0.59	0.41	ug/m3
103-65-1	120	n-Propylbenzene	ND	0.20	0.091	ppbv		ND	0.98	0.45	ug/m3
115-07-1	42	Propylene	ND	0.50	0.14	ppbv		ND	0.86	0.24	ug/m3
100-42-5	104.1	Styrene	ND	0.20	0.12	ppbv		ND	0.85	0.51	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.20	0.037	ppbv		ND	1.1	0.20	ug/m3
79-34-5	167.85	1,1,2,2-Tetrachloroethane	ND	0.20	0.048	ppbv		ND	1.4	0.33	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	0.038	ppbv		ND	1.1	0.21	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.20	0.12	ppbv		ND	1.5	0.89	ug/m3
95-63-6	120.19	1,2,4-Trimethylbenzene	ND	0.20	0.087	ppbv		ND	0.98	0.43	ug/m3
108-67-8	120.19	1,3,5-Trimethylbenzene	ND	0.20	0.080	ppbv		ND	0.98	0.39	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	0.11	0.20	0.095	ppbv	J	0.51	0.93	0.44	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	0.20	0.093	ppbv		ND	0.61	0.28	ug/m3
127-18-4	165.8	Tetrachloroethylene	0.045	0.040	0.014	ppbv		0.31	0.27	0.095	ug/m3
109-99-9	72.11	Tetrahydrofuran	ND	0.20	0.090	ppbv		ND	0.59	0.27	ug/m3
108-88-3	92.14	Toluene	0.59	0.20	0.057	ppbv		2.2	0.75	0.21	ug/m3
79-01-6	131.4	Trichloroethylene	0.30	0.040	0.019	ppbv		1.6	0.21	0.10	ug/m3
75-69-4	137.4	Trichlorofluoromethane	0.24	0.20	0.036	ppbv		1.3	1.1	0.20	ug/m3

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AA-02_DYNAPLATE_032823		
Lab Sample ID:	JD63008-2	**Date Sampled:**	03/28/23
Matrix:	AIR - Ambient Air Comp. Summa ID: M146	**Date Received:**	03/29/23
Method:	TO-15	**Percent Solids:**	n/a
Project:	AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
75-01-4	62.5	Vinyl chloride	ND	0.20	0.069	ppbv		ND	0.51	0.18	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.20	0.11	ppbv		ND	0.70	0.39	ug/m3
	106.2	m,p-Xylene	0.24	0.20	0.14	ppbv		1.0	0.87	0.61	ug/m3
95-47-6	106.2	o-Xylene	ND	0.20	0.077	ppbv		ND	0.87	0.33	ug/m3
1330-20-7	106.2	Xylenes (total)	0.24	0.20	0.077	ppbv		1.0	0.87	0.33	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	94%		65-128%

(a) Associated CCV outside of control limits low. This compound in blank spike is outside in house QC limits bias low.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	IA-02_GILMORE401_032823		
Lab Sample ID:	JD63008-3	**Date Sampled:**	03/28/23
Matrix:	AIR - Indoor Air Comp. Summa ID: A1592	**Date Received:**	03/29/23
Method:	TO-15	**Percent Solids:**	n/a
Project:	AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2W64372.D	1	04/07/23 02:16	TCH	n/a	n/a	V2W2860
Run #2	3W79954.D	1	04/07/23 16:34	TCH	n/a	n/a	V3W3153

	Initial Volume
Run #1	400 ml
Run #2	100 ml

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
67-64-1	58.08	Acetone (2-Propanone)	74.3 [a]	0.80	0.58	ppbv		176 [a]	1.9	1.4	ug/m3
107-02-8	56	Acrolein	ND	0.20	0.088	ppbv		ND	0.46	0.20	ug/m3
107-13-1	53	Acrylonitrile	ND	0.20	0.091	ppbv		ND	0.43	0.20	ug/m3
106-99-0	54.09	1,3-Butadiene	0.20	0.20	0.084	ppbv		0.44	0.44	0.19	ug/m3
71-43-2	78.11	Benzene	1.0	0.20	0.062	ppbv		3.2	0.64	0.20	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.20	0.030	ppbv		ND	1.3	0.20	ug/m3
75-25-2	252.8	Bromoform	ND	0.20	0.071	ppbv		ND	2.1	0.73	ug/m3
74-83-9	94.94	Bromomethane	ND	0.20	0.069	ppbv		ND	0.78	0.27	ug/m3
593-60-2	106.9	Bromoethene	ND	0.20	0.061	ppbv		ND	0.87	0.27	ug/m3
100-44-7	126	Benzyl Chloride [b]	ND	0.20	0.13	ppbv		ND	1.0	0.67	ug/m3
104-51-8	134	n-Butylbenzene	ND	0.20	0.11	ppbv		ND	1.1	0.60	ug/m3
135-98-8	134	sec-Butylbenzene	ND	0.20	0.081	ppbv		ND	1.1	0.44	ug/m3
75-15-0	76.14	Carbon disulfide	ND	0.20	0.045	ppbv		ND	0.62	0.14	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.20	0.074	ppbv		ND	0.92	0.34	ug/m3
75-00-3	64.52	Chloroethane	ND	0.20	0.068	ppbv		ND	0.53	0.18	ug/m3
67-66-3	119.4	Chloroform	ND	0.20	0.037	ppbv		ND	0.98	0.18	ug/m3
74-87-3	50.49	Chloromethane	0.49	0.20	0.090	ppbv		1.0	0.41	0.19	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.20	0.083	ppbv		ND	0.63	0.26	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.20	0.040	ppbv		ND	1.3	0.25	ug/m3
110-82-7	84.16	Cyclohexane	0.41	0.20	0.11	ppbv		1.4	0.69	0.38	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	0.057	ppbv		ND	0.81	0.23	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	0.059	ppbv		ND	0.79	0.23	ug/m3
106-93-4	187.9	1,2-Dibromoethane (EDB)	ND	0.20	0.097	ppbv		ND	1.5	0.75	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	0.070	ppbv		ND	0.81	0.28	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.20	0.062	ppbv		ND	0.92	0.29	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.20	0.12	ppbv		ND	0.72	0.43	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.43	0.20	0.032	ppbv		2.1	0.99	0.16	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.20	0.052	ppbv		ND	1.7	0.44	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	0.069	ppbv		ND	0.79	0.27	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	0.077	ppbv		ND	0.79	0.31	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.20	0.062	ppbv		ND	0.91	0.28	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.20	0.040	ppbv		ND	1.2	0.24	ug/m3

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: IA-02_GILMORE401_032823
Lab Sample ID: JD63008-3 **Date Sampled:** 03/28/23
Matrix: AIR - Indoor Air Comp. Summa ID: A1592 **Date Received:** 03/29/23
Method: TO-15 **Percent Solids:** n/a
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
95-50-1	147	o-Dichlorobenzene	ND	0.20	0.15	ppbv		ND	1.2	0.90	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.20	0.19	ppbv		ND	1.2	1.1	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.20	0.10	ppbv		ND	0.91	0.45	ug/m3
108-20-3	102	Di-Isopropyl ether	ND	0.20	0.082	ppbv		ND	0.83	0.34	ug/m3
64-17-5	46.07	Ethanol	42.3	0.50	0.39	ppbv		79.7	0.94	0.73	ug/m3
100-41-4	106.2	Ethylbenzene	0.62	0.20	0.061	ppbv		2.7	0.87	0.26	ug/m3
141-78-6	88	Ethyl Acetate	1.5	0.20	0.10	ppbv		5.4	0.72	0.36	ug/m3
622-96-8	120.19	4-Ethyltoluene	0.16	0.20	0.095	ppbv	J	0.79	0.98	0.47	ug/m3
76-13-1	187.4	Freon 113	ND	0.20	0.031	ppbv		ND	1.5	0.24	ug/m3
76-14-2	170.9	Freon 114	ND	0.20	0.050	ppbv		ND	1.4	0.35	ug/m3
142-82-5	100.2	Heptane	6.4	0.20	0.092	ppbv		26	0.82	0.38	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.20	0.062	ppbv		ND	2.1	0.66	ug/m3
110-54-3	86.18	Hexane	1.1	0.20	0.11	ppbv		3.9	0.70	0.39	ug/m3
591-78-6	100	2-Hexanone	ND	0.20	0.15	ppbv		ND	0.82	0.61	ug/m3
98-82-8	120	Isopropylbenzene	ND	0.20	0.064	ppbv		ND	0.98	0.31	ug/m3
67-63-0	60.1	Isopropyl Alcohol	0.50	0.20	0.14	ppbv		1.2	0.49	0.34	ug/m3
99-87-6	134	p-Isopropyltoluene	0.67	0.20	0.080	ppbv		3.7	1.1	0.44	ug/m3
75-09-2	84.94	Methylene chloride	0.47	0.20	0.056	ppbv		1.6	0.69	0.19	ug/m3
78-93-3	72.11	Methyl ethyl ketone	1.7	0.20	0.11	ppbv		5.0	0.59	0.32	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	0.51	0.20	0.073	ppbv		2.1	0.82	0.30	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.20	0.080	ppbv		ND	0.72	0.29	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.20	0.070	ppbv		ND	0.82	0.29	ug/m3
91-20-3	128.17	Naphthalene	ND	0.20	0.13	ppbv		ND	1.0	0.68	ug/m3
109-66-0	72	Pentane	5.6	0.20	0.14	ppbv		16	0.59	0.41	ug/m3
103-65-1	120	n-Propylbenzene	ND	0.20	0.091	ppbv		ND	0.98	0.45	ug/m3
115-07-1	42	Propylene	ND	0.50	0.14	ppbv		ND	0.86	0.24	ug/m3
100-42-5	104.1	Styrene	0.14	0.20	0.12	ppbv	J	0.60	0.85	0.51	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.20	0.037	ppbv		ND	1.1	0.20	ug/m3
79-34-5	167.85	1,1,2,2-Tetrachloroethane	ND	0.20	0.048	ppbv		ND	1.4	0.33	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	0.038	ppbv		ND	1.1	0.21	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.20	0.12	ppbv		ND	1.5	0.89	ug/m3
95-63-6	120.19	1,2,4-Trimethylbenzene	0.50	0.20	0.087	ppbv		2.5	0.98	0.43	ug/m3
108-67-8	120.19	1,3,5-Trimethylbenzene	0.13	0.20	0.080	ppbv	J	0.64	0.98	0.39	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	0.48	0.20	0.095	ppbv		2.2	0.93	0.44	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	0.20	0.093	ppbv		ND	0.61	0.28	ug/m3
127-18-4	165.8	Tetrachloroethylene	0.051	0.040	0.014	ppbv		0.35	0.27	0.095	ug/m3
109-99-9	72.11	Tetrahydrofuran	ND	0.20	0.090	ppbv		ND	0.59	0.27	ug/m3
108-88-3	92.14	Toluene	5.6	0.20	0.057	ppbv		21	0.75	0.21	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	0.10	ug/m3
75-69-4	137.4	Trichlorofluoromethane	0.23	0.20	0.036	ppbv		1.3	1.1	0.20	ug/m3

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	IA-02_GILMORE401_032823		
Lab Sample ID:	JD63008-3	**Date Sampled:**	03/28/23
Matrix:	AIR - Indoor Air Comp. Summa ID: A1592	**Date Received:**	03/29/23
Method:	TO-15	**Percent Solids:**	n/a
Project:	AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
75-01-4	62.5	Vinyl chloride	ND	0.20	0.069	ppbv		ND	0.51	0.18	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.20	0.11	ppbv		ND	0.70	0.39	ug/m3
	106.2	m,p-Xylene	2.1	0.20	0.14	ppbv		9.1	0.87	0.61	ug/m3
95-47-6	106.2	o-Xylene	0.68	0.20	0.077	ppbv		3.0	0.87	0.33	ug/m3
1330-20-7	106.2	Xylenes (total)	2.8	0.20	0.077	ppbv		12	0.87	0.33	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	94%	99%	65-128%

(a) Result is from Run# 2
(b) Associated CCV outside of control limits low. This compound in blank spike is outside in house QC limits bias low.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	IA-03_DYNAPLATE501_032823		
Lab Sample ID:	JD63008-4	**Date Sampled:**	03/28/23
Matrix:	AIR - Indoor Air Comp. Summa ID: A1642	**Date Received:**	03/29/23
Method:	TO-15	**Percent Solids:**	n/a
Project:	AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2W64373.D	1	04/07/23 02:56	TCH	n/a	n/a	V2W2860
Run #2							

	Initial Volume
Run #1	400 ml
Run #2	

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
67-64-1	58.08	Acetone (2-Propanone)	9.0	0.20	0.15	ppbv		21	0.48	0.36	ug/m3
107-02-8	56	Acrolein	0.60	0.20	0.088	ppbv		1.4	0.46	0.20	ug/m3
107-13-1	53	Acrylonitrile	ND	0.20	0.091	ppbv		ND	0.43	0.20	ug/m3
106-99-0	54.09	1,3-Butadiene	0.26	0.20	0.084	ppbv		0.58	0.44	0.19	ug/m3
71-43-2	78.11	Benzene	0.74	0.20	0.062	ppbv		2.4	0.64	0.20	ug/m3
75-27-4	163.8	Bromodichloromethane	0.27	0.20	0.030	ppbv		1.8	1.3	0.20	ug/m3
75-25-2	252.8	Bromoform	ND	0.20	0.071	ppbv		ND	2.1	0.73	ug/m3
74-83-9	94.94	Bromomethane	ND	0.20	0.069	ppbv		ND	0.78	0.27	ug/m3
593-60-2	106.9	Bromoethene	ND	0.20	0.061	ppbv		ND	0.87	0.27	ug/m3
100-44-7	126	Benzyl Chloride [a]	ND	0.20	0.13	ppbv		ND	1.0	0.67	ug/m3
104-51-8	134	n-Butylbenzene	ND	0.20	0.11	ppbv		ND	1.1	0.60	ug/m3
135-98-8	134	sec-Butylbenzene	ND	0.20	0.081	ppbv		ND	1.1	0.44	ug/m3
75-15-0	76.14	Carbon disulfide	9.2	0.20	0.045	ppbv		29	0.62	0.14	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.20	0.074	ppbv		ND	0.92	0.34	ug/m3
75-00-3	64.52	Chloroethane	ND	0.20	0.068	ppbv		ND	0.53	0.18	ug/m3
67-66-3	119.4	Chloroform	1.3	0.20	0.037	ppbv		6.3	0.98	0.18	ug/m3
74-87-3	50.49	Chloromethane	0.54	0.20	0.090	ppbv		1.1	0.41	0.19	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.20	0.083	ppbv		ND	0.63	0.26	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.20	0.040	ppbv		ND	1.3	0.25	ug/m3
110-82-7	84.16	Cyclohexane	0.12	0.20	0.11	ppbv	J	0.41	0.69	0.38	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	0.057	ppbv		ND	0.81	0.23	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	0.059	ppbv		ND	0.79	0.23	ug/m3
106-93-4	187.9	1,2-Dibromoethane (EDB)	ND	0.20	0.097	ppbv		ND	1.5	0.75	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	0.070	ppbv		ND	0.81	0.28	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.20	0.062	ppbv		ND	0.92	0.29	ug/m3
123-91-1	88.12	1,4-Dioxane	1.3	0.20	0.12	ppbv		4.7	0.72	0.43	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.43	0.20	0.032	ppbv		2.1	0.99	0.16	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.20	0.052	ppbv		ND	1.7	0.44	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	0.069	ppbv		ND	0.79	0.27	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	0.077	ppbv		ND	0.79	0.31	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.20	0.062	ppbv		ND	0.91	0.28	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.20	0.040	ppbv		ND	1.2	0.24	ug/m3

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: IA-03_DYNAPLATE501_032823
Lab Sample ID: JD63008-4 **Date Sampled:** 03/28/23
Matrix: AIR - Indoor Air Comp. Summa ID: A1642 **Date Received:** 03/29/23
Method: TO-15 **Percent Solids:** n/a
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
95-50-1	147	o-Dichlorobenzene	ND	0.20	0.15	ppbv		ND	1.2	0.90	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.20	0.19	ppbv		ND	1.2	1.1	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.20	0.10	ppbv		ND	0.91	0.45	ug/m3
108-20-3	102	Di-Isopropyl ether	ND	0.20	0.082	ppbv		ND	0.83	0.34	ug/m3
64-17-5	46.07	Ethanol	8.5	0.50	0.39	ppbv		16	0.94	0.73	ug/m3
100-41-4	106.2	Ethylbenzene	0.15	0.20	0.061	ppbv	J	0.65	0.87	0.26	ug/m3
141-78-6	88	Ethyl Acetate	1.5	0.20	0.10	ppbv		5.4	0.72	0.36	ug/m3
622-96-8	120.19	4-Ethyltoluene	ND	0.20	0.095	ppbv		ND	0.98	0.47	ug/m3
76-13-1	187.4	Freon 113	ND	0.20	0.031	ppbv		ND	1.5	0.24	ug/m3
76-14-2	170.9	Freon 114	ND	0.20	0.050	ppbv		ND	1.4	0.35	ug/m3
142-82-5	100.2	Heptane	0.13	0.20	0.092	ppbv	J	0.53	0.82	0.38	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.20	0.062	ppbv		ND	2.1	0.66	ug/m3
110-54-3	86.18	Hexane	0.48	0.20	0.11	ppbv		1.7	0.70	0.39	ug/m3
591-78-6	100	2-Hexanone	ND	0.20	0.15	ppbv		ND	0.82	0.61	ug/m3
98-82-8	120	Isopropylbenzene	ND	0.20	0.064	ppbv		ND	0.98	0.31	ug/m3
67-63-0	60.1	Isopropyl Alcohol	2.6	0.20	0.14	ppbv		6.4	0.49	0.34	ug/m3
99-87-6	134	p-Isopropyltoluene	0.65	0.20	0.080	ppbv		3.6	1.1	0.44	ug/m3
75-09-2	84.94	Methylene chloride	0.95	0.20	0.056	ppbv		3.3	0.69	0.19	ug/m3
78-93-3	72.11	Methyl ethyl ketone	0.92	0.20	0.11	ppbv		2.7	0.59	0.32	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.20	0.073	ppbv		ND	0.82	0.30	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.20	0.080	ppbv		ND	0.72	0.29	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.20	0.070	ppbv		ND	0.82	0.29	ug/m3
91-20-3	128.17	Naphthalene	ND	0.20	0.13	ppbv		ND	1.0	0.68	ug/m3
109-66-0	72	Pentane	3.5	0.20	0.14	ppbv		10	0.59	0.41	ug/m3
103-65-1	120	n-Propylbenzene	ND	0.20	0.091	ppbv		ND	0.98	0.45	ug/m3
115-07-1	42	Propylene	ND	0.50	0.14	ppbv		ND	0.86	0.24	ug/m3
100-42-5	104.1	Styrene	ND	0.20	0.12	ppbv		ND	0.85	0.51	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.20	0.037	ppbv		ND	1.1	0.20	ug/m3
79-34-5	167.85	1,1,2,2-Tetrachloroethane	ND	0.20	0.048	ppbv		ND	1.4	0.33	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	0.038	ppbv		ND	1.1	0.21	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.20	0.12	ppbv		ND	1.5	0.89	ug/m3
95-63-6	120.19	1,2,4-Trimethylbenzene	0.098	0.20	0.087	ppbv	J	0.48	0.98	0.43	ug/m3
108-67-8	120.19	1,3,5-Trimethylbenzene	ND	0.20	0.080	ppbv		ND	0.98	0.39	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	0.46	0.20	0.095	ppbv		2.1	0.93	0.44	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	0.68	0.20	0.093	ppbv		2.1	0.61	0.28	ug/m3
127-18-4	165.8	Tetrachloroethylene	ND	0.040	0.014	ppbv		ND	0.27	0.095	ug/m3
109-99-9	72.11	Tetrahydrofuran	0.18	0.20	0.090	ppbv	J	0.53	0.59	0.27	ug/m3
108-88-3	92.14	Toluene	0.92	0.20	0.057	ppbv		3.5	0.75	0.21	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	0.10	ug/m3
75-69-4	137.4	Trichlorofluoromethane	0.23	0.20	0.036	ppbv		1.3	1.1	0.20	ug/m3

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	IA-03_DYNAPLATE501_032823		
Lab Sample ID:	JD63008-4	**Date Sampled:**	03/28/23
Matrix:	AIR - Indoor Air Comp. Summa ID: A1642	**Date Received:**	03/29/23
Method:	TO-15	**Percent Solids:**	n/a
Project:	AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
75-01-4	62.5	Vinyl chloride	ND	0.20	0.069	ppbv		ND	0.51	0.18	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.20	0.11	ppbv		ND	0.70	0.39	ug/m3
	106.2	m,p-Xylene	0.46	0.20	0.14	ppbv		2.0	0.87	0.61	ug/m3
95-47-6	106.2	o-Xylene	0.15	0.20	0.077	ppbv	J	0.65	0.87	0.33	ug/m3
1330-20-7	106.2	Xylenes (total)	0.61	0.20	0.077	ppbv		2.6	0.87	0.33	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	94%		65-128%

(a) Associated CCV outside of control limits low. This compound in blank spike is outside in house QC limits bias low.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Summa Canister and Flow Controller Log

SGS

Air

CHAIN OF CUSTODY - AIR

PAGE 1 OF 1

PN

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX 732-329-3499
www.sgs.com/ehsusa

FED-EX Tracking #

Bottle Order Control # BW-031323-141

SGS Quote #

SGS Job # JD63008

Client / Reporting Information

Company Name: Arcadis
Address: 28550 Cabot Dr Suite #500
City: Novi State: MI Zip: 48377
Project Contact: Christina Weaver E-mail: christina.weaver@arcadis.com
Phone #

Project Information

Project Name: Univar Grand Rapids
Street: 2940 Stafford Ave SW
City: Wyoming State: MI
Project #: 30164040
Client Purchase Order #

Weather Parameters

Temperature (Fahrenheit)
Start: Maximum:
Stop: Minimum:
Atmoshpheric Pressure (inches of Hg)
Start: Maximum:
Stop: Minimum:
Other weather comment:

Requested Analysis

Sampler(s) Name(s): Scott Filipiak, Lottie Jay

Lab Sample #	Field ID / Point of Collection	Air Type: Ind (I) Soil Vap (SV) Amb (A)	Air Type: Res (R) Non-Res (NR)	Sampling Equipment Info: Canister Serial #	Sampling Equipment Info: Canister Size 6L or 1L	Sampling Equipment Info: Flow Controller Serial #	Start Sampling Information: Date	Start: Time (24hr clock)	Start: Canister Pressure ("Hg)	Start: Interior Temp (F)	Start: Sampler Init.	Stop Sampling Information: Date	Stop: Time (24hr clock)	Stop: Canister Pressure ("Hg)	Stop: Interior Temp (F)	Stop: Sampler Init.
1	AA-01-Gilmore-032823	SV	NR	A1313	6L	FC1144	3/28/23	0817	30.0	27	SF	3/28/23	1600	8.0	48	LJ
2	AA-02-Dynaplate-032823	SV		M146	6L	FC613	3/28/23	0717	28.5	27	SF	3/28/23	1441	7.0	47	LJ
3	IA-02-Gilmore401-032823	SV		A1592	6L	FC1203	3/28/23	0813	29.0	35	SF	3/28/23	1546	7.0	50	LJ
4	IA-03-Dynaplate501-032823	SV		A1642	6L	FC370	3/28/23	0710	30.0	50	SF	3/28/23	1434	8.0	65	LJ

Turnaround Time (Business days)

- 15 Business Days
- 10 Business Days
- 5 Business Days
- 3 Business Days *
- 2 Business Days *
- 1 Business Day *
- Other

Approved By:
Date:
* Approval needed for 1-3 Business Day TAT

Data Deliverable Information

All NJDEP TO-15 is mandatory Full T1

- Comm A
- Comm B
- Reduced T2
- Full T1
- Other:
- DKQP reporting

Comments / Remarks

Univar 4.4 Initial Assessment BB-413
Label Verification
Sample inventory is verified upon receipt in the Laboratory

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Laboratory: 1	Date / Time: 3/28/23	1430	Received By: 1	Relinquished By: 2	Date / Time: 3/28/23 1622	Received By: 2 FX	
Relinquished by: 3 FX	Date / Time: 3/29/23 1000		Received By: 3	Relinquished By: 4	Date / Time:	Received By: 4	
Relinquished by: 5	Date / Time:		Received By: 5	Custody Seal #			

http://www.sgs.com/en/terms-and-conditions

EHSA-QAC-0022-01-FORM-Dayton-Air COC
Rev.date:1/15/2021

Initial Assessment
Label Verification

5.1 5

SGS Sample Receipt Summary

Job Number: JD63008 **Client:** ARCADIS **Project:** AGMMIS: UNIVAR GRAND RAPIDS, 2940 ST

Date / Time Received: 3/29/2023 10:00:00 AM **Delivery Method:** FEDEX **Airbill #'s:**

Cooler Temps (Raw Measured) °C:

Cooler Temps (Corrected) °C:

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☐		☐
2. Cooler temp verification:	N/A		
3. Cooler media:	N/A		
4. No. Coolers:	N/A		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	☑
2. Trip Blank listed on COC:	☐		☐	☑
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☐

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Test Strip Lot #s: pH 1-12: 231619 pH 12+: 203117A Other: (Specify)

Comments: 1). No analysis is requested on the COC. Please verify the analysis.

Responded to by: Beth Stopen

Response Date: 3/31/23

Run all samples for VTO15SL
Per Christina Weaver

JD63008: Chain of Custody
Page 3 of 3

Summa Canister and Flow Controller Log

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI
Received: 03/29/23

SUMMA CANISTERS

Shipping							Receiving					
Summa ID	L	Vac " Hg	Date Out	By	SCC Batch	SCC FileID	Sample Number	Date In	By	Vac " Hg	Pres psig	Final psig	Dil Fact
A1313	6	29.4	03/22/23	ML	CP12056	6W28014.D	JD63008-1	04/03/23	DG	6.5			1
M146	6	29.4	03/22/23	ML	CP11932	3W77630.D	JD63008-2	04/03/23	DG	7.5			1
A1592	6	29.4	03/22/23	ML	CP11947	6W26980.D	JD63008-3	04/03/23	DG	6.5			1
A1642	6	29.4	03/22/23	ML	CP12081	8W00239.D	JD63008-4	04/03/23	DG	7.5			1

FLOW CONTROLLERS / OTHER

Shipping					Receiving				
Flow Crtl ID	Date Out	By	cc/ min	Time hrs.	Date In	By	cc/ min	Flow RPD	Equipment Type
FC370	03/22/23	ML	10.5	8	04/03/23	DG	10.4	1	Flow Controller
FC613	03/22/23	ML	10.5	8	04/03/23	DG	9.6	9	Flow Controller
FC1144	03/22/23	ML	10.3	8	04/03/23	DG	9.9	4	Flow Controller
FC1203	03/22/23	ML	10.4	8	04/03/23	DG	9.7	7	Flow Controller

SGS Bottle Order(s):
BW-031323-145

Prep Date	Room Temp(F)	Bar Pres "Hg
03/22/23	70	29.92

MS Volatiles

6

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2W2860-MB	2W64360.D	1	04/06/23	TCH	n/a	n/a	V2W2860

The QC reported here applies to the following samples: **Method:** TO-15

JD63008-1, JD63008-2, JD63008-3, JD63008-4

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
67-64-1	Acetone (2-Propanone)	ND	0.20	0.15	ppbv		ND	0.48	ug/m3
107-02-8	Acrolein	ND	0.20	0.088	ppbv		ND	0.46	ug/m3
107-13-1	Acrylonitrile	ND	0.20	0.091	ppbv		ND	0.43	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	0.084	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	0.062	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	0.030	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	0.071	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	0.069	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
104-51-8	n-Butylbenzene	ND	0.20	0.11	ppbv		ND	1.1	ug/m3
135-98-8	sec-Butylbenzene	ND	0.20	0.081	ppbv		ND	1.1	ug/m3
75-15-0	Carbon disulfide	ND	0.20	0.045	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	0.074	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	0.068	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	0.037	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	0.090	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	0.083	ppbv		ND	0.63	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	0.040	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	0.11	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	0.057	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.059	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane (EDB)	ND	0.20	0.097	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	0.070	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	0.062	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	0.12	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	0.032	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	0.052	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.069	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.077	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	0.062	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	0.040	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	0.15	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	0.19	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	0.10	ppbv		ND	0.91	ug/m3
108-20-3	Di-Isopropyl ether	ND	0.20	0.082	ppbv		ND	0.83	ug/m3

Method Blank Summary

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2W2860-MB	2W64360.D	1	04/06/23	TCH	n/a	n/a	V2W2860

The QC reported here applies to the following samples: **Method:** TO-15

JD63008-1, JD63008-2, JD63008-3, JD63008-4

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
64-17-5	Ethanol	ND	0.50	0.39	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	0.10	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	0.095	ppbv		ND	0.98	ug/m3
76-13-1	Freon 113	ND	0.20	0.031	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	0.050	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	0.092	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	0.062	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	0.15	ppbv		ND	0.82	ug/m3
98-82-8	Isopropylbenzene	ND	0.20	0.064	ppbv		ND	0.98	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	0.14	ppbv		ND	0.49	ug/m3
99-87-6	p-Isopropyltoluene	ND	0.20	0.080	ppbv		ND	1.1	ug/m3
75-09-2	Methylene chloride	ND	0.20	0.056	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	0.11	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	0.073	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	0.080	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	0.070	ppbv		ND	0.82	ug/m3
91-20-3	Naphthalene	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
109-66-0	Pentane	ND	0.20	0.14	ppbv		ND	0.59	ug/m3
103-65-1	n-Propylbenzene	ND	0.20	0.091	ppbv		ND	0.98	ug/m3
115-07-1	Propylene	ND	0.50	0.14	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	0.12	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.037	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.048	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.038	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	0.12	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	0.087	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	0.080	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	0.095	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	0.093	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	0.014	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	0.090	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	0.057	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	0.036	ppbv		ND	1.1	ug/m3

Method Blank Summary

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2W2860-MB	2W64360.D	1	04/06/23	TCH	n/a	n/a	V2W2860

The QC reported here applies to the following samples: **Method:** TO-15

JD63008-1, JD63008-2, JD63008-3, JD63008-4

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
75-01-4	Vinyl chloride	ND	0.20	0.069	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	0.14	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	0.077	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	0.077	ppbv		ND	0.87	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	94%	65-128%

Method Blank Summary

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W3153-MB	3W79949.D	1	04/07/23	TCH	n/a	n/a	V3W3153

The QC reported here applies to the following samples: **Method:** TO-15

JD63008-3

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
67-64-1	Acetone (2-Propanone)	ND	0.20	0.15	ppbv		ND	0.48	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	92%	65-128%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
124-38-9	Carbon dioxide	4.09	17	ppbv	JN
	Total TIC, Volatile		0	ppbv	

Method Blank Summary

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W1141-MB	6W26949.D	1	11/07/22	TCH	n/a	n/a	V6W1141

The QC reported here applies to the following samples: **Method:** TO-15

V6W1141-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
67-64-1	Acetone (2-Propanone)	ND	0.20	0.15	ppbv		ND	0.48	ug/m3
107-02-8	Acrolein	ND	0.20	0.088	ppbv		ND	0.46	ug/m3
107-13-1	Acrylonitrile	ND	0.20	0.091	ppbv		ND	0.43	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	0.084	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	0.062	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	0.030	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	0.071	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	0.069	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
104-51-8	n-Butylbenzene	ND	0.20	0.11	ppbv		ND	1.1	ug/m3
135-98-8	sec-Butylbenzene	ND	0.20	0.081	ppbv		ND	1.1	ug/m3
75-15-0	Carbon disulfide	ND	0.20	0.045	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	0.074	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	0.068	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	0.037	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	0.090	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	0.083	ppbv		ND	0.63	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	0.040	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	0.11	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	0.057	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.059	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane (EDB)	ND	0.20	0.097	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	0.070	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	0.062	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	0.12	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	0.032	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	0.052	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.069	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.077	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	0.062	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	0.040	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	0.15	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	0.19	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	0.10	ppbv		ND	0.91	ug/m3
108-20-3	Di-Isopropyl ether	ND	0.20	0.082	ppbv		ND	0.83	ug/m3

Method Blank Summary

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W1141-MB	6W26949.D	1	11/07/22	TCH	n/a	n/a	V6W1141

The QC reported here applies to the following samples: **Method:** TO-15

V6W1141-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
64-17-5	Ethanol	ND	0.50	0.39	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	0.10	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	0.095	ppbv		ND	0.98	ug/m3
76-13-1	Freon 113	ND	0.20	0.031	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	0.050	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	0.092	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	0.062	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	0.15	ppbv		ND	0.82	ug/m3
98-82-8	Isopropylbenzene	ND	0.20	0.064	ppbv		ND	0.98	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	0.14	ppbv		ND	0.49	ug/m3
99-87-6	p-Isopropyltoluene	ND	0.20	0.080	ppbv		ND	1.1	ug/m3
75-09-2	Methylene chloride	ND	0.20	0.056	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	0.11	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	0.073	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	0.080	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	0.070	ppbv		ND	0.82	ug/m3
91-20-3	Naphthalene	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
109-66-0	Pentane	ND	0.20	0.14	ppbv		ND	0.59	ug/m3
103-65-1	n-Propylbenzene	ND	0.20	0.091	ppbv		ND	0.98	ug/m3
115-07-1	Propylene	ND	0.50	0.14	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	0.12	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.037	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.048	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.038	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	0.12	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	0.087	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	0.080	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	0.095	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	0.093	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	0.014	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	0.090	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	0.057	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	0.036	ppbv		ND	1.1	ug/m3

Method Blank Summary

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W1141-MB	6W26949.D	1	11/07/22	TCH	n/a	n/a	V6W1141

The QC reported here applies to the following samples: **Method:** TO-15

V6W1141-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
75-01-4	Vinyl chloride	ND	0.20	0.069	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	0.14	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	0.077	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	0.077	ppbv		ND	0.87	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	100%	65-128%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
124-38-9	Carbon dioxide	1.65	3.2	ppbv	JN
	Total TIC, Volatile		0	ppbv	

Method Blank Summary

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W3057-MB	3W77614.D	1	11/07/22	TCH	n/a	n/a	V3W3057

The QC reported here applies to the following samples: **Method:** TO-15

V3W3057-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
67-64-1	Acetone (2-Propanone)	ND	0.20	0.15	ppbv		ND	0.48	ug/m3
107-02-8	Acrolein	ND	0.20	0.088	ppbv		ND	0.46	ug/m3
107-13-1	Acrylonitrile	ND	0.20	0.091	ppbv		ND	0.43	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	0.084	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	0.062	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	0.030	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	0.071	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	0.069	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
104-51-8	n-Butylbenzene	ND	0.20	0.11	ppbv		ND	1.1	ug/m3
135-98-8	sec-Butylbenzene	ND	0.20	0.081	ppbv		ND	1.1	ug/m3
75-15-0	Carbon disulfide	ND	0.20	0.045	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	0.074	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	0.068	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	0.037	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	0.090	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	0.083	ppbv		ND	0.63	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	0.040	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	0.11	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	0.057	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.059	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane (EDB)	ND	0.20	0.097	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	0.070	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	0.062	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	0.12	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	0.032	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	0.052	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.069	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.077	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	0.062	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	0.040	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	0.15	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	0.19	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	0.10	ppbv		ND	0.91	ug/m3
108-20-3	Di-Isopropyl ether	ND	0.20	0.082	ppbv		ND	0.83	ug/m3

Method Blank Summary

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W3057-MB	3W77614.D	1	11/07/22	TCH	n/a	n/a	V3W3057

The QC reported here applies to the following samples: **Method:** TO-15

V3W3057-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
64-17-5	Ethanol	ND	0.50	0.39	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	0.10	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	0.095	ppbv		ND	0.98	ug/m3
76-13-1	Freon 113	ND	0.20	0.031	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	0.050	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	0.092	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	0.062	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	0.15	ppbv		ND	0.82	ug/m3
98-82-8	Isopropylbenzene	ND	0.20	0.064	ppbv		ND	0.98	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	0.14	ppbv		ND	0.49	ug/m3
99-87-6	p-Isopropyltoluene	ND	0.20	0.080	ppbv		ND	1.1	ug/m3
75-09-2	Methylene chloride	ND	0.20	0.056	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	0.11	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	0.073	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	0.080	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	0.070	ppbv		ND	0.82	ug/m3
91-20-3	Naphthalene	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
109-66-0	Pentane	ND	0.20	0.14	ppbv		ND	0.59	ug/m3
103-65-1	n-Propylbenzene	ND	0.20	0.091	ppbv		ND	0.98	ug/m3
115-07-1	Propylene	ND	0.50	0.14	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	0.12	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.037	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.048	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.038	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	0.12	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	0.087	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	0.080	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	0.095	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	0.093	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	0.014	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	0.090	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	0.057	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	0.036	ppbv		ND	1.1	ug/m3

Method Blank Summary

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W3057-MB	3W77614.D	1	11/07/22	TCH	n/a	n/a	V3W3057

The QC reported here applies to the following samples: **Method:** TO-15

V3W3057-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
75-01-4	Vinyl chloride	ND	0.20	0.069	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	0.14	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	0.077	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	0.077	ppbv		ND	0.87	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	101%	65-128%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
124-38-9	Carbon dioxide	4.21	200	ppbv	JN
	Total TIC, Volatile		0	ppbv	

Method Blank Summary

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W3107-MB	3W78866.D	1	01/18/23	TCH	n/a	n/a	V3W3107

The QC reported here applies to the following samples: **Method:** TO-15

V3W3107-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
67-64-1	Acetone (2-Propanone)	ND	0.20	0.15	ppbv		ND	0.48	ug/m3
107-02-8	Acrolein	ND	0.20	0.088	ppbv		ND	0.46	ug/m3
107-13-1	Acrylonitrile	ND	0.20	0.091	ppbv		ND	0.43	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	0.084	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	0.062	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	0.030	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	0.071	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	0.069	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
104-51-8	n-Butylbenzene	ND	0.20	0.11	ppbv		ND	1.1	ug/m3
135-98-8	sec-Butylbenzene	ND	0.20	0.081	ppbv		ND	1.1	ug/m3
75-15-0	Carbon disulfide	ND	0.20	0.045	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	0.074	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	0.068	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	0.037	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	0.090	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	0.083	ppbv		ND	0.63	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	0.040	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	0.11	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	0.057	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.059	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane (EDB)	ND	0.20	0.097	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	0.070	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	0.062	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	0.12	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	0.032	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	0.052	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.069	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.077	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	0.062	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	0.040	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	0.15	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	0.19	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	0.10	ppbv		ND	0.91	ug/m3
108-20-3	Di-Isopropyl ether	ND	0.20	0.082	ppbv		ND	0.83	ug/m3

Method Blank Summary

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W3107-MB	3W78866.D	1	01/18/23	TCH	n/a	n/a	V3W3107

The QC reported here applies to the following samples: **Method:** TO-15

V3W3107-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
64-17-5	Ethanol	ND	0.50	0.39	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	0.10	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	0.095	ppbv		ND	0.98	ug/m3
76-13-1	Freon 113	ND	0.20	0.031	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	0.050	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	0.092	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	0.062	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	0.15	ppbv		ND	0.82	ug/m3
98-82-8	Isopropylbenzene	ND	0.20	0.064	ppbv		ND	0.98	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	0.14	ppbv		ND	0.49	ug/m3
99-87-6	p-Isopropyltoluene	ND	0.20	0.080	ppbv		ND	1.1	ug/m3
75-09-2	Methylene chloride	ND	0.20	0.056	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	0.11	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	0.073	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	0.080	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	0.070	ppbv		ND	0.82	ug/m3
91-20-3	Naphthalene	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
109-66-0	Pentane	ND	0.20	0.14	ppbv		ND	0.59	ug/m3
103-65-1	n-Propylbenzene	ND	0.20	0.091	ppbv		ND	0.98	ug/m3
115-07-1	Propylene	ND	0.50	0.14	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	0.12	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.037	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.048	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.038	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	0.12	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	0.087	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	0.080	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	0.095	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	0.093	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	0.014	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	0.090	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	0.057	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	0.036	ppbv		ND	1.1	ug/m3

Method Blank Summary

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W3107-MB	3W78866.D	1	01/18/23	TCH	n/a	n/a	V3W3107

The QC reported here applies to the following samples: **Method:** TO-15

V3W3107-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
75-01-4	Vinyl chloride	ND	0.20	0.069	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	0.14	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	0.077	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	0.077	ppbv		ND	0.87	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	96%	65-128%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
124-38-9	Carbon dioxide	4.13	21	ppbv	JN
	Total TIC, Volatile		0	ppbv	

Method Blank Summary

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V8W10-MB	8W00229.D	1	02/07/23	TCH	n/a	n/a	V8W10

The QC reported here applies to the following samples: **Method:** TO-15

V8W10-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
67-64-1	Acetone (2-Propanone)	ND	0.20	0.15	ppbv		ND	0.48	ug/m3
107-02-8	Acrolein	ND	0.20	0.088	ppbv		ND	0.46	ug/m3
107-13-1	Acrylonitrile	ND	0.20	0.091	ppbv		ND	0.43	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	0.084	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	0.062	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	0.030	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	0.071	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	0.069	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
104-51-8	n-Butylbenzene	ND	0.20	0.11	ppbv		ND	1.1	ug/m3
135-98-8	sec-Butylbenzene	ND	0.20	0.081	ppbv		ND	1.1	ug/m3
75-15-0	Carbon disulfide	ND	0.20	0.045	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	0.074	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	0.068	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	0.037	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	0.090	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	0.083	ppbv		ND	0.63	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	0.040	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	0.11	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	0.057	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.059	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane (EDB)	ND	0.20	0.097	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	0.070	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	0.062	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	0.12	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	0.032	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	0.052	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.069	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.077	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	0.062	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	0.040	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	0.15	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	0.19	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	0.10	ppbv		ND	0.91	ug/m3
108-20-3	Di-Isopropyl ether	ND	0.20	0.082	ppbv		ND	0.83	ug/m3

Method Blank Summary

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V8W10-MB	8W00229.D	1	02/07/23	TCH	n/a	n/a	V8W10

The QC reported here applies to the following samples: **Method:** TO-15

V8W10-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
64-17-5	Ethanol	ND	0.50	0.39	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	0.10	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	0.095	ppbv		ND	0.98	ug/m3
76-13-1	Freon 113	ND	0.20	0.031	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	0.050	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	0.092	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	0.062	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	0.15	ppbv		ND	0.82	ug/m3
98-82-8	Isopropylbenzene	ND	0.20	0.064	ppbv		ND	0.98	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	0.14	ppbv		ND	0.49	ug/m3
99-87-6	p-Isopropyltoluene	ND	0.20	0.080	ppbv		ND	1.1	ug/m3
75-09-2	Methylene chloride	ND	0.20	0.056	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	0.11	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	0.073	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	0.080	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	0.070	ppbv		ND	0.82	ug/m3
91-20-3	Naphthalene	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
109-66-0	Pentane	ND	0.20	0.14	ppbv		ND	0.59	ug/m3
103-65-1	n-Propylbenzene	ND	0.20	0.091	ppbv		ND	0.98	ug/m3
115-07-1	Propylene	ND	0.50	0.14	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	0.12	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.037	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.048	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.038	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	0.12	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	0.087	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	0.080	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	0.095	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	0.093	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	0.014	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	0.090	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	0.057	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	0.036	ppbv		ND	1.1	ug/m3

Method Blank Summary

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V8W10-MB	8W00229.D	1	02/07/23	TCH	n/a	n/a	V8W10

The QC reported here applies to the following samples: **Method:** TO-15

V8W10-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
75-01-4	Vinyl chloride	ND	0.20	0.069	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	0.14	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	0.077	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	0.077	ppbv		ND	0.87	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	94%	65-128%

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2W2860-BS	2W64356.D	1	04/06/23	TCH	n/a	n/a	V2W2860
V2W2860-BSD	2W64357.D	1	04/06/23	TCH	n/a	n/a	V2W2860

The QC reported here applies to the following samples: **Method:** TO-15

JD63008-1, JD63008-2, JD63008-3, JD63008-4

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone (2-Propanone)	10	8.6	86	7.9	79	8	70-130/30
107-02-8	Acrolein	10	8.9	89	8.2	82	8	70-130/30
107-13-1	Acrylonitrile	10	8.9	89	8.4	84	6	70-130/30
106-99-0	1,3-Butadiene	10	9.0	90	8.3	83	8	70-130/30
71-43-2	Benzene	10	10	100	9.3	93	7	70-130/30
75-27-4	Bromodichloromethane	10	10.1	101	9.8	98	3	70-130/30
75-25-2	Bromoform	10	9.9	99	9.6	96	3	70-130/30
74-83-9	Bromomethane	10	10.9	109	10.1	101	8	70-130/30
593-60-2	Bromoethene	10	10.9	109	10.3	103	6	70-130/30
100-44-7	Benzyl Chloride	10	5.8	58* [a]	5.7	57* [a]	2	70-130/30
104-51-8	n-Butylbenzene	10	8.5	85	8.3	83	2	50-150/30 [b]
135-98-8	sec-Butylbenzene	10	8.5	85	8.2	82	4	50-150/30 [b]
75-15-0	Carbon disulfide	10	11.7	117	10.9	109	7	70-130/30
108-90-7	Chlorobenzene	10	10.0	100	9.8	98	2	70-130/30
75-00-3	Chloroethane	10	10.4	104	9.5	95	9	70-130/30
67-66-3	Chloroform	10	10.5	105	9.9	99	6	70-130/30
74-87-3	Chloromethane	10	9.1	91	8.3	83	9	70-130/30
107-05-1	3-Chloropropene	10	10.4	104	9.8	98	6	70-130/30
56-23-5	Carbon tetrachloride	10	10.1	101	9.5	95	6	70-130/30
110-82-7	Cyclohexane	10	10.1	101	9.7	97	4	70-130/30
75-34-3	1,1-Dichloroethane	10	9.8	98	9.2	92	6	70-130/30
75-35-4	1,1-Dichloroethylene	10	10.6	106	10	100	6	70-130/30
106-93-4	1,2-Dibromoethane (EDB)	10	9.7	97	9.3	93	4	70-130/30
107-06-2	1,2-Dichloroethane	10	8.7	87	8.3	83	5	70-130/30
78-87-5	1,2-Dichloropropane	10	9.0	90	8.7	87	3	70-130/30
123-91-1	1,4-Dioxane	10	9.6	96	9.3	93	3	70-130/30
75-71-8	Dichlorodifluoromethane	10	10.1	101	9.4	94	7	70-130/30
124-48-1	Dibromochloromethane	10	10	100	9.5	95	5	70-130/30
156-60-5	trans-1,2-Dichloroethylene	10	11.0	110	10.5	105	5	70-130/30
156-59-2	cis-1,2-Dichloroethylene	10	10.9	109	10.4	104	5	70-130/30
10061-01-5	cis-1,3-Dichloropropene	10	9.1	91	8.7	87	4	70-130/30
541-73-1	m-Dichlorobenzene	10	9.2	92	8.8	88	4	70-130/30
95-50-1	o-Dichlorobenzene	10	9.0	90	8.6	86	5	70-130/30
106-46-7	p-Dichlorobenzene	10	9.1	91	8.8	88	3	70-130/30
10061-02-6	trans-1,3-Dichloropropene	10	8.4	84	8.1	81	4	70-130/30
108-20-3	Di-Isopropyl ether	10	9.1	91	8.3	83	9	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2W2860-BS	2W64356.D	1	04/06/23	TCH	n/a	n/a	V2W2860
V2W2860-BSD	2W64357.D	1	04/06/23	TCH	n/a	n/a	V2W2860

The QC reported here applies to the following samples: **Method:** TO-15

JD63008-1, JD63008-2, JD63008-3, JD63008-4

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
64-17-5	Ethanol	10	7.8	78	7.1	71	9	70-130/30
100-41-4	Ethylbenzene	10	9.4	94	9.1	91	3	70-130/30
141-78-6	Ethyl Acetate	10	9.4	94	8.7	87	8	70-130/30
622-96-8	4-Ethyltoluene	10	10.2	102	9.9	99	3	70-130/30
76-13-1	Freon 113	10	9.7	97	9.2	92	5	70-130/30
76-14-2	Freon 114	10	10.9	109	10.2	102	7	70-130/30
142-82-5	Heptane	10	7.4	74	7.1	71	4	70-130/30
87-68-3	Hexachlorobutadiene	10	7.1	71	7.0	70	1	70-130/30
110-54-3	Hexane	10	8.6	86	8.1	81	6	70-130/30
591-78-6	2-Hexanone	10	8.4	84	8.0	80	5	70-130/30
98-82-8	Isopropylbenzene	10	9.5	95	9.1	91	4	70-130/30
67-63-0	Isopropyl Alcohol	10	8.4	84	7.7	77	9	70-130/30
99-87-6	p-Isopropyltoluene	10	8.5	85	8.2	82	4	70-130/30
75-09-2	Methylene chloride	10	9.6	96	9.1	91	5	70-130/30
78-93-3	Methyl ethyl ketone	10	10.8	108	10.0	100	8	70-130/30
108-10-1	Methyl Isobutyl Ketone	10	8.3	83	7.9	79	5	70-130/30
1634-04-4	Methyl Tert Butyl Ether	10	9.0	90	8.6	86	5	70-130/30
80-62-6	Methylmethacrylate	10	9.6	96	9.1	91	5	70-130/30
91-20-3	Naphthalene	10	7.4	74	7.3	73	1	70-130/30
109-66-0	Pentane	10	8.4	84	7.8	78	7	70-130/30
103-65-1	n-Propylbenzene	10	9.6	96	9.3	93	3	50-150/30 [b]
115-07-1	Propylene	10	8.2	82	7.5	75	9	70-130/30
100-42-5	Styrene	10	9.9	99	9.6	96	3	70-130/30
71-55-6	1,1,1-Trichloroethane	10	9.6	96	9.2	92	4	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	10	10.6	106	10.1	101	5	70-130/30
79-00-5	1,1,2-Trichloroethane	10	10	100	9.5	95	5	70-130/30
120-82-1	1,2,4-Trichlorobenzene	10	7.2	72	7.1	71	1	70-130/30
95-63-6	1,2,4-Trimethylbenzene	10	9.5	95	9.2	92	3	70-130/30
108-67-8	1,3,5-Trimethylbenzene	10	9.9	99	9.4	94	5	70-130/30
540-84-1	2,2,4-Trimethylpentane	10	8.3	83	7.8	78	6	70-130/30
75-65-0	Tertiary Butyl Alcohol	10	7.6	76	7.2	72	5	70-130/30
127-18-4	Tetrachloroethylene	10	9.2	92	8.9	89	3	70-130/30
109-99-9	Tetrahydrofuran	10	11.1	111	10.4	104	7	70-130/30
108-88-3	Toluene	10	9.4	94	9.0	90	4	70-130/30
79-01-6	Trichloroethylene	10	9.6	96	9.2	92	4	70-130/30
75-69-4	Trichlorofluoromethane	10	9.4	94	8.8	88	7	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2W2860-BS	2W64356.D	1	04/06/23	TCH	n/a	n/a	V2W2860
V2W2860-BSD	2W64357.D	1	04/06/23	TCH	n/a	n/a	V2W2860

The QC reported here applies to the following samples: **Method:** TO-15

JD63008-1, JD63008-2, JD63008-3, JD63008-4

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
75-01-4	Vinyl chloride	10	9.7	97	9.1	91	6	70-130/30
108-05-4	Vinyl Acetate	10	12.0	120	11.6	116	3	70-130/30
	m,p-Xylene	20	18.5	93	17.9	90	3	70-130/30
95-47-6	o-Xylene	10	9.1	91	8.8	88	3	70-130/30
1330-20-7	Xylenes (total)	30	27.6	92	26.7	89	3	70-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	93%	94%	65-128%

(a) Outside in house control limits.
(b) Advisory control limits.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W3153-BS	3W79946.D	1	04/07/23	TCH	n/a	n/a	V3W3153
V3W3153-BSD	3W79947.D	1	04/07/23	TCH	n/a	n/a	V3W3153

The QC reported here applies to the following samples: **Method:** TO-15

JD63008-3

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone (2-Propanone)	10	8.9	89	8.8	88	1	70-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	108%	109%	65-128%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W1141-BS	6W26946.D	1	11/07/22	TCH	n/a	n/a	V6W1141
V6W1141-BSD	6W26947.D	1	11/07/22	TCH	n/a	n/a	V6W1141

The QC reported here applies to the following samples: **Method:** TO-15

V6W1141-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone (2-Propanone)	10	9.8	98	9.4	94	4	70-130/30
107-02-8	Acrolein	10	11.0	110	10.6	106	4	70-130/30
107-13-1	Acrylonitrile	10	10.4	104	10.0	100	4	70-130/30
106-99-0	1,3-Butadiene	10	10.1	101	9.9	99	2	70-130/30
71-43-2	Benzene	10	8.9	89	8.7	87	2	70-130/30
75-27-4	Bromodichloromethane	10	8.6	86	8.4	84	2	70-130/30
75-25-2	Bromoform	10	9.8	98	9.4	94	4	70-130/30
74-83-9	Bromomethane	10	10.4	104	10.1	101	3	70-130/30
593-60-2	Bromoethene	10	10.5	105	10.2	102	3	70-130/30
100-44-7	Benzyl Chloride	10	10.5	105	10.2	102	3	70-130/30
104-51-8	n-Butylbenzene	10	11.2	112	10.6	106	6	50-150/30 [a]
135-98-8	sec-Butylbenzene	10	10.4	104	9.9	99	5	50-150/30 [a]
75-15-0	Carbon disulfide	10	9.5	95	9.1	91	4	70-130/30
108-90-7	Chlorobenzene	10	9.4	94	9.0	90	4	70-130/30
75-00-3	Chloroethane	10	10.8	108	10.3	103	5	70-130/30
67-66-3	Chloroform	10	9.2	92	8.9	89	3	70-130/30
74-87-3	Chloromethane	10	9.4	94	9.1	91	3	70-130/30
107-05-1	3-Chloropropene	10	10.1	101	9.6	96	5	70-130/30
56-23-5	Carbon tetrachloride	10	9.0	90	8.6	86	5	70-130/30
110-82-7	Cyclohexane	10	9.2	92	8.7	87	6	70-130/30
75-34-3	1,1-Dichloroethane	10	9.2	92	9.0	90	2	70-130/30
75-35-4	1,1-Dichloroethylene	10	9.5	95	9.2	92	3	70-130/30
106-93-4	1,2-Dibromoethane (EDB)	10	9.5	95	9.1	91	4	70-130/30
107-06-2	1,2-Dichloroethane	10	8.7	87	8.4	84	4	70-130/30
78-87-5	1,2-Dichloropropane	10	9.0	90	8.5	85	6	70-130/30
123-91-1	1,4-Dioxane	10	10.8	108	10.3	103	5	70-130/30
75-71-8	Dichlorodifluoromethane	10	9.2	92	8.8	88	4	70-130/30
124-48-1	Dibromochloromethane	10	9.1	91	8.7	87	4	70-130/30
156-60-5	trans-1,2-Dichloroethylene	10	9.4	94	9.0	90	4	70-130/30
156-59-2	cis-1,2-Dichloroethylene	10	9.3	93	8.9	89	4	70-130/30
10061-01-5	cis-1,3-Dichloropropene	10	9.3	93	9.0	90	3	70-130/30
541-73-1	m-Dichlorobenzene	10	10.0	100	9.6	96	4	70-130/30
95-50-1	o-Dichlorobenzene	10	9.9	99	9.5	95	4	70-130/30
106-46-7	p-Dichlorobenzene	10	10.0	100	9.7	97	3	70-130/30
10061-02-6	trans-1,3-Dichloropropene	10	9.4	94	9.0	90	4	70-130/30
108-20-3	Di-Isopropyl ether	10	8.9	89	8.7	87	2	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W1141-BS	6W26946.D	1	11/07/22	TCH	n/a	n/a	V6W1141
V6W1141-BSD	6W26947.D	1	11/07/22	TCH	n/a	n/a	V6W1141

The QC reported here applies to the following samples: **Method:** TO-15

V6W1141-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
64-17-5	Ethanol	10	9.8	98	9.6	96	2	70-130/30
100-41-4	Ethylbenzene	10	8.3	83	8.0	80	4	70-130/30
141-78-6	Ethyl Acetate	10	9.4	94	9.1	91	3	70-130/30
622-96-8	4-Ethyltoluene	10	10.4	104	10.3	103	1	70-130/30
76-13-1	Freon 113	10	9.7	97	9.4	94	3	70-130/30
76-14-2	Freon 114	10	9.4	94	9.1	91	3	70-130/30
142-82-5	Heptane	10	9.3	93	8.9	89	4	70-130/30
87-68-3	Hexachlorobutadiene	10	11.0	110	10.6	106	4	70-130/30
110-54-3	Hexane	10	9.0	90	8.7	87	3	70-130/30
591-78-6	2-Hexanone	10	12.6	126	12.2	122	3	70-130/30
98-82-8	Isopropylbenzene	10	9.4	94	9.0	90	4	70-130/30
67-63-0	Isopropyl Alcohol	10	9.5	95	9.2	92	3	70-130/30
99-87-6	p-Isopropyltoluene	10	10.2	102	9.8	98	4	70-130/30
75-09-2	Methylene chloride	10	9.2	92	8.9	89	3	70-130/30
78-93-3	Methyl ethyl ketone	10	9.8	98	9.4	94	4	70-130/30
108-10-1	Methyl Isobutyl Ketone	10	11.0	110	10.7	107	3	70-130/30
1634-04-4	Methyl Tert Butyl Ether	10	8.0	80	7.7	77	4	70-130/30
80-62-6	Methylmethacrylate	10	9.6	96	9.5	95	1	70-130/30
91-20-3	Naphthalene	10	11.8	118	11.2	112	5	70-130/30
109-66-0	Pentane	10	9.6	96	9.4	94	2	70-130/30
103-65-1	n-Propylbenzene	10	10.0	100	9.7	97	3	50-150/30 [a]
115-07-1	Propylene	10	8.9	89	8.7	87	2	70-130/30
100-42-5	Styrene	10	10.2	102	9.8	98	4	70-130/30
71-55-6	1,1,1-Trichloroethane	10	8.8	88	8.5	85	3	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	10	9.8	98	9.4	94	4	70-130/30
79-00-5	1,1,2-Trichloroethane	10	9.4	94	9.0	90	4	70-130/30
120-82-1	1,2,4-Trichlorobenzene	10	11.2	112	10.5	105	6	70-130/30
95-63-6	1,2,4-Trimethylbenzene	10	10.5	105	10.2	102	3	70-130/30
108-67-8	1,3,5-Trimethylbenzene	10	10.5	105	10.0	100	5	70-130/30
540-84-1	2,2,4-Trimethylpentane	10	9.0	90	8.7	87	3	70-130/30
75-65-0	Tertiary Butyl Alcohol	10	8.7	87	8.5	85	2	70-130/30
127-18-4	Tetrachloroethylene	10	9.9	99	9.6	96	3	70-130/30
109-99-9	Tetrahydrofuran	10	9.8	98	9.5	95	3	70-130/30
108-88-3	Toluene	10	8.5	85	8.1	81	5	70-130/30
79-01-6	Trichloroethylene	10	8.7	87	8.4	84	4	70-130/30
75-69-4	Trichlorofluoromethane	10	10	100	9.7	97	3	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W1141-BS	6W26946.D	1	11/07/22	TCH	n/a	n/a	V6W1141
V6W1141-BSD	6W26947.D	1	11/07/22	TCH	n/a	n/a	V6W1141

The QC reported here applies to the following samples: **Method:** TO-15

V6W1141-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
75-01-4	Vinyl chloride	10	9.6	96	9.4	94	2	70-130/30
108-05-4	Vinyl Acetate	10	10.1	101	9.8	98	3	70-130/30
	m,p-Xylene	20	17.4	87	16.7	84	4	70-130/30
95-47-6	o-Xylene	10	8.8	88	8.5	85	3	70-130/30
1330-20-7	Xylenes (total)	30	26.2	87	25.2	84	4	70-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	103%	104%	65-128%

(a) Advisory control limits.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W3057-BS	3W77611.D	1	11/07/22	TCH	n/a	n/a	V3W3057
V3W3057-BSD	3W77612.D	1	11/07/22	TCH	n/a	n/a	V3W3057

The QC reported here applies to the following samples: **Method:** TO-15

V3W3057-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone (2-Propanone)	10	8.5	85	7.5	75	13	70-130/30
107-02-8	Acrolein	10	10.5	105	8.7	87	19	70-130/30
107-13-1	Acrylonitrile	10	10.4	104	9.9	99	5	70-130/30
106-99-0	1,3-Butadiene	10	9.2	92	9.2	92	0	70-130/30
71-43-2	Benzene	10	9.9	99	10.1	101	2	70-130/30
75-27-4	Bromodichloromethane	10	10.2	102	10.3	103	1	70-130/30
75-25-2	Bromoform	10	11.3	113	11.5	115	2	70-130/30
74-83-9	Bromomethane	10	9.1	91	8.5	85	7	70-130/30
593-60-2	Bromoethene	10	10.7	107	8.7	87	21	70-130/30
100-44-7	Benzyl Chloride	10	11.5	115	11.5	115	0	70-130/30
104-51-8	n-Butylbenzene	10	11.8	118	11.9	119	1	50-150/30 [a]
135-98-8	sec-Butylbenzene	10	11.2	112	11.2	112	0	50-150/30 [a]
75-15-0	Carbon disulfide	10	9.5	95	9.6	96	1	70-130/30
108-90-7	Chlorobenzene	10	10.4	104	10.6	106	2	70-130/30
75-00-3	Chloroethane	10	9.8	98	9.3	93	5	70-130/30
67-66-3	Chloroform	10	9.9	99	10.1	101	2	70-130/30
74-87-3	Chloromethane	10	10.2	102	9.9	99	3	70-130/30
107-05-1	3-Chloropropene	10	9.6	96	9.6	96	0	70-130/30
56-23-5	Carbon tetrachloride	10	10.0	100	10.2	102	2	70-130/30
110-82-7	Cyclohexane	10	9.2	92	9.4	94	2	70-130/30
75-34-3	1,1-Dichloroethane	10	9.0	90	9.2	92	2	70-130/30
75-35-4	1,1-Dichloroethylene	10	9.9	99	10.2	102	3	70-130/30
106-93-4	1,2-Dibromoethane (EDB)	10	10.8	108	10.9	109	1	70-130/30
107-06-2	1,2-Dichloroethane	10	9.3	93	9.5	95	2	70-130/30
78-87-5	1,2-Dichloropropane	10	9.1	91	9.1	91	0	70-130/30
123-91-1	1,4-Dioxane	10	10.2	102	10.5	105	3	70-130/30
75-71-8	Dichlorodifluoromethane	10	10.2	102	10.2	102	0	70-130/30
124-48-1	Dibromochloromethane	10	11.1	111	11.2	112	1	70-130/30
156-60-5	trans-1,2-Dichloroethylene	10	10.1	101	10.3	103	2	70-130/30
156-59-2	cis-1,2-Dichloroethylene	10	10.1	101	10.4	104	3	70-130/30
10061-01-5	cis-1,3-Dichloropropene	10	9.8	98	9.9	99	1	70-130/30
541-73-1	m-Dichlorobenzene	10	11.6	116	11.7	117	1	70-130/30
95-50-1	o-Dichlorobenzene	10	11.7	117	11.9	119	2	70-130/30
106-46-7	p-Dichlorobenzene	10	11.7	117	11.8	118	1	70-130/30
10061-02-6	trans-1,3-Dichloropropene	10	9.9	99	10.0	100	1	70-130/30
108-20-3	Di-Isopropyl ether	10	9.4	94	9.5	95	1	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W3057-BS	3W77611.D	1	11/07/22	TCH	n/a	n/a	V3W3057
V3W3057-BSD	3W77612.D	1	11/07/22	TCH	n/a	n/a	V3W3057

The QC reported here applies to the following samples: **Method:** TO-15

V3W3057-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
64-17-5	Ethanol	10	8.9	89	8.2	82	8	70-130/30
100-41-4	Ethylbenzene	10	10.1	101	10.3	103	2	70-130/30
141-78-6	Ethyl Acetate	10	9.9	99	10.0	100	1	70-130/30
622-96-8	4-Ethyltoluene	10	11.5	115	11.7	117	2	70-130/30
76-13-1	Freon 113	10	9.8	98	9.9	99	1	70-130/30
76-14-2	Freon 114	10	10.2	102	9.9	99	3	70-130/30
142-82-5	Heptane	10	9.5	95	9.6	96	1	70-130/30
87-68-3	Hexachlorobutadiene	10	11.9	119	11.8	118	1	70-130/30
110-54-3	Hexane	10	9.6	96	9.7	97	1	70-130/30
591-78-6	2-Hexanone	10	11.1	111	11.2	112	1	70-130/30
98-82-8	Isopropylbenzene	10	10.9	109	11.1	111	2	70-130/30
67-63-0	Isopropyl Alcohol	10	9.6	96	8.8	88	9	70-130/30
99-87-6	p-Isopropyltoluene	10	11.7	117	11.5	115	2	70-130/30
75-09-2	Methylene chloride	10	9.1	91	9.2	92	1	70-130/30
78-93-3	Methyl ethyl ketone	10	9.8	98	10.0	100	2	70-130/30
108-10-1	Methyl Isobutyl Ketone	10	10.0	100	10.2	102	2	70-130/30
1634-04-4	Methyl Tert Butyl Ether	10	9.4	94	9.6	96	2	70-130/30
80-62-6	Methylmethacrylate	10	10.0	100	10.2	102	2	70-130/30
91-20-3	Naphthalene	10	13.2	132* [b]	13.2	132* [b]	0	70-130/30
109-66-0	Pentane	10	9.4	94	9.3	93	1	70-130/30
103-65-1	n-Propylbenzene	10	11.3	113	11.5	115	2	50-150/30 [a]
115-07-1	Propylene	10	9.7	97	9.7	97	0	70-130/30
100-42-5	Styrene	10	11.1	111	11.4	114	3	70-130/30
71-55-6	1,1,1-Trichloroethane	10	10.0	100	10.2	102	2	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	10	10.7	107	10.9	109	2	70-130/30
79-00-5	1,1,2-Trichloroethane	10	10.0	100	10.1	101	1	70-130/30
120-82-1	1,2,4-Trichlorobenzene	10	12.7	127	12.6	126	1	70-130/30
95-63-6	1,2,4-Trimethylbenzene	10	11.7	117	11.9	119	2	70-130/30
108-67-8	1,3,5-Trimethylbenzene	10	11.4	114	11.6	116	2	70-130/30
540-84-1	2,2,4-Trimethylpentane	10	9.8	98	9.9	99	1	70-130/30
75-65-0	Tertiary Butyl Alcohol	10	9.3	93	9.5	95	2	70-130/30
127-18-4	Tetrachloroethylene	10	10.1	101	10.1	101	0	70-130/30
109-99-9	Tetrahydrofuran	10	9.7	97	10	100	3	70-130/30
108-88-3	Toluene	10	9.9	99	10.0	100	1	70-130/30
79-01-6	Trichloroethylene	10	9.8	98	9.9	99	1	70-130/30
75-69-4	Trichlorofluoromethane	10	10	100	9.8	98	2	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W3057-BS	3W77611.D	1	11/07/22	TCH	n/a	n/a	V3W3057
V3W3057-BSD	3W77612.D	1	11/07/22	TCH	n/a	n/a	V3W3057

The QC reported here applies to the following samples: **Method:** TO-15

V3W3057-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
75-01-4	Vinyl chloride	10	9.6	96	9.3	93	3	70-130/30
108-05-4	Vinyl Acetate	10	9.7	97	10.0	100	3	70-130/30
	m,p-Xylene	20	20.1	101	20.5	103	2	70-130/30
95-47-6	o-Xylene	10	10.2	102	10.4	104	2	70-130/30
1330-20-7	Xylenes (total)	30	30.3	101	30.9	103	2	70-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	99%	100%	65-128%

(a) Advisory control limits.
(b) Outside in house control limits.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W3107-BS	3W78863.D	1	01/18/23	TCH	n/a	n/a	V3W3107
V3W3107-BSD	3W78864.D	1	01/18/23	TCH	n/a	n/a	V3W3107

The QC reported here applies to the following samples: **Method:** TO-15

V3W3107-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone (2-Propanone)	10	7.0	70	7.2	72	3	70-130/30
107-02-8	Acrolein	10	9.0	90	9.4	94	4	70-130/30
107-13-1	Acrylonitrile	10	9.6	96	9.7	97	1	70-130/30
106-99-0	1,3-Butadiene	10	8.6	86	8.5	85	1	70-130/30
71-43-2	Benzene	10	10.2	102	10.1	101	1	70-130/30
75-27-4	Bromodichloromethane	10	10.7	107	10.7	107	0	70-130/30
75-25-2	Bromoform	10	11.0	110	10.7	107	3	70-130/30
74-83-9	Bromomethane	10	8.4	84	8.3	83	1	70-130/30
593-60-2	Bromoethene	10	7.8	78	7.8	78	0	70-130/30
100-44-7	Benzyl Chloride	10	11.8	118	11.3	113	4	70-130/30
104-51-8	n-Butylbenzene	10	10.7	107	10.3	103	4	50-150/30 [a]
135-98-8	sec-Butylbenzene	10	9.6	96	9.2	92	4	50-150/30 [a]
75-15-0	Carbon disulfide	10	11.2	112	11.3	113	1	70-130/30
108-90-7	Chlorobenzene	10	10.9	109	10.5	105	4	70-130/30
75-00-3	Chloroethane	10	8.2	82	8.1	81	1	70-130/30
67-66-3	Chloroform	10	11.2	112	11.2	112	0	70-130/30
74-87-3	Chloromethane	10	8.3	83	8.2	82	1	70-130/30
107-05-1	3-Chloropropene	10	11.4	114	11.6	116	2	70-130/30
56-23-5	Carbon tetrachloride	10	11.3	113	11.2	112	1	70-130/30
110-82-7	Cyclohexane	10	10.7	107	10.6	106	1	70-130/30
75-34-3	1,1-Dichloroethane	10	10.6	106	10.7	107	1	70-130/30
75-35-4	1,1-Dichloroethylene	10	11.0	110	11.0	110	0	70-130/30
106-93-4	1,2-Dibromoethane (EDB)	10	11.7	117	11.2	112	4	70-130/30
107-06-2	1,2-Dichloroethane	10	11.9	119	11.9	119	0	70-130/30
78-87-5	1,2-Dichloropropane	10	9.4	94	9.5	95	1	70-130/30
123-91-1	1,4-Dioxane	10	11.7	117	11.8	118	1	70-130/30
75-71-8	Dichlorodifluoromethane	10	11.6	116	11.6	116	0	70-130/30
124-48-1	Dibromochloromethane	10	10.3	103	9.9	99	4	70-130/30
156-60-5	trans-1,2-Dichloroethylene	10	11.0	110	11.1	111	1	70-130/30
156-59-2	cis-1,2-Dichloroethylene	10	11.7	117	11.8	118	1	70-130/30
10061-01-5	cis-1,3-Dichloropropene	10	10.6	106	10.7	107	1	70-130/30
541-73-1	m-Dichlorobenzene	10	10.9	109	10.4	104	5	70-130/30
95-50-1	o-Dichlorobenzene	10	10.7	107	10.2	102	5	70-130/30
106-46-7	p-Dichlorobenzene	10	11.6	116	11.1	111	4	70-130/30
10061-02-6	trans-1,3-Dichloropropene	10	10.8	108	10.8	108	0	70-130/30
108-20-3	Di-Isopropyl ether	10	10.1	101	10.1	101	0	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W3107-BS	3W78863.D	1	01/18/23	TCH	n/a	n/a	V3W3107
V3W3107-BSD	3W78864.D	1	01/18/23	TCH	n/a	n/a	V3W3107

The QC reported here applies to the following samples: **Method:** TO-15

V3W3107-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
64-17-5	Ethanol	10	7.6	76	7.6	76	0	70-130/30
100-41-4	Ethylbenzene	10	10.5	105	10.2	102	3	70-130/30
141-78-6	Ethyl Acetate	10	10.9	109	11.2	112	3	70-130/30
622-96-8	4-Ethyltoluene	10	11.2	112	10.8	108	4	70-130/30
76-13-1	Freon 113	10	10.7	107	10.7	107	0	70-130/30
76-14-2	Freon 114	10	9.6	96	9.6	96	0	70-130/30
142-82-5	Heptane	10	8.0	80	8.1	81	1	70-130/30
87-68-3	Hexachlorobutadiene	10	11.5	115	11.1	111	4	70-130/30
110-54-3	Hexane	10	10	100	10.0	100	0	70-130/30
591-78-6	2-Hexanone	10	10.2	102	10	100	2	70-130/30
98-82-8	Isopropylbenzene	10	10.5	105	10.2	102	3	70-130/30
67-63-0	Isopropyl Alcohol	10	9.1	91	9.1	91	0	70-130/30
99-87-6	p-Isopropyltoluene	10	9.0	90	8.7	87	3	70-130/30
75-09-2	Methylene chloride	10	10.2	102	10.3	103	1	70-130/30
78-93-3	Methyl ethyl ketone	10	11.4	114	11.3	113	1	70-130/30
108-10-1	Methyl Isobutyl Ketone	10	9.4	94	9.5	95	1	70-130/30
1634-04-4	Methyl Tert Butyl Ether	10	11.2	112	11.3	113	1	70-130/30
80-62-6	Methylmethacrylate	10	10.1	101	10.2	102	1	70-130/30
91-20-3	Naphthalene	10	13.4	134* [b]	13.0	130	3	70-130/30
109-66-0	Pentane	10	8.5	85	8.6	86	1	70-130/30
103-65-1	n-Propylbenzene	10	10.7	107	10.3	103	4	50-150/30 [a]
115-07-1	Propylene	10	7.9	79	8.0	80	1	70-130/30
100-42-5	Styrene	10	11.5	115	11.2	112	3	70-130/30
71-55-6	1,1,1-Trichloroethane	10	10.8	108	10.8	108	0	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	10	11.2	112	10.8	108	4	70-130/30
79-00-5	1,1,2-Trichloroethane	10	10.5	105	10.6	106	1	70-130/30
120-82-1	1,2,4-Trichlorobenzene	10	13.2	132* [b]	12.9	129	2	70-130/30
95-63-6	1,2,4-Trimethylbenzene	10	10.7	107	10.3	103	4	70-130/30
108-67-8	1,3,5-Trimethylbenzene	10	11.1	111	10.7	107	4	70-130/30
540-84-1	2,2,4-Trimethylpentane	10	9.1	91	9.2	92	1	70-130/30
75-65-0	Tertiary Butyl Alcohol	10	10.1	101	10.1	101	0	70-130/30
127-18-4	Tetrachloroethylene	10	10.3	103	9.9	99	4	70-130/30
109-99-9	Tetrahydrofuran	10	11.4	114	11.5	115	1	70-130/30
108-88-3	Toluene	10	9.9	99	9.9	99	0	70-130/30
79-01-6	Trichloroethylene	10	10.3	103	10.3	103	0	70-130/30
75-69-4	Trichlorofluoromethane	10	11.3	113	11.4	114	1	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W3107-BS	3W78863.D	1	01/18/23	TCH	n/a	n/a	V3W3107
V3W3107-BSD	3W78864.D	1	01/18/23	TCH	n/a	n/a	V3W3107

The QC reported here applies to the following samples: **Method:** TO-15

V3W3107-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
75-01-4	Vinyl chloride	10	9.2	92	9.2	92	0	70-130/30
108-05-4	Vinyl Acetate	10	12.9	129	12.9	129	0	70-130/30
	m,p-Xylene	20	20.8	104	20.3	102	2	70-130/30
95-47-6	o-Xylene	10	10.2	102	9.9	99	3	70-130/30
1330-20-7	Xylenes (total)	30	31.0	103	30.2	101	3	70-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	100%	101%	65-128%

(a) Advisory control limits.
(b) High percent recovery and no associated positive reported in the QC batch.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V8W10-BS	8W00226.D	1	02/07/23	TCH	n/a	n/a	V8W10
V8W10-BSD	8W00227.D	1	02/07/23	TCH	n/a	n/a	V8W10

The QC reported here applies to the following samples: **Method:** TO-15

V8W10-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone (2-Propanone)	10	9.0	90	9.3	93	3	70-130/30
107-02-8	Acrolein	10	7.6	76	8.0	80	5	70-130/30
107-13-1	Acrylonitrile	10	10.1	101	10.6	106	5	70-130/30
106-99-0	1,3-Butadiene	10	10.3	103	10.8	108	5	70-130/30
71-43-2	Benzene	10	9.8	98	10.1	101	3	70-130/30
75-27-4	Bromodichloromethane	10	10.6	106	10.7	107	1	70-130/30
75-25-2	Bromoform	10	9.5	95	9.6	96	1	70-130/30
74-83-9	Bromomethane	10	9.7	97	10.0	100	3	70-130/30
593-60-2	Bromoethene	10	9.6	96	9.9	99	3	70-130/30
100-44-7	Benzyl Chloride	10	7.9	79	8.2	82	4	70-130/30
104-51-8	n-Butylbenzene	10	11.7	117	11.8	118	1	50-150/30 [a]
135-98-8	sec-Butylbenzene	10	11.2	112	11.3	113	1	50-150/30 [a]
75-15-0	Carbon disulfide	10	10.3	103	10.6	106	3	70-130/30
108-90-7	Chlorobenzene	10	10.2	102	10.3	103	1	70-130/30
75-00-3	Chloroethane	10	10	100	10.4	104	4	70-130/30
67-66-3	Chloroform	10	10.8	108	11.0	110	2	70-130/30
74-87-3	Chloromethane	10	9.1	91	9.3	93	2	70-130/30
107-05-1	3-Chloropropene	10	10.1	101	10.6	106	5	70-130/30
56-23-5	Carbon tetrachloride	10	9.8	98	10.0	100	2	70-130/30
110-82-7	Cyclohexane	10	10	100	10.2	102	2	70-130/30
75-34-3	1,1-Dichloroethane	10	10.3	103	10.6	106	3	70-130/30
75-35-4	1,1-Dichloroethylene	10	10.2	102	10.5	105	3	70-130/30
106-93-4	1,2-Dibromoethane (EDB)	10	10.2	102	10.4	104	2	70-130/30
107-06-2	1,2-Dichloroethane	10	10.7	107	10.9	109	2	70-130/30
78-87-5	1,2-Dichloropropane	10	10.5	105	10.7	107	2	70-130/30
123-91-1	1,4-Dioxane	10	10.0	100	10.1	101	1	70-130/30
75-71-8	Dichlorodifluoromethane	10	11.0	110	11.3	113	3	70-130/30
124-48-1	Dibromochloromethane	10	9.9	99	10	100	1	70-130/30
156-60-5	trans-1,2-Dichloroethylene	10	10.1	101	10.3	103	2	70-130/30
156-59-2	cis-1,2-Dichloroethylene	10	10	100	10.3	103	3	70-130/30
10061-01-5	cis-1,3-Dichloropropene	10	9.2	92	9.4	94	2	70-130/30
541-73-1	m-Dichlorobenzene	10	10.8	108	10.9	109	1	70-130/30
95-50-1	o-Dichlorobenzene	10	11.1	111	11.3	113	2	70-130/30
106-46-7	p-Dichlorobenzene	10	10.8	108	10.8	108	0	70-130/30
10061-02-6	trans-1,3-Dichloropropene	10	8.9	89	9.2	92	3	70-130/30
108-20-3	Di-Isopropyl ether	10	10.6	106	11.0	110	4	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V8W10-BS	8W00226.D	1	02/07/23	TCH	n/a	n/a	V8W10
V8W10-BSD	8W00227.D	1	02/07/23	TCH	n/a	n/a	V8W10

The QC reported here applies to the following samples: **Method:** TO-15

V8W10-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
64-17-5	Ethanol	10	10.6	106	10.8	108	2	70-130/30
100-41-4	Ethylbenzene	10	8.6	86	8.8	88	2	70-130/30
141-78-6	Ethyl Acetate	10	10.9	109	11.3	113	4	70-130/30
622-96-8	4-Ethyltoluene	10	10.9	109	11.1	111	2	70-130/30
76-13-1	Freon 113	10	10.0	100	10.3	103	3	70-130/30
76-14-2	Freon 114	10	10.8	108	11.1	111	3	70-130/30
142-82-5	Heptane	10	9.9	99	10.0	100	1	70-130/30
87-68-3	Hexachlorobutadiene	10	10.1	101	10.2	102	1	70-130/30
110-54-3	Hexane	10	10.8	108	11.0	110	2	70-130/30
591-78-6	2-Hexanone	10	10.5	105	10.8	108	3	70-130/30
98-82-8	Isopropylbenzene	10	10.4	104	10.6	106	2	70-130/30
67-63-0	Isopropyl Alcohol	10	9.2	92	9.6	96	4	70-130/30
99-87-6	p-Isopropyltoluene	10	11.8	118	11.8	118	0	70-130/30
75-09-2	Methylene chloride	10	10	100	10.3	103	3	70-130/30
78-93-3	Methyl ethyl ketone	10	10.1	101	10.5	105	4	70-130/30
108-10-1	Methyl Isobutyl Ketone	10	10.2	102	10.4	104	2	70-130/30
1634-04-4	Methyl Tert Butyl Ether	10	9.0	90	9.4	94	4	70-130/30
80-62-6	Methylmethacrylate	10	10.2	102	10.4	104	2	70-130/30
91-20-3	Naphthalene	10	11.3	113	11.4	114	1	70-130/30
109-66-0	Pentane	10	9.9	99	10.3	103	4	70-130/30
103-65-1	n-Propylbenzene	10	10.6	106	10.7	107	1	50-150/30 [a]
115-07-1	Propylene	10	9.7	97	9.9	99	2	70-130/30
100-42-5	Styrene	10	10.1	101	10.3	103	2	70-130/30
71-55-6	1,1,1-Trichloroethane	10	9.8	98	10.1	101	3	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	10	11.2	112	11.3	113	1	70-130/30
79-00-5	1,1,2-Trichloroethane	10	10.7	107	10.9	109	2	70-130/30
120-82-1	1,2,4-Trichlorobenzene	10	10.6	106	10.6	106	0	70-130/30
95-63-6	1,2,4-Trimethylbenzene	10	11.7	117	11.8	118	1	70-130/30
108-67-8	1,3,5-Trimethylbenzene	10	11.1	111	11.2	112	1	70-130/30
540-84-1	2,2,4-Trimethylpentane	10	10.4	104	10.5	105	1	70-130/30
75-65-0	Tertiary Butyl Alcohol	10	8.7	87	9.1	91	4	70-130/30
127-18-4	Tetrachloroethylene	10	10.3	103	10.5	105	2	70-130/30
109-99-9	Tetrahydrofuran	10	10.1	101	10.6	106	5	70-130/30
108-88-3	Toluene	10	8.9	89	9.2	92	3	70-130/30
79-01-6	Trichloroethylene	10	10.3	103	10.5	105	2	70-130/30
75-69-4	Trichlorofluoromethane	10	10.8	108	11.1	111	3	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V8W10-BS	8W00226.D	1	02/07/23	TCH	n/a	n/a	V8W10
V8W10-BSD	8W00227.D	1	02/07/23	TCH	n/a	n/a	V8W10

The QC reported here applies to the following samples: **Method:** TO-15

V8W10-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
75-01-4	Vinyl chloride	10	10.4	104	10.6	106	2	70-130/30
108-05-4	Vinyl Acetate	10	9.3	93	9.5	95	2	70-130/30
	m,p-Xylene	20	18.0	90	18.3	92	2	70-130/30
95-47-6	o-Xylene	10	9.1	91	9.2	92	1	70-130/30
1330-20-7	Xylenes (total)	30	27.1	90	27.5	92	1	70-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	100%	99%	65-128%

(a) Advisory control limits.

* = Outside of Control Limits.

Duplicate Summary

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD62993-1DUP	2W64362.D	1	04/06/23	TCH	n/a	n/a	V2W2860
JD62993-1	2W64361.D	1	04/06/23	TCH	n/a	n/a	V2W2860

The QC reported here applies to the following samples: **Method:** TO-15

JD63008-1, JD63008-2, JD63008-3, JD63008-4

CAS No.	Compound	JD62993-1 ppbv	Q	DUP ppbv	Q	RPD	Limits
67-64-1	Acetone (2-Propanone)	2.1		2.2		5	25
107-02-8	Acrolein	ND		ND		nc	25
107-13-1	Acrylonitrile	ND		ND		nc	25
106-99-0	1,3-Butadiene	ND		ND		nc	25
71-43-2	Benzene	0.11	J	0.11	J	0	25
75-27-4	Bromodichloromethane	ND		ND		nc	25
75-25-2	Bromoform	ND		ND		nc	25
74-83-9	Bromomethane	ND		ND		nc	25
593-60-2	Bromoethene	ND		ND		nc	25
100-44-7	Benzyl Chloride	ND		ND		nc	25
104-51-8	n-Butylbenzene	ND		ND		nc	30 [a]
135-98-8	sec-Butylbenzene	ND		ND		nc	30 [a]
75-15-0	Carbon disulfide	ND		ND		nc	25
108-90-7	Chlorobenzene	ND		ND		nc	25
75-00-3	Chloroethane	ND		ND		nc	25
67-66-3	Chloroform	ND		ND		nc	25
74-87-3	Chloromethane	0.54		0.56		4	25
107-05-1	3-Chloropropene	ND		ND		nc	25
56-23-5	Carbon tetrachloride	ND		ND		nc	25
110-82-7	Cyclohexane	ND		ND		nc	25
75-34-3	1,1-Dichloroethane	ND		ND		nc	25
75-35-4	1,1-Dichloroethylene	ND		ND		nc	25
106-93-4	1,2-Dibromoethane (EDB)	ND		ND		nc	25
107-06-2	1,2-Dichloroethane	ND		ND		nc	25
78-87-5	1,2-Dichloropropane	ND		ND		nc	25
123-91-1	1,4-Dioxane	ND		ND		nc	25
75-71-8	Dichlorodifluoromethane	0.41		0.41		0	25
124-48-1	Dibromochloromethane	ND		ND		nc	25
156-60-5	trans-1,2-Dichloroethylene	ND		ND		nc	25
156-59-2	cis-1,2-Dichloroethylene	ND		ND		nc	25
10061-01-5	cis-1,3-Dichloropropene	ND		ND		nc	25
541-73-1	m-Dichlorobenzene	ND		ND		nc	25
95-50-1	o-Dichlorobenzene	ND		ND		nc	25
106-46-7	p-Dichlorobenzene	ND		ND		nc	25
10061-02-6	trans-1,3-Dichloropropene	ND		ND		nc	25
108-20-3	Di-Isopropyl ether	ND		ND		nc	25

* = Outside of Control Limits.

Duplicate Summary

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD62993-1DUP	2W64362.D	1	04/06/23	TCH	n/a	n/a	V2W2860
JD62993-1	2W64361.D	1	04/06/23	TCH	n/a	n/a	V2W2860

The QC reported here applies to the following samples: **Method:** TO-15

JD63008-1, JD63008-2, JD63008-3, JD63008-4

CAS No.	Compound	JD62993-1 ppbv	Q	DUP ppbv	Q	RPD	Limits
64-17-5	Ethanol	1.8		1.7		6	25
100-41-4	Ethylbenzene	ND		ND		nc	25
141-78-6	Ethyl Acetate	1.1		1.0		10	25
622-96-8	4-Ethyltoluene	ND		ND		nc	25
76-13-1	Freon 113	ND		ND		nc	25
76-14-2	Freon 114	ND		ND		nc	25
142-82-5	Heptane	ND		ND		nc	25
87-68-3	Hexachlorobutadiene	ND		ND		nc	25
110-54-3	Hexane	ND		ND		nc	25
591-78-6	2-Hexanone	ND		ND		nc	25
98-82-8	Isopropylbenzene	ND		ND		nc	25
67-63-0	Isopropyl Alcohol	0.24		0.23		4	25
99-87-6	p-Isopropyltoluene	ND		ND		nc	25
75-09-2	Methylene chloride	0.43		0.43		0	25
78-93-3	Methyl ethyl ketone	0.18	J	0.20		11	25
108-10-1	Methyl Isobutyl Ketone	ND		ND		nc	25
1634-04-4	Methyl Tert Butyl Ether	ND		ND		nc	25
80-62-6	Methylmethacrylate	ND		ND		nc	25
91-20-3	Naphthalene	ND		ND		nc	25
109-66-0	Pentane	0.26		0.25		4	25
103-65-1	n-Propylbenzene	ND		ND		nc	30 [a]
115-07-1	Propylene	ND		ND		nc	25
100-42-5	Styrene	ND		ND		nc	25
71-55-6	1,1,1-Trichloroethane	ND		ND		nc	25
79-34-5	1,1,2,2-Tetrachloroethane	ND		ND		nc	25
79-00-5	1,1,2-Trichloroethane	ND		ND		nc	25
120-82-1	1,2,4-Trichlorobenzene	ND		ND		nc	25
95-63-6	1,2,4-Trimethylbenzene	ND		ND		nc	25
108-67-8	1,3,5-Trimethylbenzene	ND		ND		nc	25
540-84-1	2,2,4-Trimethylpentane	ND		ND		nc	25
75-65-0	Tertiary Butyl Alcohol	ND		ND		nc	25
127-18-4	Tetrachloroethylene	ND		ND		nc	25
109-99-9	Tetrahydrofuran	ND		ND		nc	25
108-88-3	Toluene	0.19	J	0.19	J	0	25
79-01-6	Trichloroethylene	ND		ND		nc	25
75-69-4	Trichlorofluoromethane	0.21		0.22		5	25

* = Outside of Control Limits.

Duplicate Summary

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD62993-1DUP	2W64362.D	1	04/06/23	TCH	n/a	n/a	V2W2860
JD62993-1	2W64361.D	1	04/06/23	TCH	n/a	n/a	V2W2860

The QC reported here applies to the following samples: **Method:** TO-15

JD63008-1, JD63008-2, JD63008-3, JD63008-4

CAS No.	Compound	JD62993-1 ppbv	Q	DUP ppbv	Q	RPD	Limits
75-01-4	Vinyl chloride	ND		ND		nc	25
108-05-4	Vinyl Acetate	ND		ND		nc	25
	m,p-Xylene	ND		ND		nc	25
95-47-6	o-Xylene	ND		ND		nc	25
1330-20-7	Xylenes (total)	ND		ND		nc	25

CAS No.	Surrogate Recoveries	DUP	JD62993-1	Limits
460-00-4	4-Bromofluorobenzene	94%	94%	65-128%

(a) Advisory control limits.

* = Outside of Control Limits.

Duplicate Summary

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD62957-5DUP	3W79953.D	1	04/07/23	TCH	n/a	n/a	V3W3153
JD62957-5	3W79952.D	1	04/07/23	TCH	n/a	n/a	V3W3153

The QC reported here applies to the following samples: **Method:** TO-15

JD63008-3

CAS No.	Compound	JD62957-5 ppbv	Q	DUP ppbv	Q	RPD	Limits
67-64-1	Acetone (2-Propanone)	44.4		43.0		3	25

CAS No.	Surrogate Recoveries	DUP	JD62957-5	Limits
460-00-4	4-Bromofluorobenzene	99%	103%	65-128%

* = Outside of Control Limits.

Summa Cleaning Certification

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W1141-SCC	6W26977.D	1	11/08/22	TCH	n/a	n/a	V6W1141

The QC reported here (Summa A1592) applies to the following samples: **Method:** TO-15

Batch CP11947 cleaned 11/04/22: JD63008-3(A1592)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
67-64-1	Acetone (2-Propanone)	ND	0.20	0.15	ppbv		ND	0.48	ug/m3
107-02-8	Acrolein	ND	0.20	0.088	ppbv		ND	0.46	ug/m3
107-13-1	Acrylonitrile	ND	0.20	0.091	ppbv		ND	0.43	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	0.084	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	0.062	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	0.030	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	0.071	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	0.069	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
104-51-8	n-Butylbenzene	ND	0.20	0.11	ppbv		ND	1.1	ug/m3
135-98-8	sec-Butylbenzene	ND	0.20	0.081	ppbv		ND	1.1	ug/m3
75-15-0	Carbon disulfide	ND	0.20	0.045	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	0.074	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	0.068	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	0.037	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	0.090	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	0.083	ppbv		ND	0.63	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	0.040	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	0.11	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	0.057	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.059	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane (EDB)	ND	0.20	0.097	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	0.070	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	0.062	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	0.12	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	0.032	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	0.052	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.069	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.077	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	0.062	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	0.040	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	0.15	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	0.19	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	0.10	ppbv		ND	0.91	ug/m3
108-20-3	Di-Isopropyl ether	ND	0.20	0.082	ppbv		ND	0.83	ug/m3

Summa Cleaning Certification

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W1141-SCC	6W26977.D	1	11/08/22	TCH	n/a	n/a	V6W1141

The QC reported here (Summa A1592) applies to the following samples: **Method:** TO-15

Batch CP11947 cleaned 11/04/22: JD63008-3(A1592)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
64-17-5	Ethanol	ND	0.50	0.39	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	0.10	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	0.095	ppbv		ND	0.98	ug/m3
76-13-1	Freon 113	ND	0.20	0.031	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	0.050	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	0.092	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	0.062	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	0.15	ppbv		ND	0.82	ug/m3
98-82-8	Isopropylbenzene	ND	0.20	0.064	ppbv		ND	0.98	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	0.14	ppbv		ND	0.49	ug/m3
99-87-6	p-Isopropyltoluene	ND	0.20	0.080	ppbv		ND	1.1	ug/m3
75-09-2	Methylene chloride	ND	0.20	0.056	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	0.11	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	0.073	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	0.080	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	0.070	ppbv		ND	0.82	ug/m3
91-20-3	Naphthalene	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
109-66-0	Pentane	ND	0.20	0.14	ppbv		ND	0.59	ug/m3
103-65-1	n-Propylbenzene	ND	0.20	0.091	ppbv		ND	0.98	ug/m3
115-07-1	Propylene	ND	0.50	0.14	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	0.12	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.037	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.048	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.038	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	0.12	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	0.087	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	0.080	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	0.095	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	0.093	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	0.014	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	0.090	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	0.057	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	0.036	ppbv		ND	1.1	ug/m3

Summa Cleaning Certification

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W1141-SCC	6W26977.D	1	11/08/22	TCH	n/a	n/a	V6W1141

The QC reported here (Summa A1592) applies to the following samples: **Method:** TO-15

Batch CP11947 cleaned 11/04/22: JD63008-3(A1592)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
75-01-4	Vinyl chloride	ND	0.20	0.069	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	0.14	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	0.077	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	0.077	ppbv		ND	0.87	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	98%	65-128%

Summa Cleaning Certification

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W3057-SCC	3W77632.D	1	11/08/22	TCH	n/a	n/a	V3W3057

The QC reported here (Summa M146) applies to the following samples: **Method:** TO-15

Batch CP11932 cleaned 11/06/22: JD63008-2(M146)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
67-64-1	Acetone (2-Propanone)	ND	0.20	0.15	ppbv		ND	0.48	ug/m3
107-02-8	Acrolein	ND	0.20	0.088	ppbv		ND	0.46	ug/m3
107-13-1	Acrylonitrile	ND	0.20	0.091	ppbv		ND	0.43	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	0.084	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	0.062	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	0.030	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	0.071	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	0.069	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
104-51-8	n-Butylbenzene	ND	0.20	0.11	ppbv		ND	1.1	ug/m3
135-98-8	sec-Butylbenzene	ND	0.20	0.081	ppbv		ND	1.1	ug/m3
75-15-0	Carbon disulfide	ND	0.20	0.045	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	0.074	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	0.068	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	0.037	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	0.090	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	0.083	ppbv		ND	0.63	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	0.040	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	0.11	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	0.057	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.059	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane (EDB)	ND	0.20	0.097	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	0.070	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	0.062	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	0.12	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	0.032	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	0.052	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.069	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.077	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	0.062	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	0.040	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	0.15	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	0.19	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	0.10	ppbv		ND	0.91	ug/m3
108-20-3	Di-Isopropyl ether	ND	0.20	0.082	ppbv		ND	0.83	ug/m3

Summa Cleaning Certification

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W3057-SCC	3W77632.D	1	11/08/22	TCH	n/a	n/a	V3W3057

The QC reported here (Summa M146) applies to the following samples: **Method:** TO-15

Batch CP11932 cleaned 11/06/22: JD63008-2(M146)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
64-17-5	Ethanol	ND	0.50	0.39	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	0.10	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	0.095	ppbv		ND	0.98	ug/m3
76-13-1	Freon 113	ND	0.20	0.031	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	0.050	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	0.092	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	0.062	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	0.15	ppbv		ND	0.82	ug/m3
98-82-8	Isopropylbenzene	ND	0.20	0.064	ppbv		ND	0.98	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	0.14	ppbv		ND	0.49	ug/m3
99-87-6	p-Isopropyltoluene	ND	0.20	0.080	ppbv		ND	1.1	ug/m3
75-09-2	Methylene chloride	ND	0.20	0.056	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	0.11	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	0.073	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	0.080	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	0.070	ppbv		ND	0.82	ug/m3
91-20-3	Naphthalene	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
109-66-0	Pentane	ND	0.20	0.14	ppbv		ND	0.59	ug/m3
103-65-1	n-Propylbenzene	ND	0.20	0.091	ppbv		ND	0.98	ug/m3
115-07-1	Propylene	ND	0.50	0.14	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	0.12	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.037	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.048	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.038	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	0.12	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	0.087	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	0.080	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	0.095	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	0.093	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	0.014	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	0.090	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	0.057	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	0.036	ppbv		ND	1.1	ug/m3

Summa Cleaning Certification

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W3057-SCC	3W77632.D	1	11/08/22	TCH	n/a	n/a	V3W3057

The QC reported here (Summa M146) applies to the following samples: **Method:** TO-15

Batch CP11932 cleaned 11/06/22: JD63008-2(M146)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
75-01-4	Vinyl chloride	ND	0.20	0.069	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	0.14	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	0.077	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	0.077	ppbv		ND	0.87	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	100%	65-128%

Summa Cleaning Certification

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W3107-SCC	3W78885.D	1	01/19/23	TCH	n/a	n/a	V3W3107

The QC reported here (Summa A2034) applies to the following samples: **Method:** TO-15

Batch CP12056 cleaned 01/16/23: JD63008-1(A1313)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
67-64-1	Acetone (2-Propanone)	ND	0.20	0.15	ppbv		ND	0.48	ug/m3
107-02-8	Acrolein	ND	0.20	0.088	ppbv		ND	0.46	ug/m3
107-13-1	Acrylonitrile	ND	0.20	0.091	ppbv		ND	0.43	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	0.084	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	0.062	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	0.030	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	0.071	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	0.069	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
104-51-8	n-Butylbenzene	ND	0.20	0.11	ppbv		ND	1.1	ug/m3
135-98-8	sec-Butylbenzene	ND	0.20	0.081	ppbv		ND	1.1	ug/m3
75-15-0	Carbon disulfide	ND	0.20	0.045	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	0.074	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	0.068	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	0.037	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	0.090	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	0.083	ppbv		ND	0.63	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	0.040	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	0.11	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	0.057	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.059	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane (EDB)	ND	0.20	0.097	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	0.070	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	0.062	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	0.12	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	0.032	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	0.052	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.069	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.077	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	0.062	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	0.040	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	0.15	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	0.19	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	0.10	ppbv		ND	0.91	ug/m3
108-20-3	Di-Isopropyl ether	ND	0.20	0.082	ppbv		ND	0.83	ug/m3

Summa Cleaning Certification

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W3107-SCC	3W78885.D	1	01/19/23	TCH	n/a	n/a	V3W3107

The QC reported here (Summa A2034) applies to the following samples: **Method:** TO-15

Batch CP12056 cleaned 01/16/23: JD63008-1(A1313)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
64-17-5	Ethanol	ND	0.50	0.39	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	0.10	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	0.095	ppbv		ND	0.98	ug/m3
76-13-1	Freon 113	ND	0.20	0.031	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	0.050	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	0.092	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	0.062	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	0.15	ppbv		ND	0.82	ug/m3
98-82-8	Isopropylbenzene	ND	0.20	0.064	ppbv		ND	0.98	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	0.14	ppbv		ND	0.49	ug/m3
99-87-6	p-Isopropyltoluene	ND	0.20	0.080	ppbv		ND	1.1	ug/m3
75-09-2	Methylene chloride	ND	0.20	0.056	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	0.11	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	0.073	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	0.080	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	0.070	ppbv		ND	0.82	ug/m3
91-20-3	Naphthalene	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
109-66-0	Pentane	ND	0.20	0.14	ppbv		ND	0.59	ug/m3
103-65-1	n-Propylbenzene	ND	0.20	0.091	ppbv		ND	0.98	ug/m3
115-07-1	Propylene	ND	0.50	0.14	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	0.12	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.037	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.048	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.038	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	0.12	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	0.087	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	0.080	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	0.095	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	0.093	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	0.014	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	0.090	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	0.057	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	0.036	ppbv		ND	1.1	ug/m3

Summa Cleaning Certification

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W3107-SCC	3W78885.D	1	01/19/23	TCH	n/a	n/a	V3W3107

The QC reported here (Summa A2034) applies to the following samples: **Method:** TO-15

Batch CP12056 cleaned 01/16/23: JD63008-1(A1313)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
75-01-4	Vinyl chloride	ND	0.20	0.069	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	0.14	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	0.077	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	0.077	ppbv		ND	0.87	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	94%	65-128%

Summa Cleaning Certification

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V8W10-SCC	8W00230.D	1	02/07/23	TCH	n/a	n/a	V8W10

The QC reported here (Summa A1642) applies to the following samples: **Method:** TO-15

Batch CP12081 cleaned 02/01/23: JD63008-4(A1642)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
67-64-1	Acetone (2-Propanone)	ND	0.20	0.15	ppbv		ND	0.48	ug/m3
107-02-8	Acrolein	ND	0.20	0.088	ppbv		ND	0.46	ug/m3
107-13-1	Acrylonitrile	ND	0.20	0.091	ppbv		ND	0.43	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	0.084	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	0.062	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	0.030	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	0.071	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	0.069	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
104-51-8	n-Butylbenzene	ND	0.20	0.11	ppbv		ND	1.1	ug/m3
135-98-8	sec-Butylbenzene	ND	0.20	0.081	ppbv		ND	1.1	ug/m3
75-15-0	Carbon disulfide	ND	0.20	0.045	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	0.074	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	0.068	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	0.037	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	0.090	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	0.083	ppbv		ND	0.63	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	0.040	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	0.11	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	0.057	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.059	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane (EDB)	ND	0.20	0.097	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	0.070	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	0.062	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	0.12	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	0.032	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	0.052	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.069	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.077	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	0.062	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	0.040	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	0.15	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	0.19	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	0.10	ppbv		ND	0.91	ug/m3
108-20-3	Di-Isopropyl ether	ND	0.20	0.082	ppbv		ND	0.83	ug/m3

Summa Cleaning Certification

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V8W10-SCC	8W00230.D	1	02/07/23	TCH	n/a	n/a	V8W10

The QC reported here (Summa A1642) applies to the following samples: **Method:** TO-15

Batch CP12081 cleaned 02/01/23: JD63008-4(A1642)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
64-17-5	Ethanol	ND	0.50	0.39	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	0.10	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	0.095	ppbv		ND	0.98	ug/m3
76-13-1	Freon 113	ND	0.20	0.031	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	0.050	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	0.092	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	0.062	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	0.15	ppbv		ND	0.82	ug/m3
98-82-8	Isopropylbenzene	ND	0.20	0.064	ppbv		ND	0.98	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	0.14	ppbv		ND	0.49	ug/m3
99-87-6	p-Isopropyltoluene	ND	0.20	0.080	ppbv		ND	1.1	ug/m3
75-09-2	Methylene chloride	ND	0.20	0.056	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	0.11	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	0.073	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	0.080	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	0.070	ppbv		ND	0.82	ug/m3
91-20-3	Naphthalene	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
109-66-0	Pentane	ND	0.20	0.14	ppbv		ND	0.59	ug/m3
103-65-1	n-Propylbenzene	ND	0.20	0.091	ppbv		ND	0.98	ug/m3
115-07-1	Propylene	ND	0.50	0.14	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	0.12	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.037	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.048	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.038	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	0.12	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	0.087	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	0.080	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	0.095	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	0.093	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	0.014	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	0.090	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	0.057	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	0.036	ppbv		ND	1.1	ug/m3

Summa Cleaning Certification

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V8W10-SCC	8W00230.D	1	02/07/23	TCH	n/a	n/a	V8W10

The QC reported here (Summa A1642) applies to the following samples: **Method:** TO-15

Batch CP12081 cleaned 02/01/23: JD63008-4(A1642)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
75-01-4	Vinyl chloride	ND	0.20	0.069	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	0.14	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	0.077	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	0.077	ppbv		ND	0.87	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	94%	65-128%

Instrument Performance Check (BFB)

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample: V2W2776-BFB
Lab File ID: 2W62382.D
Instrument ID: GCMS2W
Injection Date: 12/14/22
Injection Time: 17:23

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	13015	22.8		Pass
75	30.0 - 66.0% of mass 95	30880	54.0		Pass
95	Base peak, 100% relative abundance	57157	100.0		Pass
96	5.0 - 9.0% of mass 95	3907	6.84		Pass
173	Less than 2.0% of mass 174	242	0.42	(0.57) [a]	Pass
174	50.0 - 120.0% of mass 95	42512	74.4		Pass
175	4.0 - 9.01% of mass 174	3043	5.32	(7.16) [a]	Pass
176	93.0 - 101.0% of mass 174	40504	70.9	(95.3) [a]	Pass
177	5.0 - 9.0% of mass 176	2767	4.84	(6.83) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2W2776-IC2776	2W62383.D	12/14/22	17:55	00:32	Initial cal 0.04
V2W2776-IC2776	2W62384.D	12/14/22	18:28	01:05	Initial cal 0.1
V2W2776-IC2776	2W62385.D	12/14/22	18:59	01:36	Initial cal 0.2
V2W2776-IC2776	2W62386.D	12/14/22	19:31	02:08	Initial cal 0.5
V2W2776-IC2776	2W62388.D	12/14/22	20:33	03:10	Initial cal 5
V2W2776-ICC2776	2W62389.D	12/14/22	21:05	03:42	Initial cal 10
V2W2776-IC2776	2W62390.D	12/14/22	21:37	04:14	Initial cal 20
V2W2776-IC2776	2W62391.D	12/14/22	22:12	04:49	Initial cal 40
V2W2776-IC2776	2W62392.D	12/14/22	22:47	05:24	Initial cal 50
V2W2776-ICV2776	2W62395.D	12/15/22	00:22	06:59	Initial cal verification 10

Instrument Performance Check (BFB)

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample: V2W2860-BFB
Lab File ID: 2W64353.D
Instrument ID: GCMS2W
Injection Date: 04/06/23
Injection Time: 14:14

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	9247	18.2		Pass
75	30.0 - 66.0% of mass 95	25467	50.1		Pass
95	Base peak, 100% relative abundance	50821	100.0		Pass
96	5.0 - 9.0% of mass 95	3277	6.45		Pass
173	Less than 2.0% of mass 174	150	0.30	(0.42) [a]	Pass
174	50.0 - 120.0% of mass 95	35600	70.0		Pass
175	4.0 - 9.01% of mass 174	2573	5.06	(7.23) [a]	Pass
176	93.0 - 101.0% of mass 174	35128	69.1	(98.7) [a]	Pass
177	5.0 - 9.0% of mass 176	2343	4.61	(6.67) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2W2860-CC2776	2W64355.D	04/06/23	15:31	01:17	Continuing cal 10
V2W2860-BS	2W64356.D	04/06/23	16:05	01:51	Blank Spike
V2W2860-BSD	2W64357.D	04/06/23	16:39	02:25	Blank Spike Duplicate
V2W2860-MB	2W64360.D	04/06/23	18:38	04:24	Method Blank
JD62993-1	2W64361.D	04/06/23	19:18	05:04	(used for QC only; not part of job JD63008)
JD62993-1DUP	2W64362.D	04/06/23	19:57	05:43	Duplicate
ZZZZZZ	2W64363.D	04/06/23	20:36	06:22	(unrelated sample)
ZZZZZZ	2W64364.D	04/06/23	21:16	07:02	(unrelated sample)
ZZZZZZ	2W64365.D	04/06/23	21:55	07:41	(unrelated sample)
ZZZZZZ	2W64366.D	04/06/23	22:35	08:21	(unrelated sample)
ZZZZZZ	2W64367.D	04/06/23	23:09	08:55	(unrelated sample)
ZZZZZZ	2W64368.D	04/06/23	23:43	09:29	(unrelated sample)
ZZZZZZ	2W64369.D	04/07/23	00:16	10:02	(unrelated sample)
JD63008-1	2W64370.D	04/07/23	00:56	10:42	AA-01_GILMORE_032823
JD63008-2	2W64371.D	04/07/23	01:36	11:22	AA-02_DYNAPLATE_032823
JD63008-3	2W64372.D	04/07/23	02:16	12:02	IA-02_GILMORE401_032823
JD63008-4	2W64373.D	04/07/23	02:56	12:42	IA-03_DYNAPLATE501_032823
ZZZZZZ	2W64374.D	04/07/23	03:35	13:21	(unrelated sample)
ZZZZZZ	2W64375.D	04/07/23	04:15	14:01	(unrelated sample)
ZZZZZZ	2W64376.D	04/07/23	04:55	14:41	(unrelated sample)
ZZZZZZ	2W64377.D	04/07/23	05:35	15:21	(unrelated sample)
ZZZZZZ	2W64378.D	04/07/23	06:16	16:02	(unrelated sample)
ZZZZZZ	2W64379.D	04/07/23	06:57	16:43	(unrelated sample)
ZZZZZZ	2W64380.D	04/07/23	07:38	17:24	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample:	V3W3055-BFB	**Injection Date:**	11/03/22
Lab File ID:	3W77566.D	**Injection Time:**	02:37
Instrument ID:	GCMS3W		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	29547	21.0		Pass
75	30.0 - 66.0% of mass 95	73547	52.3		Pass
95	Base peak, 100% relative abundance	140547	100.0		Pass
96	5.0 - 9.0% of mass 95	9241	6.58		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	124965	88.9		Pass
175	4.0 - 9.01% of mass 174	10222	7.27	(8.18) [a]	Pass
176	93.0 - 101.0% of mass 174	121805	86.7	(97.5) [a]	Pass
177	5.0 - 9.0% of mass 176	8004	5.69	(6.57) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V3W3055-IC3055	3W77567.D	11/03/22	03:16	00:39	Initial cal 0.04
V3W3055-IC3055	3W77568.D	11/03/22	03:54	01:17	Initial cal 0.1
V3W3055-IC3055	3W77569.D	11/03/22	04:34	01:57	Initial cal 0.2
V3W3055-IC3055	3W77571.D	11/03/22	05:54	03:17	Initial cal 0.5
V3W3055-IC3055	3W77572.D	11/03/22	06:33	03:56	Initial cal 5
V3W3055-ICC3055	3W77573.D	11/03/22	07:12	04:35	Initial cal 10
V3W3055-IC3055	3W77574.D	11/03/22	07:54	05:17	Initial cal 20
V3W3055-IC3055	3W77575.D	11/03/22	08:38	06:01	Initial cal 40
V3W3055-IC3055	3W77576.D	11/03/22	09:25	06:48	Initial cal 50

Instrument Performance Check (BFB)

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample:	V3W3055-BFB	**Injection Date:**	11/06/22
Lab File ID:	3W77583.D	**Injection Time:**	15:04
Instrument ID:	GCMS3W		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	44243	25.1		Pass
75	30.0 - 66.0% of mass 95	96336	54.7		Pass
95	Base peak, 100% relative abundance	176213	100.0		Pass
96	5.0 - 9.0% of mass 95	11902	6.75		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	163328	92.7		Pass
175	4.0 - 9.01% of mass 174	13564	7.70	(8.30) [a]	Pass
176	93.0 - 101.0% of mass 174	156501	88.8	(95.8) [a]	Pass
177	5.0 - 9.0% of mass 176	10917	6.20	(6.98) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V3W3055-ICV3055	3W77585.D	11/06/22	16:46	01:42	Initial cal verification 10
V3W3056-CC3055	3W77586.D	11/06/22	21:11	06:07	Continuing cal 10
V3W3056-BS	3W77587.D	11/06/22	21:50	06:46	Blank Spike
V3W3056-BSD	3W77588.D	11/06/22	22:32	07:28	Blank Spike Duplicate
V3W3056-MB	3W77590.D	11/06/22	23:56	08:52	Method Blank
V3W3056-SCC	3W77591.D	11/07/22	00:41	09:37	Summa Cleaning Certification
V3W3056-SCC	3W77592.D	11/07/22	01:26	10:22	Summa Cleaning Certification
V3W3056-SCC	3W77594.D	11/07/22	02:56	11:52	Summa Cleaning Certification
V3W3056-SCC	3W77595.D	11/07/22	03:41	12:37	Summa Cleaning Certification
V3W3056-SCC	3W77596.D	11/07/22	04:26	13:22	Summa Cleaning Certification
V3W3056-SCC	3W77597.D	11/07/22	05:10	14:06	Summa Cleaning Certification
V3W3056-SCC	3W77598.D	11/07/22	05:56	14:52	Summa Cleaning Certification
V3W3056-SCC	3W77599.D	11/07/22	06:40	15:36	Summa Cleaning Certification
V3W3056-SCC	3W77600.D	11/07/22	07:26	16:22	Summa Cleaning Certification
V3W3056-SCC	3W77601.D	11/07/22	08:10	17:06	Summa Cleaning Certification
V3W3056-SCC	3W77602.D	11/07/22	08:55	17:51	Summa Cleaning Certification
V3W3056-SCC	3W77605.D	11/07/22	11:10	20:06	Summa Cleaning Certification
V3W3056-SCC	3W77606.D	11/07/22	11:55	20:51	Summa Cleaning Certification
V3W3056-SCC	3W77607.D	11/07/22	12:40	21:36	Summa Cleaning Certification
V3W3056-SCC	3W77608.D	11/07/22	13:24	22:20	Summa Cleaning Certification

Instrument Performance Check (BFB)

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample: V3W3057-BFB
Lab File ID: 3W77609.D
Instrument ID: GCMS3W
Injection Date: 11/07/22
Injection Time: 16:17

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	30325	21.3		Pass
75	30.0 - 66.0% of mass 95	74803	52.6		Pass
95	Base peak, 100% relative abundance	142133	100.0		Pass
96	5.0 - 9.0% of mass 95	9729	6.84		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	134243	94.4		Pass
175	4.0 - 9.01% of mass 174	10661	7.50	(7.94) [a]	Pass
176	93.0 - 101.0% of mass 174	131165	92.3	(97.7) [a]	Pass
177	5.0 - 9.0% of mass 176	8545	6.01	(6.51) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V3W3057-CC3055	3W77610.D	11/07/22	16:56	00:39	Continuing cal 10
V3W3057-BS	3W77611.D	11/07/22	18:35	02:18	Blank Spike
V3W3057-BSD	3W77612.D	11/07/22	19:14	02:57	Blank Spike Duplicate
V3W3057-MB	3W77614.D	11/07/22	20:34	04:17	Method Blank
JD53783-6	3W77615.D	11/07/22	21:28	05:11	(used for QC only; not part of job JD63008)
JD53783-6DUP	3W77616.D	11/07/22	22:13	05:56	Duplicate
ZZZZZZ	3W77618.D	11/07/22	23:42	07:25	(unrelated sample)
ZZZZZZ	3W77619.D	11/08/22	00:27	08:10	(unrelated sample)
ZZZZZZ	3W77620.D	11/08/22	01:12	08:55	(unrelated sample)
ZZZZZZ	3W77621.D	11/08/22	01:57	09:40	(unrelated sample)
ZZZZZZ	3W77622.D	11/08/22	02:42	10:25	(unrelated sample)
ZZZZZZ	3W77623.D	11/08/22	03:27	11:10	(unrelated sample)
ZZZZZZ	3W77624.D	11/08/22	04:12	11:55	(unrelated sample)
ZZZZZZ	3W77625.D	11/08/22	04:57	12:40	(unrelated sample)
ZZZZZZ	3W77626.D	11/08/22	05:41	13:24	(unrelated sample)
ZZZZZZ	3W77627.D	11/08/22	06:26	14:09	(unrelated sample)
V3W3057-SCC	3W77628.D	11/08/22	07:12	14:55	Summa Cleaning Certification
V3W3057-SCC	3W77629.D	11/08/22	07:56	15:39	Summa Cleaning Certification
V3W3057-SCC	3W77630.D	11/08/22	08:42	16:25	Summa Cleaning Certification
V3W3057-SCC	3W77631.D	11/08/22	09:27	17:10	Summa Cleaning Certification
V3W3057-SCC	3W77632.D	11/08/22	10:11	17:54	Summa Cleaning Certification
V3W3057-SCC	3W77633.D	11/08/22	10:56	18:39	Summa Cleaning Certification
V3W3057-SCC	3W77634.D	11/08/22	11:40	19:23	Summa Cleaning Certification

Instrument Performance Check (BFB)

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample:	V3W3100-BFB	**Injection Date:**	01/06/23
Lab File ID:	3W78713.D	**Injection Time:**	09:28
Instrument ID:	GCMS3W		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	24491	19.7		Pass
75	30.0 - 66.0% of mass 95	60821	49.0		Pass
95	Base peak, 100% relative abundance	124220	100.0		Pass
96	5.0 - 9.0% of mass 95	8288	6.67		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	91648	73.8		Pass
175	4.0 - 9.01% of mass 174	6856	5.52	(7.48) [a]	Pass
176	93.0 - 101.0% of mass 174	88963	71.6	(97.1) [a]	Pass
177	5.0 - 9.0% of mass 176	5915	4.76	(6.65) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V3W3100-IC3100	3W78714.D	01/06/23	10:20	00:52	Initial cal 0.04
V3W3100-IC3100	3W78715.D	01/06/23	11:00	01:32	Initial cal 0.1
V3W3100-IC3100	3W78716.D	01/06/23	11:40	02:12	Initial cal 0.2
V3W3100-IC3100	3W78717.D	01/06/23	12:21	02:53	Initial cal 0.5
V3W3100-IC3100	3W78719.D	01/06/23	13:39	04:11	Initial cal 5
V3W3100-ICC3100	3W78720.D	01/06/23	14:19	04:51	Initial cal 10
V3W3100-IC3100	3W78721.D	01/06/23	15:01	05:33	Initial cal 20
V3W3100-IC3100	3W78722.D	01/06/23	15:47	06:19	Initial cal 40
V3W3100-IC3100	3W78723.D	01/06/23	16:34	07:06	Initial cal 50
V3W3100-ICV3100	3W78726.D	01/06/23	18:34	09:06	Initial cal verification 10

Instrument Performance Check (BFB)

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample:	V3W3107-BFB	**Injection Date:**	01/18/23
Lab File ID:	3W78861.D	**Injection Time:**	08:23
Instrument ID:	GCMS3W		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	22589	17.2		Pass
75	30.0 - 66.0% of mass 95	63837	48.6		Pass
95	Base peak, 100% relative abundance	131392	100.0		Pass
96	5.0 - 9.0% of mass 95	8613	6.56		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	96163	73.2		Pass
175	4.0 - 9.01% of mass 174	6947	5.29	(7.22) [a]	Pass
176	93.0 - 101.0% of mass 174	93645	71.3	(97.4) [a]	Pass
177	5.0 - 9.0% of mass 176	5942	4.52	(6.35) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V3W3107-CC3100	3W78862.D	01/18/23	09:04	00:41	Continuing cal 10
V3W3107-BS	3W78863.D	01/18/23	09:47	01:24	Blank Spike
V3W3107-BSD	3W78864.D	01/18/23	10:26	02:03	Blank Spike Duplicate
V3W3107-MB	3W78866.D	01/18/23	11:56	03:33	Method Blank
ZZZZZZ	3W78867.D	01/18/23	12:38	04:15	(unrelated sample)
ZZZZZZ	3W78868.D	01/18/23	13:18	04:55	(unrelated sample)
ZZZZZZ	3W78869.D	01/18/23	13:57	05:34	(unrelated sample)
ZZZZZZ	3W78870.D	01/18/23	14:37	06:14	(unrelated sample)
ZZZZZZ	3W78871.D	01/18/23	15:15	06:52	(unrelated sample)
JD58820-1	3W78872.D	01/18/23	16:01	07:38	(used for QC only; not part of job JD63008)
JD58820-1DUP	3W78873.D	01/18/23	16:47	08:24	Duplicate
ZZZZZZ	3W78874.D	01/18/23	17:33	09:10	(unrelated sample)
ZZZZZZ	3W78875.D	01/18/23	18:20	09:57	(unrelated sample)
ZZZZZZ	3W78876.D	01/18/23	19:07	10:44	(unrelated sample)
ZZZZZZ	3W78877.D	01/18/23	19:52	11:29	(unrelated sample)
ZZZZZZ	3W78878.D	01/18/23	20:38	12:15	(unrelated sample)
ZZZZZZ	3W78879.D	01/18/23	21:24	13:01	(unrelated sample)
V3W3107-SCC	3W78881.D	01/18/23	22:54	14:31	Summa Cleaning Certification
V3W3107-SCC	3W78882.D	01/18/23	23:39	15:16	Summa Cleaning Certification
V3W3107-SCC	3W78883.D	01/19/23	00:23	16:00	Summa Cleaning Certification
V3W3107-SCC	3W78884.D	01/19/23	01:08	16:45	Summa Cleaning Certification
V3W3107-SCC	3W78885.D	01/19/23	01:53	17:30	Summa Cleaning Certification

Instrument Performance Check (BFB)

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample:	V3W3146-BFB	**Injection Date:**	03/30/23
Lab File ID:	3W79755.D	**Injection Time:**	19:26
Instrument ID:	GCMS3W		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	25131	21.4		Pass
75	30.0 - 66.0% of mass 95	55896	47.7		Pass
95	Base peak, 100% relative abundance	117229	100.0		Pass
96	5.0 - 9.0% of mass 95	7739	6.60		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	102621	87.5		Pass
175	4.0 - 9.01% of mass 174	7732	6.60	(7.53) [a]	Pass
176	93.0 - 101.0% of mass 174	97333	83.0	(94.8) [a]	Pass
177	5.0 - 9.0% of mass 176	6716	5.73	(6.90) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V3W3146-IC3146	3W79756.D	03/30/23	20:04	00:38	Initial cal 0.04
V3W3146-IC3146	3W79757.D	03/30/23	20:41	01:15	Initial cal 0.1
V3W3146-IC3146	3W79758.D	03/30/23	21:20	01:54	Initial cal 0.2
V3W3146-IC3146	3W79759.D	03/30/23	22:00	02:34	Initial cal 0.5
V3W3146-IC3146	3W79761.D	03/30/23	23:16	03:50	Initial cal 5
V3W3146-ICC3146	3W79762.D	03/30/23	23:55	04:29	Initial cal 10
V3W3146-IC3146	3W79763.D	03/31/23	00:35	05:09	Initial cal 20
V3W3146-IC3146	3W79764.D	03/31/23	01:20	05:54	Initial cal 40
V3W3146-IC3146	3W79765.D	03/31/23	02:05	06:39	Initial cal 50
V3W3146-ICV3146	3W79768.D	03/31/23	04:02	08:36	Initial cal verification 10

Instrument Performance Check (BFB)

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample:	V3W3153-BFB	**Injection Date:**	04/07/23
Lab File ID:	3W79943.D	**Injection Time:**	08:20
Instrument ID:	GCMS3W		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	20013	22.4		Pass
75	30.0 - 66.0% of mass 95	44235	49.4		Pass
95	Base peak, 100% relative abundance	89499	100.0		Pass
96	5.0 - 9.0% of mass 95	5934	6.63		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	90325	100.9		Pass
175	4.0 - 9.01% of mass 174	6779	7.57	(7.51) [a]	Pass
176	93.0 - 101.0% of mass 174	86629	96.8	(95.9) [a]	Pass
177	5.0 - 9.0% of mass 176	5687	6.35	(6.56) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V3W3153-CC3146	3W79945.D	04/07/23	09:53	01:33	Continuing cal 10
V3W3153-BS	3W79946.D	04/07/23	10:42	02:22	Blank Spike
V3W3153-BSD	3W79947.D	04/07/23	11:21	03:01	Blank Spike Duplicate
V3W3153-MB	3W79949.D	04/07/23	12:48	04:28	Method Blank
ZZZZZZ	3W79950.D	04/07/23	13:42	05:22	(unrelated sample)
ZZZZZZ	3W79951.D	04/07/23	14:27	06:07	(unrelated sample)
JD62957-5	3W79952.D	04/07/23	15:15	06:55	(used for QC only; not part of job JD63008)
JD62957-5DUP	3W79953.D	04/07/23	15:54	07:34	Duplicate
JD63008-3	3W79954.D	04/07/23	16:34	08:14	IA-02_GILMORE401_032823
ZZZZZZ	3W79955.D	04/07/23	17:13	08:53	(unrelated sample)
ZZZZZZ	3W79956.D	04/07/23	17:52	09:32	(unrelated sample)
ZZZZZZ	3W79958.D	04/07/23	19:09	10:49	(unrelated sample)
ZZZZZZ	3W79960.D	04/07/23	20:27	12:07	(unrelated sample)
ZZZZZZ	3W79962.D	04/07/23	21:48	13:28	(unrelated sample)
ZZZZZZ	3W79964.D	04/07/23	23:07	14:47	(unrelated sample)
ZZZZZZ	3W79966.D	04/08/23	00:27	16:07	(unrelated sample)
ZZZZZZ	3W79967.D	04/08/23	01:12	16:52	(unrelated sample)
ZZZZZZ	3W79968.D	04/08/23	01:56	17:36	(unrelated sample)
ZZZZZZ	3W79969.D	04/08/23	02:42	18:22	(unrelated sample)
ZZZZZZ	3W79970.D	04/08/23	03:28	19:08	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample:	V6W1125-BFB	**Injection Date:**	10/19/22
Lab File ID:	6W26446.D	**Injection Time:**	17:44
Instrument ID:	GCMS6W		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	11894	25.6		Pass
75	30.0 - 66.0% of mass 95	23544	50.6		Pass
95	Base peak, 100% relative abundance	46541	100.0		Pass
96	5.0 - 9.0% of mass 95	3244	6.97		Pass
173	Less than 2.0% of mass 174	352	0.76	(0.98) [a]	Pass
174	50.0 - 120.0% of mass 95	35928	77.2		Pass
175	4.0 - 9.01% of mass 174	2432	5.23	(6.77) [a]	Pass
176	93.0 - 101.0% of mass 174	34165	73.4	(95.1) [a]	Pass
177	5.0 - 9.0% of mass 176	2442	5.25	(7.15) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V6W1125-IC1125	6W26448.D	10/19/22	19:10	01:26	Initial cal 0.04
V6W1125-IC1125	6W26449.D	10/19/22	19:43	01:59	Initial cal 0.1
V6W1125-IC1125	6W26450.D	10/19/22	20:15	02:31	Initial cal 0.2
V6W1125-IC1125	6W26451.D	10/19/22	20:47	03:03	Initial cal 0.5
V6W1125-IC1125	6W26453.D	10/19/22	21:52	04:08	Initial cal 5
V6W1125-ICC1125	6W26454.D	10/19/22	22:25	04:41	Initial cal 10
V6W1125-IC1125	6W26455.D	10/19/22	22:57	05:13	Initial cal 20
V6W1125-IC1125	6W26456.D	10/19/22	23:29	05:45	Initial cal 40
V6W1125-IC1125	6W26457.D	10/20/22	00:03	06:19	Initial cal 50
V6W1125-ICV1125	6W26462.D	10/20/22	09:08	15:24	Initial cal verification 10

Instrument Performance Check (BFB)

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample: V6W1141-BFB
Lab File ID: 6W26944.D
Instrument ID: GCMS6W
Injection Date: 11/07/22
Injection Time: 07:38

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	7992	24.5		Pass
75	30.0 - 66.0% of mass 95	16955	52.0		Pass
95	Base peak, 100% relative abundance	32624	100.0		Pass
96	5.0 - 9.0% of mass 95	1954	5.99		Pass
173	Less than 2.0% of mass 174	210	0.64	(0.78) [a]	Pass
174	50.0 - 120.0% of mass 95	26923	82.5		Pass
175	4.0 - 9.01% of mass 174	1824	5.59	(6.77) [a]	Pass
176	93.0 - 101.0% of mass 174	25112	77.0	(93.3) [a]	Pass
177	5.0 - 9.0% of mass 176	1556	4.77	(6.20) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V6W1141-CC1125	6W26945.D	11/07/22	08:11	00:33	Continuing cal 10
V6W1141-BS	6W26946.D	11/07/22	08:52	01:14	Blank Spike
V6W1141-BSD	6W26947.D	11/07/22	09:25	01:47	Blank Spike Duplicate
V6W1141-MB	6W26949.D	11/07/22	10:43	03:05	Method Blank
V6W1141-SCC	6W26950.D	11/07/22	11:38	04:00	Summa Cleaning Certification
V6W1141-SCC	6W26951.D	11/07/22	12:11	04:33	Summa Cleaning Certification
V6W1141-SCC	6W26952.D	11/07/22	12:43	05:05	Summa Cleaning Certification
ZZZZZZ	6W26953.D	11/07/22	13:21	05:43	(unrelated sample)
ZZZZZZ	6W26955.D	11/07/22	14:46	07:08	(unrelated sample)
ZZZZZZ	6W26956.D	11/07/22	15:18	07:40	(unrelated sample)
ZZZZZZ	6W26957.D	11/07/22	15:52	08:14	(unrelated sample)
JD54490-11	6W26958.D	11/07/22	16:25	08:47	(used for QC only; not part of job JD63008)
JD54490-11DUP	6W26959.D	11/07/22	16:58	09:20	Duplicate
ZZZZZZ	6W26960.D	11/07/22	17:31	09:53	(unrelated sample)
ZZZZZZ	6W26961.D	11/07/22	18:03	10:25	(unrelated sample)
ZZZZZZ	6W26962.D	11/07/22	18:36	10:58	(unrelated sample)
ZZZZZZ	6W26963.D	11/07/22	19:08	11:30	(unrelated sample)
ZZZZZZ	6W26964.D	11/07/22	19:40	12:02	(unrelated sample)
ZZZZZZ	6W26965.D	11/07/22	20:13	12:35	(unrelated sample)
ZZZZZZ	6W26969.D	11/07/22	22:23	14:45	(unrelated sample)
V6W1141-SCC	6W26971.D	11/07/22	23:45	16:07	Summa Cleaning Certification
V6W1141-SCC	6W26972.D	11/08/22	00:17	16:39	Summa Cleaning Certification
V6W1141-SCC	6W26973.D	11/08/22	00:50	17:12	Summa Cleaning Certification
V6W1141-SCC	6W26974.D	11/08/22	01:22	17:44	Summa Cleaning Certification

Instrument Performance Check (BFB)

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample:	V6W1141-BFB	**Injection Date:**	11/07/22
Lab File ID:	6W26944.D	**Injection Time:**	07:38
Instrument ID:	GCMS6W		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V6W1141-SCC	6W26976.D	11/08/22	02:26	18:48	Summa Cleaning Certification
V6W1141-SCC	6W26977.D	11/08/22	02:59	19:21	Summa Cleaning Certification
V6W1141-SCC	6W26978.D	11/08/22	03:32	19:54	Summa Cleaning Certification
V6W1141-SCC	6W26979.D	11/08/22	04:05	20:27	Summa Cleaning Certification
V6W1141-SCC	6W26980.D	11/08/22	04:38	21:00	Summa Cleaning Certification
V6W1141-SCC	6W26981.D	11/08/22	05:10	21:32	Summa Cleaning Certification

Instrument Performance Check (BFB)

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample:	V8W1-BFB	**Injection Date:**	12/16/22
Lab File ID:	8W00006.D	**Injection Time:**	16:27
Instrument ID:	GCMS8W		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	15729	13.6		Pass
75	30.0 - 66.0% of mass 95	56885	49.3		Pass
95	Base peak, 100% relative abundance	115283	100.0		Pass
96	5.0 - 9.0% of mass 95	7956	6.90		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	94600	82.1		Pass
175	4.0 - 9.01% of mass 174	6689	5.80	(7.07) [a]	Pass
176	93.0 - 101.0% of mass 174	91331	79.2	(96.5) [a]	Pass
177	5.0 - 9.0% of mass 176	5825	5.05	(6.38) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V8W1-IC0001	8W00007.D	12/16/22	17:01	00:34	Initial cal 0.04
V8W1-IC0001	8W00008.D	12/16/22	17:35	01:08	Initial cal 0.1
V8W1-IC0001	8W00009.D	12/16/22	18:09	01:42	Initial cal 0.2
V8W1-IC0001	8W00010.D	12/16/22	18:46	02:19	Initial cal 0.5
V8W1-IC0001	8W00012.D	12/16/22	19:56	03:29	Initial cal 5
V8W1-ICC0001	8W00013.D	12/16/22	20:32	04:05	Initial cal 10
V8W1-IC0001	8W00014.D	12/16/22	21:10	04:43	Initial cal 20
V8W1-IC0001	8W00015.D	12/16/22	21:51	05:24	Initial cal 40
V8W1-IC0001	8W00016.D	12/16/22	22:34	06:07	Initial cal 50
V8W1-ICV0001	8W00019.D	12/17/22	00:17	07:50	Initial cal verification 10

Instrument Performance Check (BFB)

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Sample:	V8W10-BFB	**Injection Date:**	02/07/23
Lab File ID:	8W00224.D	**Injection Time:**	09:58
Instrument ID:	GCMS8W		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	15059	14.0		Pass
75	30.0 - 66.0% of mass 95	53560	49.7		Pass
95	Base peak, 100% relative abundance	107757	100.0		Pass
96	5.0 - 9.0% of mass 95	7811	7.25		Pass
173	Less than 2.0% of mass 174	415	0.39	(0.51) [a]	Pass
174	50.0 - 120.0% of mass 95	80933	75.1		Pass
175	4.0 - 9.01% of mass 174	5921	5.49	(7.32) [a]	Pass
176	93.0 - 101.0% of mass 174	78635	73.0	(97.2) [a]	Pass
177	5.0 - 9.0% of mass 176	5228	4.85	(6.65) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V8W10-CC0001	8W00225.D	02/07/23	10:33	00:35	Continuing cal 10
V8W10-BS	8W00226.D	02/07/23	11:15	01:17	Blank Spike
V8W10-BSD	8W00227.D	02/07/23	11:51	01:53	Blank Spike Duplicate
V8W10-MB	8W00229.D	02/07/23	14:24	04:26	Method Blank
V8W10-SCC	8W00230.D	02/07/23	17:36	07:38	Summa Cleaning Certification
V8W10-SCC	8W00231.D	02/07/23	18:17	08:19	Summa Cleaning Certification
V8W10-SCC	8W00232.D	02/07/23	18:57	08:59	Summa Cleaning Certification
V8W10-SCC	8W00233.D	02/07/23	19:37	09:39	Summa Cleaning Certification
V8W10-SCC	8W00235.D	02/07/23	20:58	11:00	Summa Cleaning Certification
V8W10-SCC	8W00236.D	02/07/23	21:38	11:40	Summa Cleaning Certification
V8W10-SCC	8W00238.D	02/07/23	23:00	13:02	Summa Cleaning Certification
V8W10-SCC	8W00239.D	02/07/23	23:39	13:41	Summa Cleaning Certification
V8W10-SCC	8W00241.D	02/08/23	01:00	15:02	Summa Cleaning Certification
V8W10-SCC	8W00243.D	02/08/23	02:21	16:23	Summa Cleaning Certification
V8W10-SCC	8W00244.D	02/08/23	03:02	17:04	Summa Cleaning Certification
V8W10-SCC	8W00245.D	02/08/23	03:42	17:44	Summa Cleaning Certification
V8W10-SCC	8W00246.D	02/08/23	04:24	18:26	Summa Cleaning Certification
V8W10-SCC	8W00247.D	02/08/23	05:04	19:06	Summa Cleaning Certification
V8W10-SCC	8W00248.D	02/08/23	05:45	19:47	Summa Cleaning Certification
V8W10-SCC	8W00249.D	02/08/23	06:26	20:28	Summa Cleaning Certification

Surrogate Recovery Summary

Job Number: JD63008
Account: UNIVAR UNIVAR
Project: AGMMIS: Univar Grand Rapids, 2940 Stafford Avenue, Wyoming, MI

Method: TO-15 **Matrix:** AIR

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1
JD63008-1	2W64370.D	94
JD63008-2	2W64371.D	94
JD63008-3	2W64372.D	94
JD63008-3	3W79954.D	99
JD63008-4	2W64373.D	94
JD62957-5DUP	3W79953.D	99
JD62993-1DUP	2W64362.D	94
V2W2860-BS	2W64356.D	93
V2W2860-BSD	2W64357.D	94
V2W2860-MB	2W64360.D	94
V3W3057-SCC	3W77632.D	100
V3W3107-SCC	3W78885.D	94
V3W3153-BS	3W79946.D	108
V3W3153-BSD	3W79947.D	109
V3W3153-MB	3W79949.D	92
V6W1141-SCC	6W26977.D	98
V8W10-SCC	8W00230.D	94
V3W3057-BS	3W77611.D	99
V3W3057-BSD	3W77612.D	100
V3W3057-MB	3W77614.D	101
V3W3107-BS	3W78863.D	100
V3W3107-BSD	3W78864.D	101
V3W3107-MB	3W78866.D	96
V6W1141-BS	6W26946.D	103
V6W1141-BSD	6W26947.D	104
V6W1141-MB	6W26949.D	100
V8W10-BS	8W00226.D	100
V8W10-BSD	8W00227.D	99
V8W10-MB	8W00229.D	94

Surrogate Compounds	Recovery Limits
S1 = 4-Bromofluorobenzene	65-128%

Field Documents

Indoor/Outdoor Air Collection Log

Office Name & Address (Reporting Information): Novi, 28550 Cabot Drive		Project Name: Univar Grand Rapids
Field Manager: Scott Filipiak		Project Number: 30164040
Phone: 248-722-8561	Special Instructions: Analyze for VOCs via USEPA TO-15 on a standard turn around time.	Site Address: 2940 Stafford Ave SW, Wyoming, MI
		Sampler Name: Scott Filipiak / Lottie Jay — Phone Number:248-722-8561
Email Address for Result Reporting: Erin.Kozak@arcadis.com Christina.Weaver@arcadis.com Caitlin.Cisco@arcdis.com		Email: Scott.Filipiak@Arcadis.com
Summa Canister Size (1L, 2.7 L, 6L): 6 L	Lab: SGS	Building Survey Completed? Yes — Chemical Inventory Completed? Yes — Background Sources Removed? NA

Sample ID	Sample Location Description	Indoor/Outdoor	PID in sampling area (ppm)	Date	Canister Number	Flow Controller Number	Sample Collection Start Time	Beginning Canister Pressure	Sample Collection End Time	Ending Canister Pressure	Sample Height	Heating, Ventilation, and Air Conditioning System Information						Notes
												HVAC Fan On?	Heat On?	Start Temperature Setting (°F)	Start Flow Rate (cfm)	End Temperature Setting (°F)	End Flow Rate (cfm)	
AA-01_GILMORE_032823	Outdoor Gilmore	Outdoor	0	3/28/2023	A1313	FC1144	817	30	1600	8	4' 8"	--	--	--	--	--	--	--
AA-02_DYNAPLATE_032823	Outdoor Dynaplate	Outdoor	0	3/28/2023	M146	FC613	717	28.5	1441	7	4' 7"	--	--	--	--	--	--	--
AA-03_UNIVAR_032923	Outdoor Univar	Outdoor	0	3/29/2023	A1611	FC1140	659	30	1420	8	4' 9"	--	--	--	--	--	--	--
IA-01_GILMORE302_033123	Gilmore Office	Indoor	0	3/31/2023	A1692	FC832	813	29	1546	7	4' 6"	Yes	Yes	65	--	65	--	--
IA-02_GILMORE401_032823	Gilmore Storage	Indoor	0	3/28/2023	A1592	FC1203	710	30	1434	7	4' 7"	No	No	35	--	50	--	Garage Door on opposite side of facility open at collection time.
IA-03_DYNAPLATE-510_032823	Dyna-Plate Plate Room	Indoor	0	3/28/2023	A1642	FC370	708	30	1405	8	4' 7"	Yes	Yes	65	--	65	--	Facility Oven doors open during collection time.
IA-04_UNIVAR13_032923	Univar Warm Room	Indoor	0	3/29/2023	A1609	FC830	703	29	1410	8	4' 6"	Yes	Yes	65	--	65	--	--
IA-05_UNIVAR-FD-01_032923	Near Floor Drain in Univar Break Room	Indoor	0	3/29/2023	A1069	FC108	705	28	1400	8	4' 7"	Yes	Yes	65	--	65	--	--
IA-06_UNIVAR-FD-02_032923	Near Floor Drain in Univar Mens Bathroom	Indoor	0	3/29/2023	A231	FC773	630	29	1400	8	4' 7"	Yes	Yes	65	--	65	--	--

Meteorological Data

Date	Time	Temp		Relative Humidity (%)	Barometric Pressure (in.Hg)	Weather source	**General Notes or Observations**
		Indoor	Outdoor				
3/28/2023	600	65	31 F	76	29.25	NOAA	Partly Cloudy
3/28/2023	1400	65	46 F	51	29.22	NOAA	Partly Cloudy
3/29/2023	800	65	37 F	57	29.09	NOAA	Light Rain / Snow
3/29/2023	1400	65	35 F	52	29.20	NOAA	Partly Cloudy
3/31/2023	900	65	42 F	92	28.79	NOAA	Light Rain
3/31/2023	1600	65	57 F	83	28.61	NOAA	Cloudy

Soil Vapor Collection Log Sheet

Office Name & Address (Reporting Information): Novi 28550 Cabot Drive Ste#500 Novi, MI 48377			Project Name: Univar Grand Rapids
Field Manager: Scott Filipiak			Project Number: 30164040
Phone: 248-722-8561	Special Instructions: Analyze for VOCs via USEPA TO-15 on a standard turn around time		Site Address: 2940 Stafford Ave SW, Wyoming, MI
Email Address for Result Reporting: Erin.Kozak@arcadis.com; Caitlin.Cisco@arcadis.com; Christina.Weaver@arcadis.com			Sampler Name: Scott Filipiak / Lottie Jay Phone Number: 248-722-8561 Email: Scott.Filipiak@Arcadis.com
Helium Detector Used: MGD-2002	Helium Leak Method: Helium Tracer Test		Summa Canister Size (1L, 2.7 L, 6L): 1 L Lab: SGS

Sample ID	Sample Location Description	Date	Leak/Tracer Test completed prior to sample collection						Canister Number	Flow Controller Number	Sample Collection Start Time	Beginning Canister Pressure (in. Hg)	Sample Collection End Time	Ending Canister Pressure (in. Hg)	Notes
			Shut in Test Pass/Fail?	Purge Reading (ppm)	Shroud Helium Concentration	Helium Test Pass/Fail?	Purge Volume (mL)	Purge Rate (mL/min)							
SSMP-302_033123	Gilmore Office	3/31/2023	Pass	0	> 40 %	Pass	120	120	A1892	FC648	1520	-28	1532	-5	
SSMP-401_033123	Gilmore Storage	3/31/2023	Pass	0	> 40 %	Pass	120	120	A1431	FC252	950	-30	1000	-5	
SSMP-510_032923	Dyna-Plate Plate Room	3/29/2023	Pass	0	> 40 %	Pass	120	120	A1500	FC257	822	-30	835	-5	
SSMP-13_032923	Univar Warm Room	3/29/2023	Pass	0	> 40 %	Pass	120	120	A1430	FC945	1414	-29	1427	-5	
FLOORDRAIN_01_032923	Univar Break Room	3/29/2023	NA	NA	NA	NA	120	120	A1422	FC981	1110	-28	1124	-4.5	
FLOORDRAIN_02_032923	Univar Mens Bathroom	3/29/2023	NA	NA	NA	NA	120	120	A1899	FC861	1056	-28	1108	-5	
DUP-01_032923	Parent: Floor Drain -01	3/29/2023	NA	NA	NA	NA	120	120	A1439	FC1235	1110	-28	1123	-4.5	
DUP-02_032923	Parent - SSMP-13	3/29/2023	Pass	0	> 40 %	Pass	120	120	A1983	FC975	1414	-30	1429	-5	

Meteorological Data

Date	Time	Temp		Relative Humidity (%)	Barometric Pressure (in.Hg)	Weather source	**General Notes or Observations**
		Indoor	Outdoor				
3/29/2023	800	70	37 F	57	29.09	NOAA	Light rain / snow
3/29/2023	1400	70	35 F	52	29.20	NOAA	Partly Cloudy
3/31/2023	900	70	42 F	92	28.79	NOAA	Light rain

Air Parameters (completed after sample collection)

Location ID	CH4 %	CH4 LEL %	O2 %	CO2 %	Differential Pressure	PID	
SSMP-302	0.2		19.2	0.8	0	NM	
SSMP-401	0.2		19.5	0.7	0	NM	
SSMP-510	0.2		16.3	4.8	0	12.8	
SSMP-13 (DUP-02)	0.3		19.9	0.4	0.005	260	
FLOORDRAIN_01 (DUP-01)	0.3		20.2	0.3	NM	0	
FLOORDRAIN_02	0.3		20	0.3	NM	0.1	

Non-Residential Indoor Air Quality Evaluation Form

Date: 3-29-23 Facility Name: DYNA-PLATE EPA ID No.: _____

PART 1: General Information

Business Name: DYNAPLATE

Address: 344 MART ST

Contact Name: CRAIG HILL

Phone: 616-452-6763 **Email:** _____

Facility Owner/Landlord Information (If different from above)

Name: SAME

Phone: 1 **Email:** _____

Other Building Contacts _____

Building/Business Type and Uses (Check appropriate boxes)

☐ Office Space ☒ Warehouse ☒ Manufacturing ☐ Multi-story ☐ Multi-tenant ☐ Warehouse

☐ Single level Office/Warehouse ☐ Other _____

Building Occupancy

Number of Occupants: 10 Adults: Gender M/F 8 / 2 General Age ranges: 20 - 65

Days/Hours of occupancy 7-3 Duration of work shifts 9

Days/Hours of ventilation system operation CONTINOUS

Building Characteristics

Year/Decade Built: 1950's Number of Stories: 1

Approximate Building Area (square feet): Total 51,000 First Floor _____

Is there an attached warehouse/shop space? (Y/N) Y describe its use: MINIMAL STORAGE

Is there a basement or underground garage? (Y/N) N describe its use: _____

Foundation Type (Check appropriate boxes)

☒ Slab-on-Grade ☐ Slab-above-Grade (elevated/cap-slab on fill) ☐ Crawl Space ☐ Basement ☐ None

Describe _____

Survey Preparation Information

Preparer's Name: FILIPIAK Date Prepared: _____

Affiliation: ARCADIS Phone: 248-722-8561 Email: SCOTT.FILIPIAK@ARCADIS

Non-Residential Indoor Air Quality Evaluation Form

Date: 3/29/23 Facility Name: DYNAPLATE EPA ID No.: _____

PART 2: Factors Impacting Indoor Air Quality and Sampling

Questions

Describe renovation activities over the last 6 months (what was done, what area, and when):

NONE

Describe any open combustion in the building. (smoking/incense/candles/cooking/burning)

SMALL BREAKROOM, MICROWAVE ONLY

Have site-specific contaminants of concern been used or stored in the building or nearby? ☐ Yes ☒ No

Please list the general types of chemicals _____

Have any significant amounts of volatile chemicals been used recently? ☐ Yes ☒ No

Please list the chemicals _____

Describe any instance of water/groundwater present in the basement/crawlspace (including sumps):

Are there conduits for sewer gases to enter the building (dry p-traps, open clean-outs, abandoned hook-ups, poorly installed/sealed/seated plumbing)? Describe:

NONE

Observations

What is the temperature relative to outside? ≈

VI is promoted when the interior is warmer than the exterior.

Were windows/doors/roll-up doors kept open? NO

Increased ventilation from the outside will dilute vapors from the subsurface and may mitigate areas of negative pressure.

Mechanical ventilation system status and condition? JUST RECENTLY TUNED

Are intake or exhaust fans being used? YES

Are there ventilation hoods in use? NO

Indicated by air moving from the outside in. Negative pressure is the main driving force that moves vapors into a building.

Is there evidence of negative pressure? NO

Do parts of the indoor environment appear stagnant? NO

Vapors may build up in areas with poor ventilation.

Describe any strong odors. N/A

Strong odors may indicate poor ventilation or an indoor air source that may interfere with analysis.

Building Construction

Building Construction Materials?

☐ Concrete ☐ Concrete Block ☒ Steel ☐ Wood ☐ Other _____

Does the building have an at-grade or below-grade garage? NO How is it ventilated? _____

Non-Residential Indoor Air Quality Evaluation Form

Date: 3/29/23 Facility Name: DYNA PLATE EPA ID No.: _____

Does the building have an attached mechanical room? YES

Does the building have footers distinct from the slab or integrated footers? NO

Is the building slab constructed with post-tension concrete? YES

What are the ceiling heights? 20'

Pathway Analysis

Does the building have a basement or sub-surface structures that are/have:

☐ Unfinished ☐ Exposed soil ☐ Damp or flooded ☐ Unsealed utility lines ☐ Other _____

Are there utilities that penetrate the slab that may be conduits for soil vapor? ☐ Yes ☒ No

Are these:

Connected to subsurface vaults? ☐ Yes ☒ No

Connected to utilities closer to potential VI sources? ☐ Yes ☒ No

In areas where pressure differential would cause air to flow through them? ☐ Yes ☒ No

Is there non-ventilated spaces in the building (maintenance /electrical / server rooms)? ☐ Yes ☒ No

If Yes, describe: _____

Are these spaces occupied? ☐ Yes ☒ No

At what frequency/duration? _____

Are there potential pathways in these spaces? ☐ Yes ☒ No

If Yes, describe: _____

Are there heat sources in these spaces (servers, transformers, etc.? ☐ Yes ☒ No

If Yes, describe: _____

Are there heat sources or other systems that may generate a negative pressure near the floor/slab?

☐ Yes ☒ No

If Yes, Describe: _____

Are there elevators in the building? ☐ Yes ☒ No

If the elevators are hydraulic how deep do the pistons penetrate below the slab? _____

Are there utilities penetrating the floor/slab? ☐ Yes ☒ No

Are there sumps, either interior or outside and adjacent? ☐ Yes ☒ No

What is the condition of the foundation/slab? _____

Non-Residential Indoor Air Quality Evaluation Form

Date: 3/29/23 Facility Name: DINA PLATE EPA ID No.: _____

Was the building constructed with a subslab system or barrier? ☐ Yes ☒ No

If Yes, describe: _____

Are there floor drains? ☒ Yes ☐ No

If Yes, describe: COMMON FLOOR DRAINS THROUGHOUT THE FACILITY.

If the foundation design specifications and/or as-built drawings are available, please attach.

Other Information (that may be of importance in understanding the indoor air quality):

Potential Sampling Locations

General notes on potential sample locations and type. Tentative sampling date(s) and preferred times.

On a separate page, draw/attach the general floor plan of the building and denote potential locations of sample collection. Indicate locations of doors, windows, ventilation system components, indoor air contaminant sources and field instrument readings.

Non-Residential Indoor Air Quality Evaluation Form

Date: 3/29/23 Facility Name: DYNA PLATE EPA ID No.: _____

PART 3: Inventory of Potential Indoor Contaminant Sources:

List items/products in the building or the attached warehouse/shop that may contain site-specific contaminants of concern. Attach Safety Data Sheets (SDSs).

Potential contaminant source	Location of Product Source	Photograph, ingredients, PID reading	Remove? Y/N

CHEMICAL LISTING
DYNA PLATE, INC.
Provided May 13, 2020

Acids:

Hydrochloric Acid 18-20 Deg
Nitric Acid 42 Deg
Sulfuric Acid 66 Deg

Chromates/Sealers:

Kimya TC3 Clear Chromate
Kimya Tri Blue 120 Clear Chromate
Kimya Tri Yellow Chromate A
Kimya Tri Yellow Chromate B
Kimya Tri Black Chromate A
Kimya Tri Black Chromate B
Kimya Tri Black TC
Kimya Sealer 305L
Kimya Sealer 359
Kimya Lube #2
Kimya KRI 90

Cleaners/Cleaner Additives:

Kimya 581 DP
Kimya 556 Additive
Kimya SOL 132 Additive
Kimya KI-22 Additive

Plating Bath Chemicals:

Kimya Anti-Burn
Kimya 939 Brightener
Kimya 939 Wetter
Ammonium Chloride
Potassium Chloride
Hydrogen Peroxide 33-35%
Zinc Metal 99.9%

Waste Treatment/lab Chemicals:

Defoamer DF-410
Kimya KR-B7110
Kimya KR-B9008
Polymer P-142
Calcium Chloride 83-87%
Liquid Caustic Soda 50%
Sodium Bisulfite FG
Sodium Hydrosulfite
DE Filter Powder FW-60
Potassium Permanganate FF
Salt Solution 5%

Non-Residential Indoor Air Quality Evaluation Form

Date: 3/29/23 Facility Name: DANA PLATE EPA ID No.: _____

PART 4: Building Heating/Cooling/Ventilation Systems

(Note: Complete this section as much as possible. Not all facility personnel or their contractors will readily have access to information in this section. Information from this section will help determine characteristics of some systems and it's impacts on vapor intrusion)

Systems Present

What types of systems are used for heating, cooling and ventilation? Check all that apply.

☐ Air Handler(s) ☐ Package Units ☐ Window/Wall systems ☐ Split System

☐ Radiant heating (electric or water/steam) ☐ Evaporative Coolers ☐ Heat pump ☐ Built-up ☐ None

Comments _____

Do the systems present provide make-up/fresh air? ☒ Yes ☐ No

> Fresh air should be supplied in all commercial/industrial/institutional settings. ASHRAE Standard 62, *Ventilation for Acceptable Indoor Air Quality*, has guidelines on how much air should be supplied. Meeting these requirements generally helps to mitigate VI impacts.

Have the systems been evaluated for ASHRAE Standard 62 compliance? ☒ Yes ☐ No

Is a system commissioning report available? ☐ Yes ☒ No (attach)

When was the system last tested and balanced? UNAVAILABLE (attach report if available)

Is the ventilation system automated (building automation system)? ☒ Yes ☐ No

> Automation systems can be used to record settings during sampling and to verify HVAC operation where an HVAC remedy is required

If yes is the data recorded or can it be recorded? ☐ Yes ☒ No

(*Note that the ventilation settings should be evaluated in the automation system and verified manually where possible.)*

System operations

For each of the ventilation systems describe how is outdoor air supplied?

- Economizers: _____
  - minimum and maximum settings cfm or %_____
- Manual adjustable outdoor air intakes _____
  - Settings _____
- Fixed outdoor air intakes? _____
- Unused outdoor air intake (blank panel)? _____
- Outdoor air intake not easily installed (e.g., split system, radiant heating) _____

How frequently are the ventilation systems serviced? ANNUALLY

> Generally, systems should be serviced quarterly to verify performance.

Days and hours of operation for each ventilation system CONTINUOUS

Do any of the ventilation systems operate during nights and weekends? ☒ Yes ☐ No

Non-Residential Indoor Air Quality Evaluation Form

Date: 3/29/23 Facility Name: DYNAPLATE EPA ID No.: _____

If yes, are they operating on reduced settings? ☒ Yes ☐ No

Are the temperature / ventilation settings locked or routinely adjusted by the occupants? AUTOMOTIVE

What are the temperature settings? (note if seasonally variable) Days _____ Nights _____
Weekends _____

If there is an economizer, does the system control outdoor air supply using: (check all that apply)
☒ Outdoor air temperature/enthalpy ☐ CO_2 concentration ☐ Other _____

Is there power exhaust? ☐ Yes ☒ No

Is the power exhaust setting dependent on ☐ economizer damper position ☒ static pressure

Does the system use variable or constant air volume distribution (VAV/CAV)? VAV

Is there a dedicated outdoor air system installed? ☐ Yes ☒ No

If Yes, describe: _____

Other Ventilation Issues impacting vapor intrusion potential.

Does the ventilation system have any underground components? NO

Having air flow on or below the building floor can draw in vapors from the subsurface.

Is ventilation being supplied or returned under a false floor above the building slab? NO

This is common in server rooms

Are ducting components routed through a basement, crawlspace, or utility vault area? NO

Is a boiler or heater present in a basement or crawlspace? N/A describe _____

Is the make-up air balanced with the exhaust fans in kitchens, laboratories and similar spaces? N/A

Are there spaces of the building that are inherently at a negative pressure? NO

Certain rooms such as kitchens are generally kep at negative pressure other rooms may be negative due to system design/use

Outdoor air intakes
Where are the outdoor air intakes located? _____

Are any intakes near sources of contaminants / sewer vents? _____

Are there carbon filters present in the ventilation system? _____
What make and model of filters are present and how often are they changed? _____

Non-Residential Indoor Air Quality Evaluation Form

Date: 3/29/23 Facility Name: DNA RATE EPA ID No.: _____

Ventilation zones and settings

Zone/ Room	System Type	Supply Air Total cfm (range if VAV)	Supply Air % outdoor (range)	Ducted y/n	Return Air cfm	Ducted y/n

Non-Residential Indoor Air Quality Evaluation Form

Date: 3-29-23 Facility Name: GILMORE EPA ID No.: _____

PART 1: General Information

Business Name: BUILDING # 3

Address: 321 TERMINAL ST

Contact Name: MIKE EMLEY

Phone: 616-780-2573 **Email:** _____

Facility Owner/Landlord Information (If different from above)

Name: SAME

Phone: _____ **Email:** _____

Other Building Contacts _____

Building/Business Type and Uses (Check appropriate boxes)

☐ Office Space ☒ Warehouse ☐ Manufacturing ☐ Multi-story ☐ Multi-tenant ☐ Warehouse

☐ Single level Office/Warehouse ☐ Other _____

Building Occupancy

Number of Occupants: 0 Adults: Gender M/F 0 / 0 General Age ranges: N/A

Days/Hours of occupancy MISC Duration of work shifts VARIES

Days/Hours of ventilation system operation NONE

Building Characteristics

Year/Decade Built: 1990'S Number of Stories: 1

Approximate Building Area (square feet): Total 11000 First Floor SAME

Is there an attached warehouse/shop space? (Y/N) Y describe its use: LAWN MAINT STORAGE ENTIRE BLDG

Is there a basement or underground garage? (Y/N) N describe its use: _____

Foundation Type (Check appropriate boxes)

☒ Slab-on-Grade ☐ Slab-above-Grade (elevated/cap-slab on fill) ☐ Crawl Space ☐ Basement ☐ None

Describe _____

Survey Preparation Information

Preparer's Name: FILIPIAK Date Prepared: 3/29/23

Affiliation: ARCADIS Phone: 248-722-8521 Email: SCOTT.FILIPIAK

Non-Residential Indoor Air Quality Evaluation Form

Date: 3/29/23 Facility Name: GILMORE BLDG #3 EPA ID No.: _____

PART 2: Factors Impacting Indoor Air Quality and Sampling

Questions

Describe renovation activities over the last 6 months (what was done, what area, and when):

NONE

Describe any open combustion in the building. (smoking/incense/candles/cooking/burning)

NONE

Have site-specific contaminants of concern been used or stored in the building or nearby? ☒ Yes ☐ No

Please list the general types of chemicals CLEANING SOLVENTS

Have any significant amounts of volatile chemicals been used recently? ☐ Yes ☒ No

Please list the chemicals SEE PHOTO'S

Describe any instance of water/groundwater present in the basement/crawlspace (including sumps):

Are there conduits for sewer gases to enter the building (dry p-traps, open clean-outs, abandoned hook-ups, poorly installed/sealed/seated plumbing)? Describe:

NO.

Observations

What is the temperature relative to outside? SLIGHTLY WARMER

VI is promoted when the interior is warmer than the exterior.

Were windows/doors/roll-up doors kept open? NO

Increased ventilation from the outside will dilute vapors from the subsurface and may mitigate areas of negative pressure.

Mechanical ventilation system status and condition? NONE

Are intake or exhaust fans being used? NO

Are there ventilation hoods in use? NO

Indicated by air moving from the outside in. Negative pressure is the main driving force that moves vapors into a building.

Is there evidence of negative pressure? NO

Do parts of the indoor environment appear stagnant? NO

Vapors may build up in areas with poor ventilation.

Describe any strong odors. NONE

Strong odors may indicate poor ventilation or an indoor air source that may interfere with analysis.

Building Construction

Building Construction Materials?

☐ Concrete ☐ Concrete Block ☒ Steel ☐ Wood ☐ Other _____

Does the building have an at-grade or below-grade garage? No How is it ventilated? _____

Non-Residential Indoor Air Quality Evaluation Form

Date: 3/29/23 Facility Name: GILMORE BLDG #3 EPA ID No.: _____

Does the building have an attached mechanical room? NO

Does the building have footers distinct from the slab or integrated footers? NO

Is the building slab constructed with post-tension concrete? YES

What are the ceiling heights? 14 - 20'

Pathway Analysis

Does the building have a basement or sub-surface structures that are/have:

☐ Unfinished ☐ Exposed soil ☐ Damp or flooded ☐ Unsealed utility lines ☐ Other _____

Are there utilities that penetrate the slab that may be conduits for soil vapor? ☐ Yes ☒ No

Are these:

Connected to subsurface vaults? ☐ Yes ☒ No

Connected to utilities closer to potential VI sources? ☐ Yes ☒ No

In areas where pressure differential would cause air to flow through them? ☐ Yes ☒ No

Is there non-ventilated spaces in the building (maintenance /electrical / server rooms)? ☐ Yes ☒ No

If Yes, describe: _____

Are these spaces occupied? ☐ Yes ☐ No

At what frequency/duration? _____

Are there potential pathways in these spaces? ☐ Yes ☐ No

If Yes, describe: _____

Are there heat sources in these spaces (servers, transformers, etc.? ☐ Yes ☐ No

If Yes, describe: _____

Are there heat sources or other systems that may generate a negative pressure near the floor/slab?

☐ Yes ☒ No

If Yes, Describe: _____

Are there elevators in the building? ☐ Yes ☒ No

If the elevators are hydraulic how deep do the pistons penetrate below the slab? _____

Are there utilities penetrating the floor/slab? ☐ Yes ☒ No

Are there sumps, either interior or outside and adjacent? ☐ Yes ☒ No

What is the condition of the foundation/slab? GOOD

Non-Residential Indoor Air Quality Evaluation Form

Date: 3/29/23 Facility Name: Gilmore Bldg #3 EPA ID No.: _____

Was the building constructed with a subslab system or barrier? ☐ Yes ☒ No

If Yes, describe: _____

_____

_____

Are there floor drains? ☐ Yes ☐ No

If Yes, describe: _____

_____

_____

If the foundation design specifications and/or as-built drawings are available, please attach.

Other Information (that may be of importance in understanding the indoor air quality):

_____

_____

_____

Potential Sampling Locations

General notes on potential sample locations and type. Tentative sampling date(s) and preferred times.

_____

_____

_____

On a separate page, draw/attach the general floor plan of the building and denote potential locations of sample collection. Indicate locations of doors, windows, ventilation system components, indoor air contaminant sources and field instrument readings.

Non-Residential Indoor Air Quality Evaluation Form

Date: 3/29/23 Facility Name: Gilmore Bldg #3 EPA ID No.: _____

PART 3: Inventory of Potential Indoor Contaminant Sources:

List items/products in the building or the attached warehouse/shop that may contain site-specific contaminants of concern. Attach Safety Data Sheets (SDSs).

Potential contaminant source	Location of Product Source	Photograph, ingredients, PID reading	Remove? Y/N

Non-Residential Indoor Air Quality Evaluation Form

Date: 3/29/23 Facility Name: Gilmore Bldg #3 EPA ID No.: _____

PART 4: Building Heating/Cooling/Ventilation Systems

(Note: Complete this section as much as possible. Not all facility personnel or their contractors will readily have access to information in this section. Information from this section will help determine characteristics of some systems and it's impacts on vapor intrusion)

Systems Present

What types of systems are used for heating, cooling and ventilation? Check all that apply.

☐ Air Handler(s) ☐ Package Units ☐ Window/Wall systems ☐ Split System

☐ Radiant heating (electric or water/steam) ☐ Evaporative Coolers ☐ Heat pump ☐ Built-up ☒ None

Comments _____

Do the systems present provide make-up/fresh air? ☑ Yes ☐ No

Fresh air should be supplied in all commercial/industrial/institutional settings. ASHRAE Standard 62, *Ventilation for Acceptable Indoor Air Quality*, has guidelines on how much air should be supplied. Meeting these requirements generally helps to mitigate VI impacts.

Have the systems been evaluated for ASHRAE Standard 62 compliance? ☐ Yes ☐ No

Is a system commissioning report available? ☐ Yes ☒ No (attach)

When was the system last tested and balanced? _____ (attach report if available)

Is the ventilation system automated (building automation system)? ☐ Yes ☒ No

Automation systems can be used to record settings during sampling and to verify HVAC operation where an HVAC remedy is required

If yes is the data recorded or can it be recorded? ☐ Yes ☒ No

(Note that the ventilation settings should be evaluated in the automation system and verified manually where possible.)

System operations

For each of the ventilation systems describe how is outdoor air supplied?

- Economizers: _____
  - minimum and maximum settings cfm or %_____
- Manual adjustable outdoor air intakes _____
  - Settings _____
- Fixed outdoor air intakes? _____
- Unused outdoor air intake (blank panel)? _____
- Outdoor air intake not easily installed (e.g., split system, radiant heating) _____

How frequently are the ventilation systems serviced? _____

Generally, systems should be serviced quarterly to verify performance.

Days and hours of operation for each ventilation system _____

Do any of the ventilation systems operate during nights and weekends? ☐ Yes ☐ No

Non-Residential Indoor Air Quality Evaluation Form

Date: 3/29/23 Facility Name: Gilmore Bldg #3 EPA ID No.: _____

If yes, are they operating on reduced settings? ☒ Yes ☐ No

Are the temperature / ventilation settings locked or routinely adjusted by the occupants? _____

What are the temperature settings? (note if seasonally variable) Days _____ Nights _____
Weekends _____

If there is an economizer, does the system control outdoor air supply using: (check all that apply)

☐ Outdoor air temperature/enthalpy ☐ CO_2 concentration ☐ Other _____

Is there power exhaust? ☐ Yes ☒ No

Is the power exhaust setting dependent on ☐ economizer damper position ☐ static pressure

Does the system use variable or constant air volume distribution (VAV/CAV)? _____

Is there a dedicated outdoor air system installed? ☐ Yes ☒ No

If Yes, describe: _____

Other Ventilation Issues impacting vapor intrusion potential.

Does the ventilation system have any underground components? NO

Having air flow on or below the building floor can draw in vapors from the subsurface.

Is ventilation being supplied or returned under a false floor above the building slab? NO

This is common in server rooms

Are ducting components routed through a basement, crawlspace, or utility vault area? NO

Is a boiler or heater present in a basement or crawlspace? NO describe _____

Is the make-up air balanced with the exhaust fans in kitchens, laboratories and similar spaces? NO

Are there spaces of the building that are inherently at a negative pressure? NO

Certain rooms such as kitchens are generally kep at negative pressure other rooms may be negative due to system design/use

Outdoor air intakes

Where are the outdoor air intakes located? _____

Are any intakes near sources of contaminants / sewer vents? _____

Are there carbon filters present in the ventilation system? _____

What make and model of filters are present and how often are they changed? _____

Non-Residential Indoor Air Quality Evaluation Form

Date: 3/29/23 Facility Name: Gilmore Bldg #3 EPA ID No.: _____

Ventilation zones and settings

Zone/ Room	System Type	Supply Air Total cfm (range if VAV)	Supply Air % outdoor (range)	Ducted y/n	Return Air cfm	Ducted y/n

Non-Residential Indoor Air Quality Evaluation Form

Date: 3/29/23 Facility Name: GILMORE EPA ID No.: _____

PART 1: General Information

Business Name: BUILDING #4

Address: 321 TERMINAL ST.

Contact Name: MIKE EMLEY

Phone: 616-780-2573 **Email:** _____

Facility Owner/Landlord Information (If different from above)

Name: SAME

Phone: _____ **Email:** _____

Other Building Contacts _____

Building/Business Type and Uses (Check appropriate boxes)

☐ Office Space ☒ Warehouse ☐ Manufacturing ☐ Multi-story ☐ Multi-tenant ☐ Warehouse

☐ Single level Office/Warehouse ☐ Other _____

Building Occupancy

Number of Occupants: 0 Adults: Gender M/F Ø / Ø General Age ranges: N/A

Days/Hours of occupancy MISC Duration of work shifts VARIES

Days/Hours of ventilation system operation NONE

Building Characteristics

Year/Decade Built: 1990's Number of Stories: 1

Approximate Building Area (square feet): Total 11000 First Floor SAME

Is there an attached warehouse/shop space? (Y/N) Y describe its use: VEHICLE STORAGE ; MAINT

Is there a basement or underground garage? (Y/N) N describe its use: _____

Foundation Type (Check appropriate boxes)

☒ Slab-on-Grade ☐ Slab-above-Grade (elevated/cap-slab on fill) ☐ Crawl Space ☐ Basement ☐ None

Describe _____

Survey Preparation Information

Preparer's Name: FILIPIAK Date Prepared: 3/29/23

Affiliation: ARCADIS Phone: 248-722-8561 Email: SCOTT.FILIPIAK@ARCADIS

Non-Residential Indoor Air Quality Evaluation Form

Date: 3/29/23 Facility Name: GILMORE BUILDING #4 EPA ID No.: _____

PART 2: Factors Impacting Indoor Air Quality and Sampling

Questions

Describe renovation activities over the last 6 months (what was done, what area, and when):

NONE

Describe any open combustion in the building. (smoking/incense/candles/cooking/burning)

NONE

Have site-specific contaminants of concern been used or stored in the building or nearby? ☒ Yes ☒ No

Please list the general types of chemicals _____

Have any significant amounts of volatile chemicals been used recently? ☐ Yes ☒ No

Please list the chemicals ANTIFREEZE; MOTOR OIL; WINDSHIELD SOLVENT

Describe any instance of water/groundwater present in the basement/crawlspace (including sumps):

Are there conduits for sewer gases to enter the building (dry p-traps, open clean-outs, abandoned hook-ups, poorly installed/sealed/seated plumbing)? Describe:

NO

Observations

What is the temperature relative to outside? SLIGHTLY ABOVE OUTSIDE

VI is promoted when the interior is warmer than the exterior.

Were windows/doors/roll-up doors kept open? NO AND DOORS HAVE GAPS

Increased ventilation from the outside will dilute vapors from the subsurface and may mitigate areas of negative pressure.

Mechanical ventilation system status and condition? NONE

Are intake or exhaust fans being used? NO

Are there ventilation hoods in use? NO

Indicated by air moving from the outside in. Negative pressure is the main driving force that moves vapors into a building.

Is there evidence of negative pressure? NO

Do parts of the indoor environment appear stagnant? NO

Vapors may build up in areas with poor ventilation.

Describe any strong odors. NONE

Strong odors may indicate poor ventilation or an indoor air source that may interfere with analysis.

Building Construction

Building Construction Materials?

☐ Concrete ☐ Concrete Block ☒ Steel ☐ Wood ☐ Other _____

Does the building have an at-grade or below-grade garage? NO How is it ventilated? _____

Non-Residential Indoor Air Quality Evaluation Form

Date: 3/29/23 Facility Name: Gilmore Building #4 EPA ID No.: _____

Does the building have an attached mechanical room? No

Does the building have footers distinct from the slab or integrated footers? NO

Is the building slab constructed with post-tension concrete? YES

What are the ceiling heights? 14-20'

Pathway Analysis

Does the building have a basement or sub-surface structures that are/have:

☐ Unfinished ☐ Exposed soil ☐ Damp or flooded ☐ Unsealed utility lines ☐ Other _____

Are there utilities that penetrate the slab that may be conduits for soil vapor? ☐ Yes ☒ No

Are these:

Connected to subsurface vaults? ☐ Yes ☒ No

Connected to utilities closer to potential VI sources? ☐ Yes ☒ No

In areas where pressure differential would cause air to flow through them? ☐ Yes ☒ No

Is there non-ventilated spaces in the building (maintenance /electrical / server rooms)? ☐ Yes ☒ No

If Yes, describe: _____

Are these spaces occupied? ☐ Yes ☐ No

At what frequency/duration? _____

Are there potential pathways in these spaces? ☐ Yes ☐ No

If Yes, describe: _____

Are there heat sources in these spaces (servers, transformers, etc.? ☐ Yes ☐ No

If Yes, describe: _____

Are there heat sources or other systems that may generate a negative pressure near the floor/slab?

☐ Yes ☒ No

If Yes, Describe: _____

Are there elevators in the building? ☐ Yes ☒ No

If the elevators are hydraulic how deep do the pistons penetrate below the slab? _____

Are there utilities penetrating the floor/slab? ☐ Yes ☒ No

Are there sumps, either interior or outside and adjacent? ☐ Yes ☒ No

What is the condition of the foundation/slab? _____

Non-Residential Indoor Air Quality Evaluation Form

Date: 3/29/23 Facility Name: GILMORE BUILDING #4 EPA ID No.: _____

Was the building constructed with a subslab system or barrier? ☐ Yes ☒ No

If Yes, describe: _____

_____

_____

Are there floor drains? ☐ Yes ☐ No

If Yes, describe: UNKNOWN

_____

_____

If the foundation design specifications and/or as-built drawings are available, please attach.

Other Information (that may be of importance in understanding the indoor air quality):

_____

_____

_____

Potential Sampling Locations

General notes on potential sample locations and type. Tentative sampling date(s) and preferred times.

_____

_____

_____

On a separate page, draw/attach the general floor plan of the building and denote potential locations of sample collection. Indicate locations of doors, windows, ventilation system components, indoor air contaminant sources and field instrument readings.

Non-Residential Indoor Air Quality Evaluation Form

Date: 3/29/23 Facility Name: Gilmore Building #4 EPA ID No.: _____

PART 3: Inventory of Potential Indoor Contaminant Sources:

List items/products in the building or the attached warehouse/shop that may contain site-specific contaminants of concern. Attach Safety Data Sheets (SDSs).

Potential contaminant source	Location of Product Source	Photograph, ingredients, PID reading	Remove? Y/N

Non-Residential Indoor Air Quality Evaluation Form

Date: 3/29/23 Facility Name: Gilmore Building #4 EPA ID No.: _____

PART 4: Building Heating/Cooling/Ventilation Systems

(Note: Complete this section as much as possible. Not all facility personnel or their contractors will readily have access to information in this section. Information from this section will help determine characteristics of some systems and it's impacts on vapor intrusion)

Systems Present

What types of systems are used for heating, cooling and ventilation? Check all that apply.

☐ Air Handler(s) ☐ Package Units ☐ Window/Wall systems ☐ Split System

☐ Radiant heating (electric or water/steam) ☐ Evaporative Coolers ☐ Heat pump ☐ Built-up ☒ None

Comments Warehouse

Do the systems present provide make-up/fresh air? ☐ Yes ☒ No

> Fresh air should be supplied in all commercial/industrial/institutional settings. ASHRAE Standard 62, *Ventilation for Acceptable Indoor Air Quality*, has guidelines on how much air should be supplied. Meeting these requirements generally helps to mitigate VI impacts.

Have the systems been evaluated for ASHRAE Standard 62 compliance? ☐ Yes ☒ No

Is a system commissioning report available? ☐ Yes ☒ No (attach)

When was the system last tested and balanced? _____ (attach report if available)

Is the ventilation system automated (building automation system)? ☐ Yes ☒ No

> Automation systems can be used to record settings during sampling and to verify HVAC operation where an HVAC remedy is required

If yes is the data recorded or can it be recorded? ☐ Yes ☒ No

(Note that the ventilation settings should be evaluated in the automation system and verified manually where possible.)

System operations

For each of the ventilation systems describe how is outdoor air supplied?

- Economizers: _____
  - minimum and maximum settings cfm or %_____
- Manual adjustable outdoor air intakes _____
  - Settings _____
- Fixed outdoor air intakes? _____
- Unused outdoor air intake (blank panel)? _____
- Outdoor air intake not easily installed (e.g., split system, radiant heating) _____

How frequently are the ventilation systems serviced? _____

> Generally, systems should be serviced quarterly to verify performance.

Days and hours of operation for each ventilation system _____

Do any of the ventilation systems operate during nights and weekends? ☐ Yes ☒ No

Non-Residential Indoor Air Quality Evaluation Form

Date: 3/29/23 Facility Name: GILMORE BUILDING #4 EPA ID No.: _____

If yes, are they operating on reduced settings? ☐ Yes ☒ No

Are the temperature / ventilation settings locked or routinely adjusted by the occupants? _____

What are the temperature settings? (note if seasonally variable) Days _____ Nights _____
Weekends _____

If there is an economizer, does the system control outdoor air supply using: (check all that apply)

☐ Outdoor air temperature/enthalpy ☐ CO_2 concentration ☐ Other _____

Is there power exhaust? ☐ Yes ☒ No

Is the power exhaust setting dependent on ☐ economizer damper position ☐ static pressure

Does the system use variable or constant air volume distribution (VAV/CAV)? _____

Is there a dedicated outdoor air system installed? ☐ Yes ☒ No

If Yes, describe: _____

Other Ventilation Issues impacting vapor intrusion potential.

Does the ventilation system have any underground components? NO

Having air flow on or below the building floor can draw in vapors from the subsurface.

Is ventilation being supplied or returned under a false floor above the building slab? NO

This is common in server rooms

Are ducting components routed through a basement, crawlspace, or utility vault area? NO

Is a boiler or heater present in a basement or crawlspace? N/A describe _____

Is the make-up air balanced with the exhaust fans in kitchens, laboratories and similar spaces? NO

Are there spaces of the building that are inherently at a negative pressure? NO

Certain rooms such as kitchens are generally kep at negative pressure other rooms may be negative due to system design/use

Outdoor air intakes

Where are the outdoor air intakes located? N/A

Are any intakes near sources of contaminants / sewer vents? _____

Are there carbon filters present in the ventilation system? _____

What make and model of filters are present and how often are they changed? _____

Non-Residential Indoor Air Quality Evaluation Form

Date: 3/29/23 Facility Name: GILMORE BUILDING #4 EPA ID No.: _____

Ventilation zones and settings

Zone/ Room	System Type	Supply Air Total cfm (range if VAV)	Supply Air % outdoor (range)	Ducted y/n	Return Air cfm	Ducted y/n