
**Site Specific Conditional Sampler
Garfield County, Colorado**

VOC Data Summaries

Prepared for

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A decorative graphic in the bottom left corner consisting of three stylized mountain peaks in shades of green and blue.

TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
1.0 INTRODUCTION	1-1
2.0 SAMPLE COLLECTION AND ANALYSIS	2-1
3.0 OPERATIONAL SUMMARY	3-1
4.0 DATA SUMMARIES	4-1
APPENDIX A Lab Results	A-1

LIST OF FIGURES

<u>Figure</u>	<u>Page</u>
1-1 Map showing location of the general sampling area	1-2
1-2 Photo of upwind conditional sampler system	1-3
1-3 Photo of downwind conditional sampler system	1-3
1-4 Photo of example canister	1-4
4-1 Measured SNMOC Concentrations	4-2
4-2 Meteorological Time Series Plot – Upwind Sampler January 2018	4-3
4-3 Meteorological Time Series Plot – Downwind Sampler January 2018	4-4
4-4 Meteorological Time Series Plot – Upwind Sampler February 2018	4-5
4-5 Meteorological Time Series Plot – Downwind Sampler February 2018	4-6
4-6 Meteorological Time Series Plot – Upwind Sampler March 2018	4-7
4-7 Meteorological Time Series Plot – Downwind Sampler March 2018	4-8
4-8 Wind Rose – Upwind Sampler January 2018	4-9
4-9 Wind Rose – Downwind Sampler January 2018	4-10
4-8 Wind Rose – Upwind Sampler February 2018	4-11
4-8 Wind Rose – Downwind Sampler February 2018	4-12
4-8 Wind Rose – Upwind Sampler March 2018	4-13
4-9 Wind Rose – Downwind Sampler March 2018	4-14

LIST OF TABLES

<u>Table</u>	<u>Page</u>
3-1 Operational Summary	3-1

1.0 INTRODUCTION

In response to citizen concerns, Garfield County Public Health contracted with Air Resource Specialists, Inc. (ARS) to design and build a conditional sampler to collect canister samples near a newly developed well-pad operated by URSA Operating Company, LLC.

Figure 1-1 presents a map showing the general location of URSA operations and the monitoring location. Figures 1-2 and 1-3 show photographs of the sampling systems. This data submittal report summarizes Speciated Non-Methane Organic Compounds (SNMOC) measured at the URSA site.

Any questions regarding the content of this report or the accompanying digital data files should be addressed to:

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Figure 1-1. Map Showing General Location of the Sampling Area.



Figure 1-2. Upwind Conditional Sampler



Figure 1-3. Downwind Conditional Sampler



Figure 1-4. Example Summa Canister

2.0 SAMPLE COLLECTION AND ANALYSIS

Methodologies for the collection and analysis of Volatile Organic Compounds (VOC) at the URSA site specific conditional monitoring site meet EPA's *Compendium of Methods for Determination of Toxic Organic Compounds in Ambient Air*.

Speciated compounds are analyzed from samples collected using a SUMMA® stainless steel canister following EPA's Compendium Method TO-12, *Determination of Non-Methane Organic Compounds (NMOC) in Ambient Air Using Cryogenic Preconcentration and Direct Flame Ionization Detection (PDFID)*. Collected samples are sent to Eastern Research Group, Inc. (ERG) for analysis.

Two sampling systems collect ambient air samples when specific wind speed and direction conditions are present. The samplers operate when prevailing winds are from the southwest (215°- 235°), collecting upwind samples not likely associated with activities from the well pad using one system, and collecting downwind samples likely to be influenced by well pad activity using the other system.

For this study, each sample comprises at least a seven day period to ensure sufficient collection for VOC identification. Following exposure, samples were collected by Garfield County Public Health site operators and shipped directly to ERG for analysis. Chain-of-custody accounting is fully documented by shipping records, shipping logs, and field sampling log sheets, maintained by Garfield County Public Health. ERG performs sample analysis and data validation for samples per EPA method TO-12 requirements and provides validated data to ARS for inclusion in reports, data submittals and archives.

3.0 OPERATIONAL SUMMARY

The operational timelines for the canister samples for the reporting period are summarized in Table 3-1. The summaries include sampling times, site visits and significant events affecting data collection.

Table 3-1
Sampler Operational Timeline
January – March 2018

Month/Year	Upwind Canister Total Sampling Time	Downwind Canister Total Sampling Time
January 2018	614 minutes	599 minutes
February 2018	429 minutes	733 minutes
March 2018	705 minutes	665 minutes

4.0 DATA SUMMARIES

Volatile organic compounds (VOCs) are carbon-based and hydrogen-based chemicals that exist in the gas phase or can evaporate from liquids. VOCs can react in the atmosphere to form ozone (O₃) and particulate matter. Hazardous air pollutants (HAPs) are a subset of VOC compounds, and include compounds that are known or believed to cause human health effects. Speciated Non-Methane Organic Compounds (SNMOC) are collected and analyzed according to EPA Compendium Method TO-12.

Figure 4-1 presents measured SNMOC compounds collected from the site specific conditional sampler during each week long sampling event. Associated meteorological data are presented in Figures 4-2 through 4-7 as timeline series plots. Figures 4-8 through 4-13 present monthly wind roses associated with each conditional sampling period.

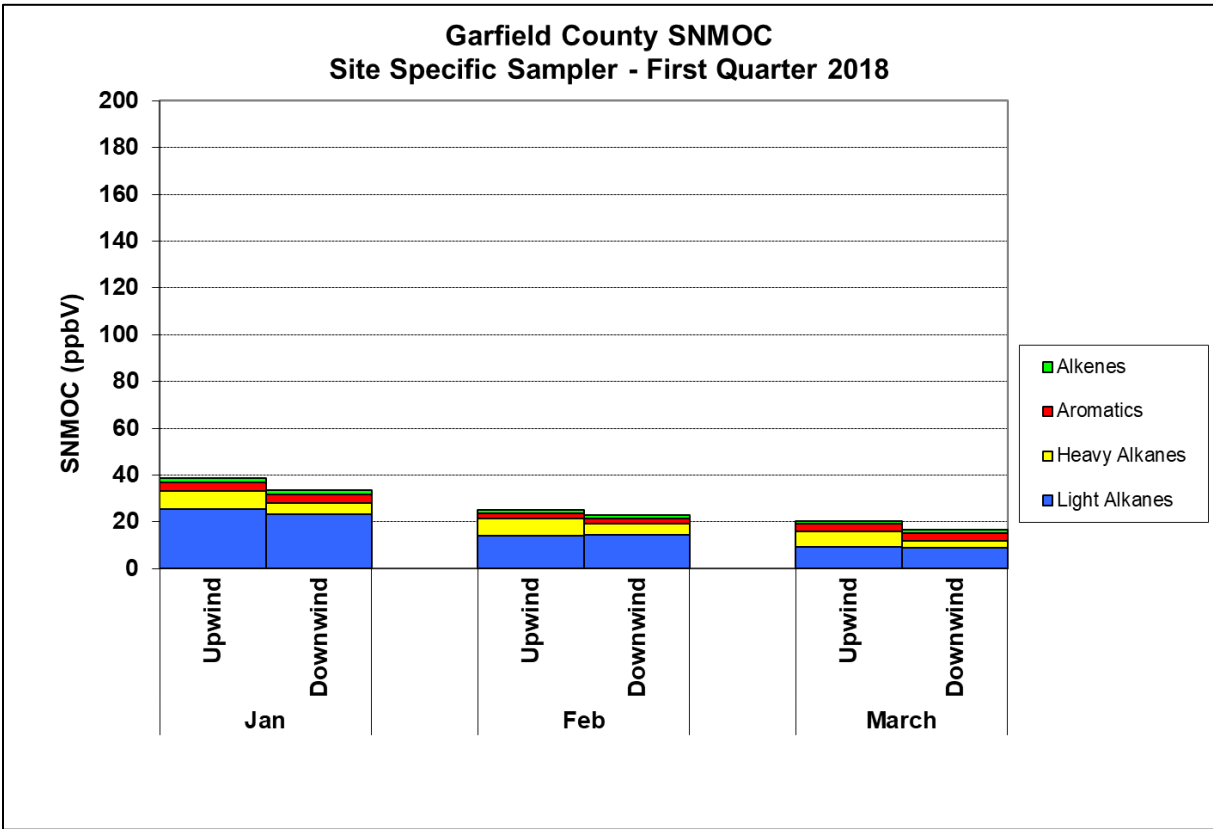


Figure 4-1. Measured SNMOC Concentrations Site Specific Conditional Sampler

Figure 4-2
Upwind Sampler
Garfield County - Meteorological Data
January 2018

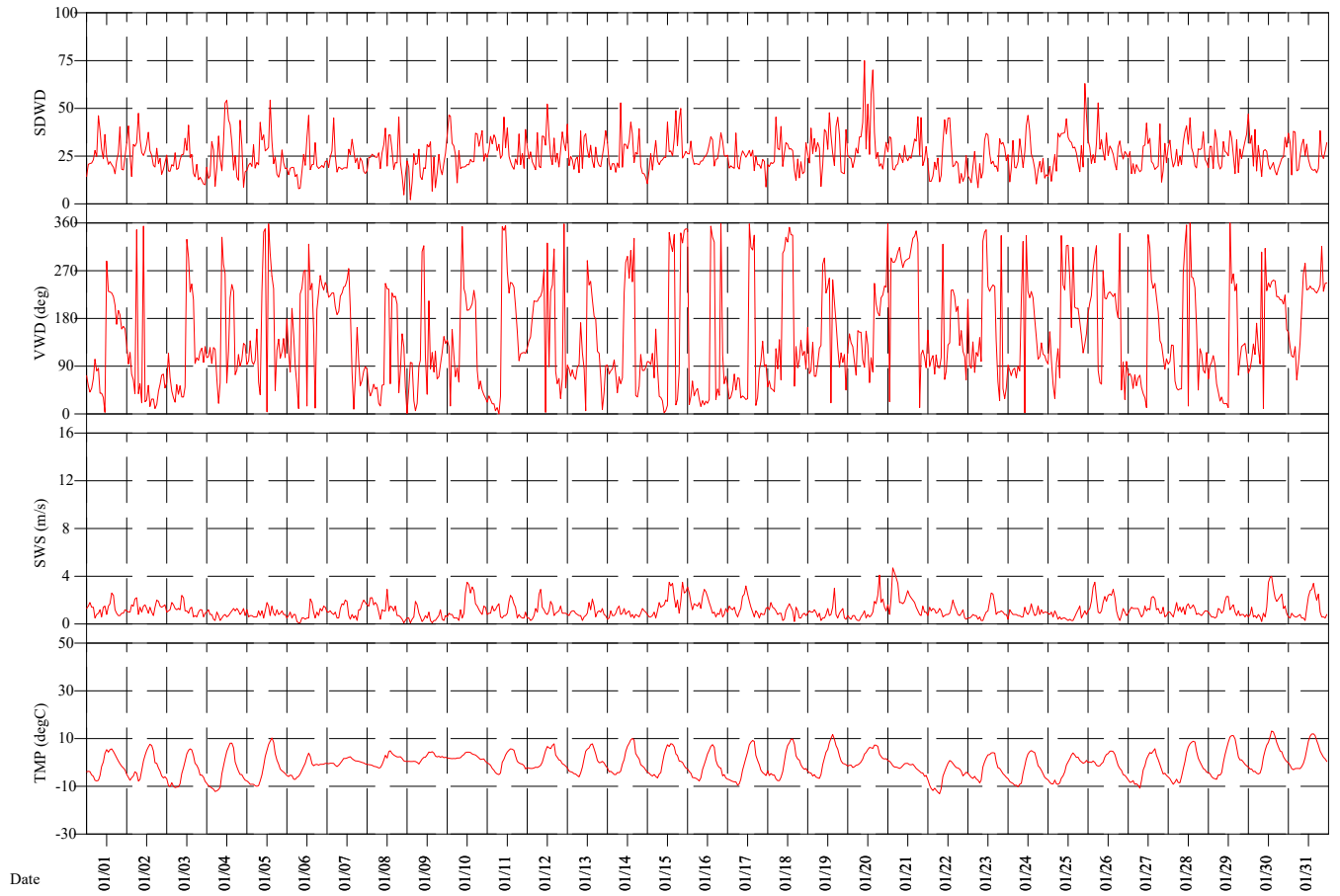


Figure 4-3
Downwind Sampler
Garfield County - Meteorological Data
January 2018

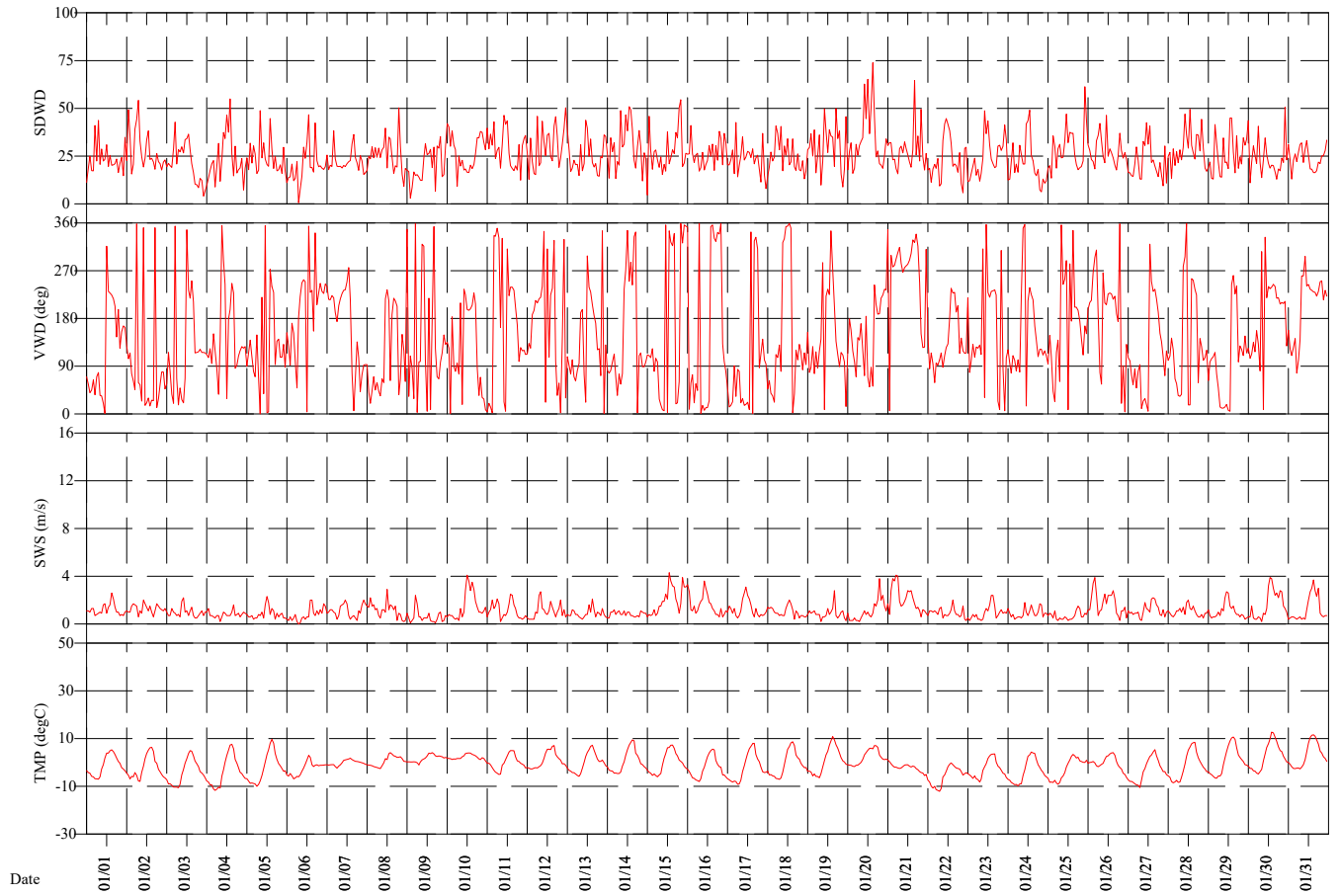


Figure 4-4
Upwind Sampler
Garfield County - Meteorological Data
February 2018

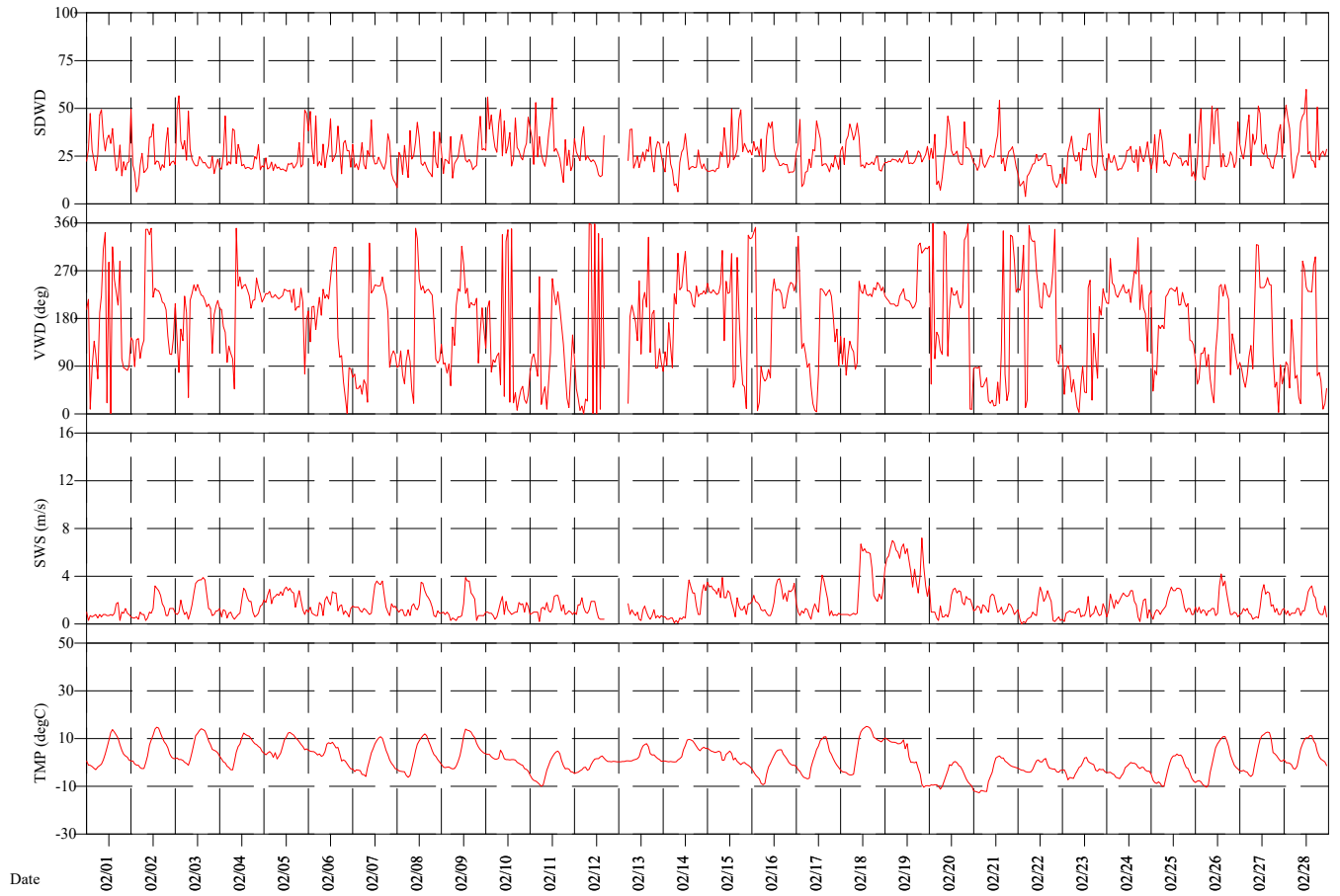


Figure 4-5
Downwind Sampler
Garfield County - Meteorological Data
February 2018

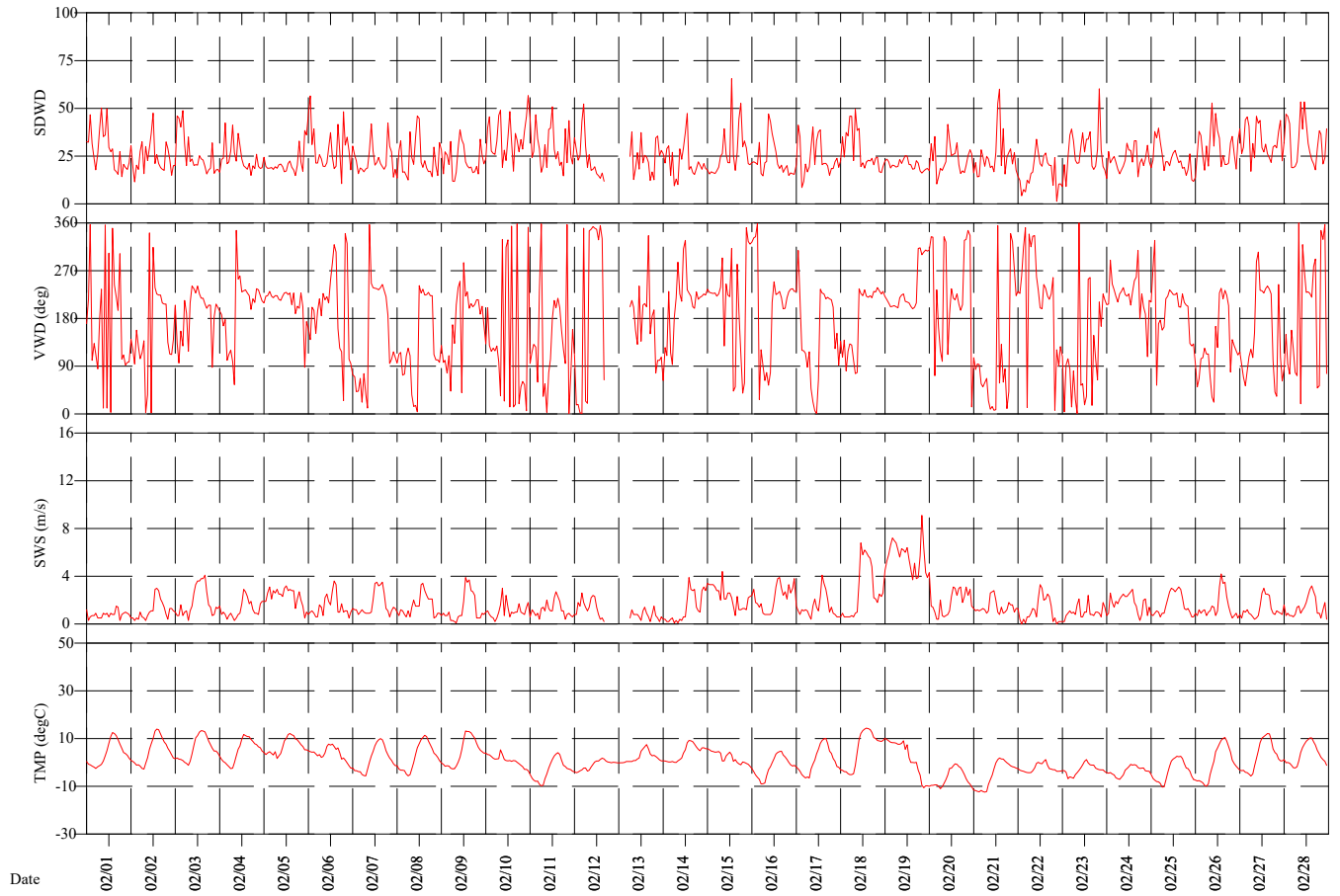


Figure 4-6
Upwind Sampler
Garfield County - Meteorological Data
March 2018

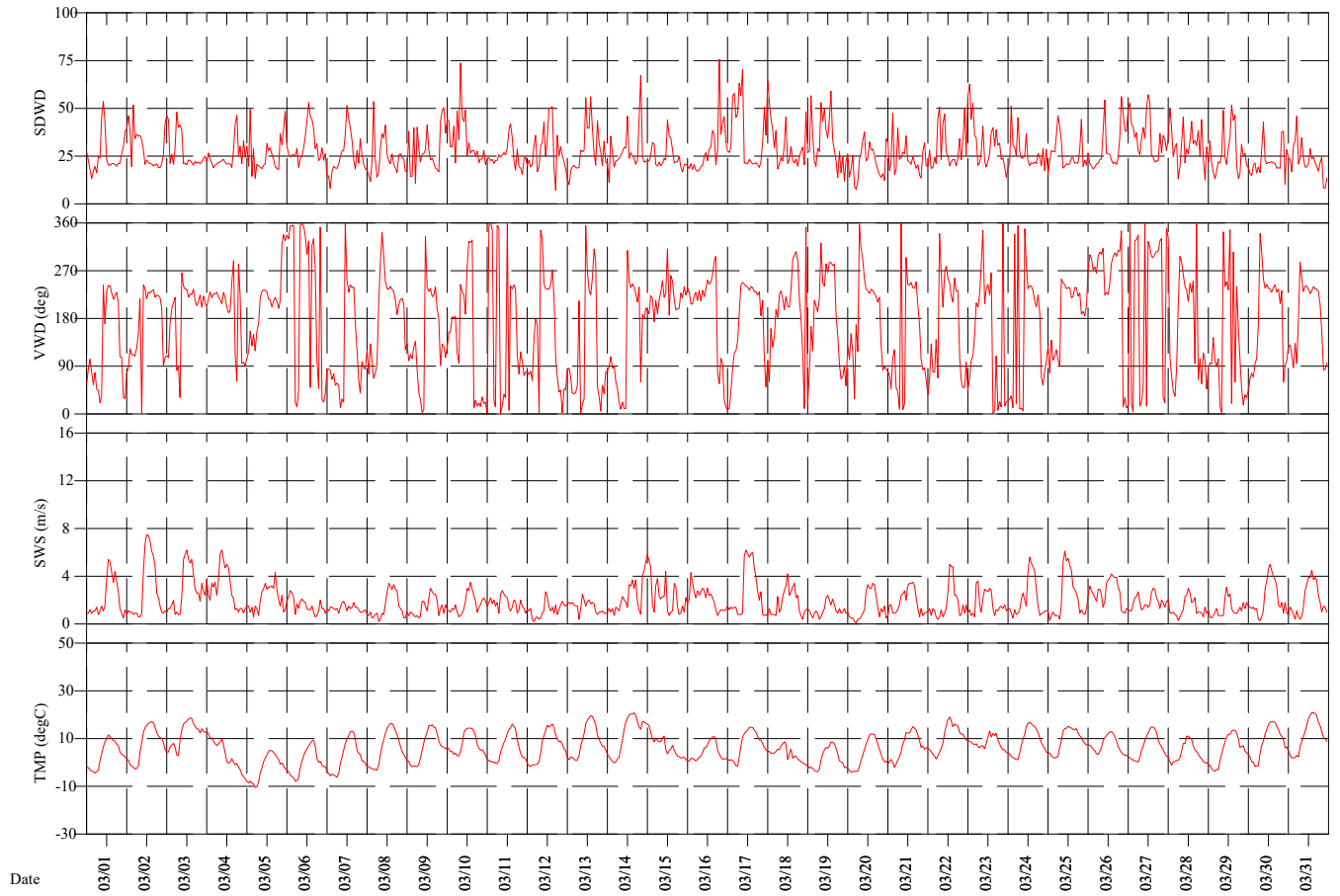
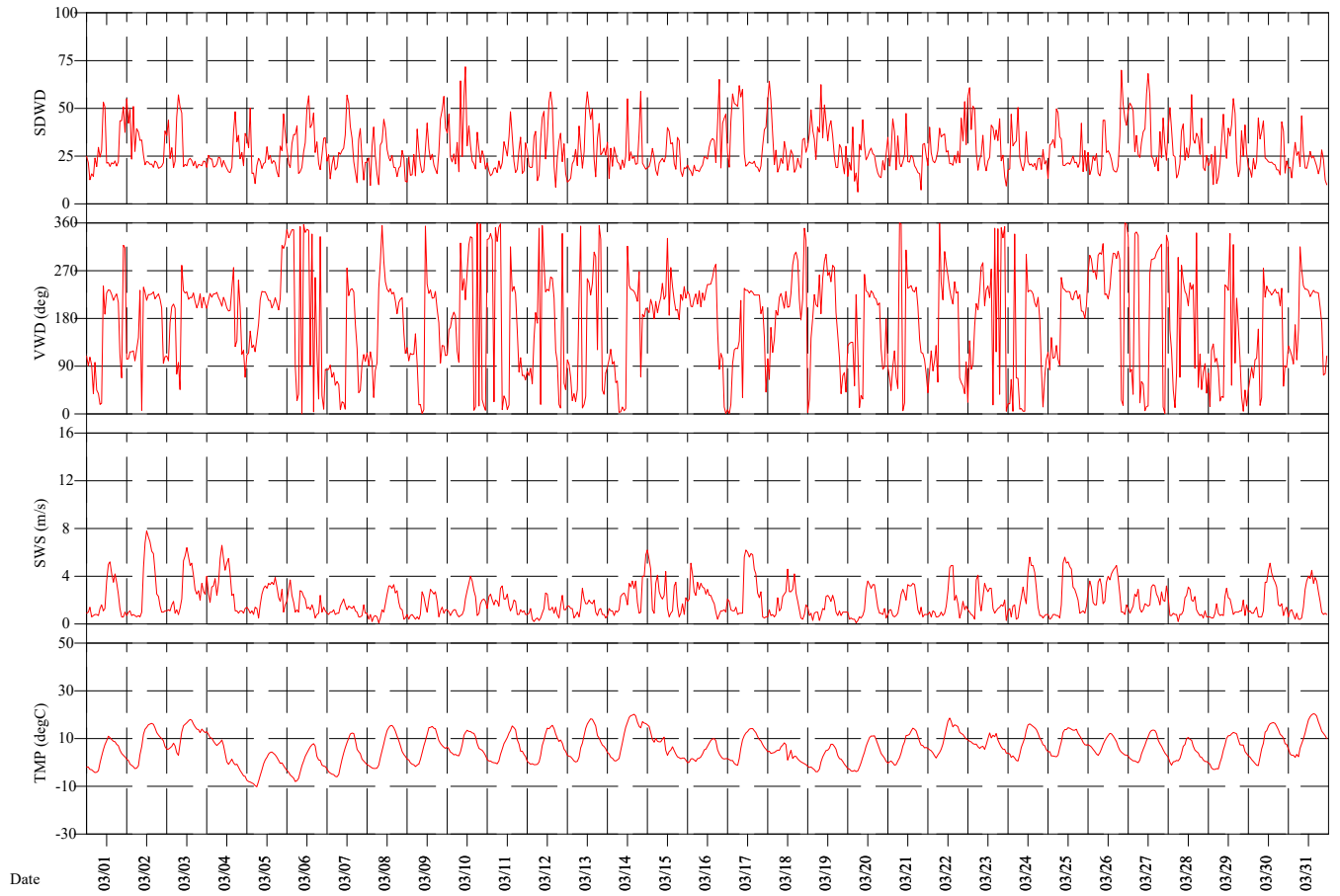


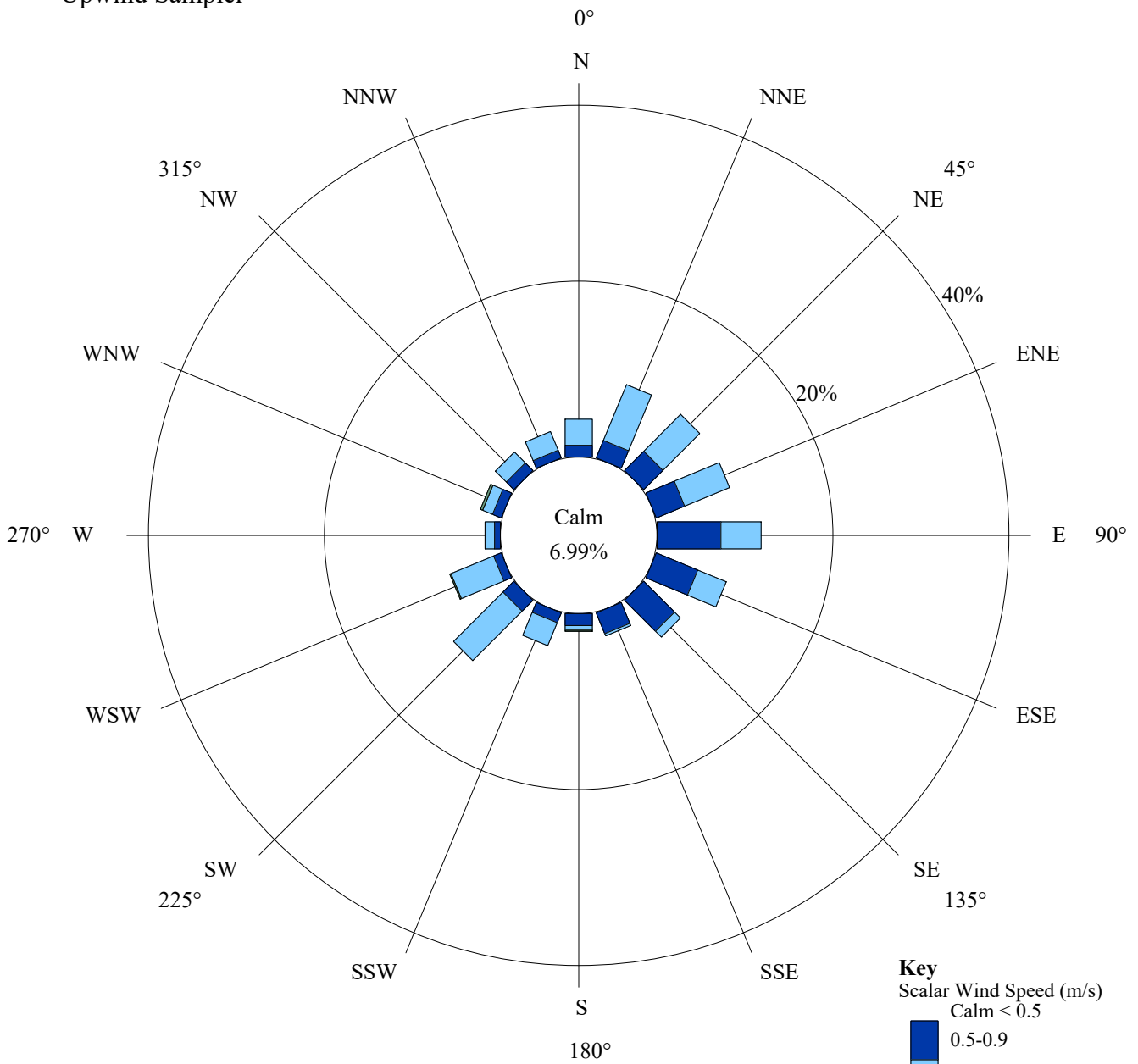
Figure 4-7
Downwind Sampler
Garfield County - Meteorological Data
March 2018



Garfield County Colorado
Upwind Sampler

Figure 4-8
Wind Rose

01/01/2018 - 01/31/2018

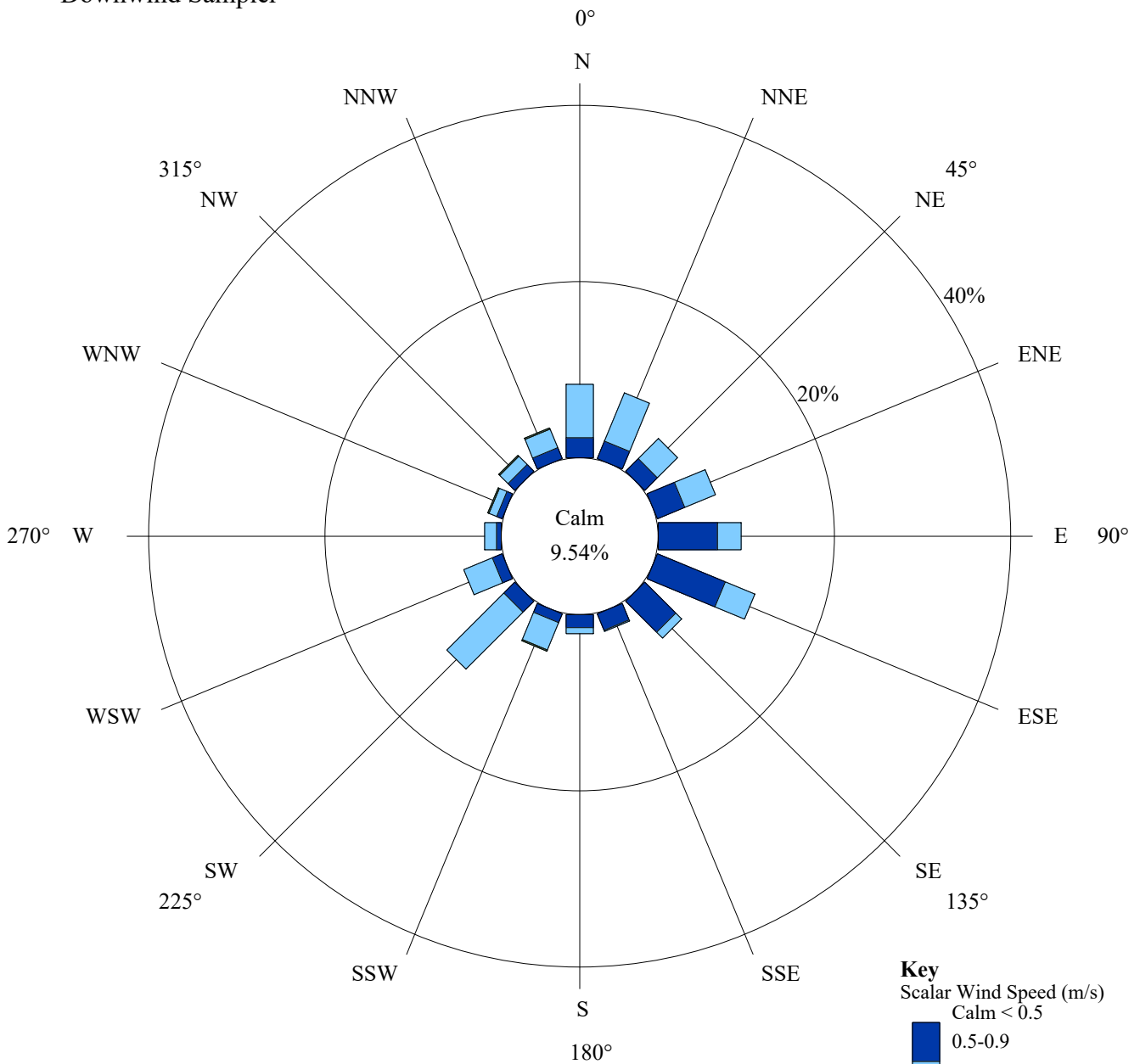


100.0% Collected 100.0% Valid
744 Possible /744 Collected /744 Valid
Collection Statistics Include:
Wind Speed and Wind Direction
(SWS-1; VWD-1)

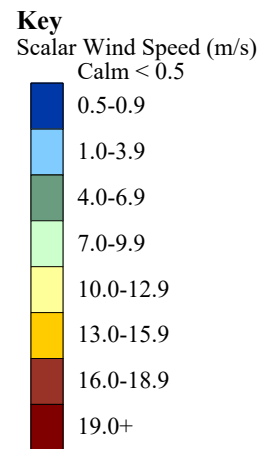
Garfiled County Colorado
Downwind Sampler

Figure 4-9
Wind Rose

01/01/2018 - 01/31/2018



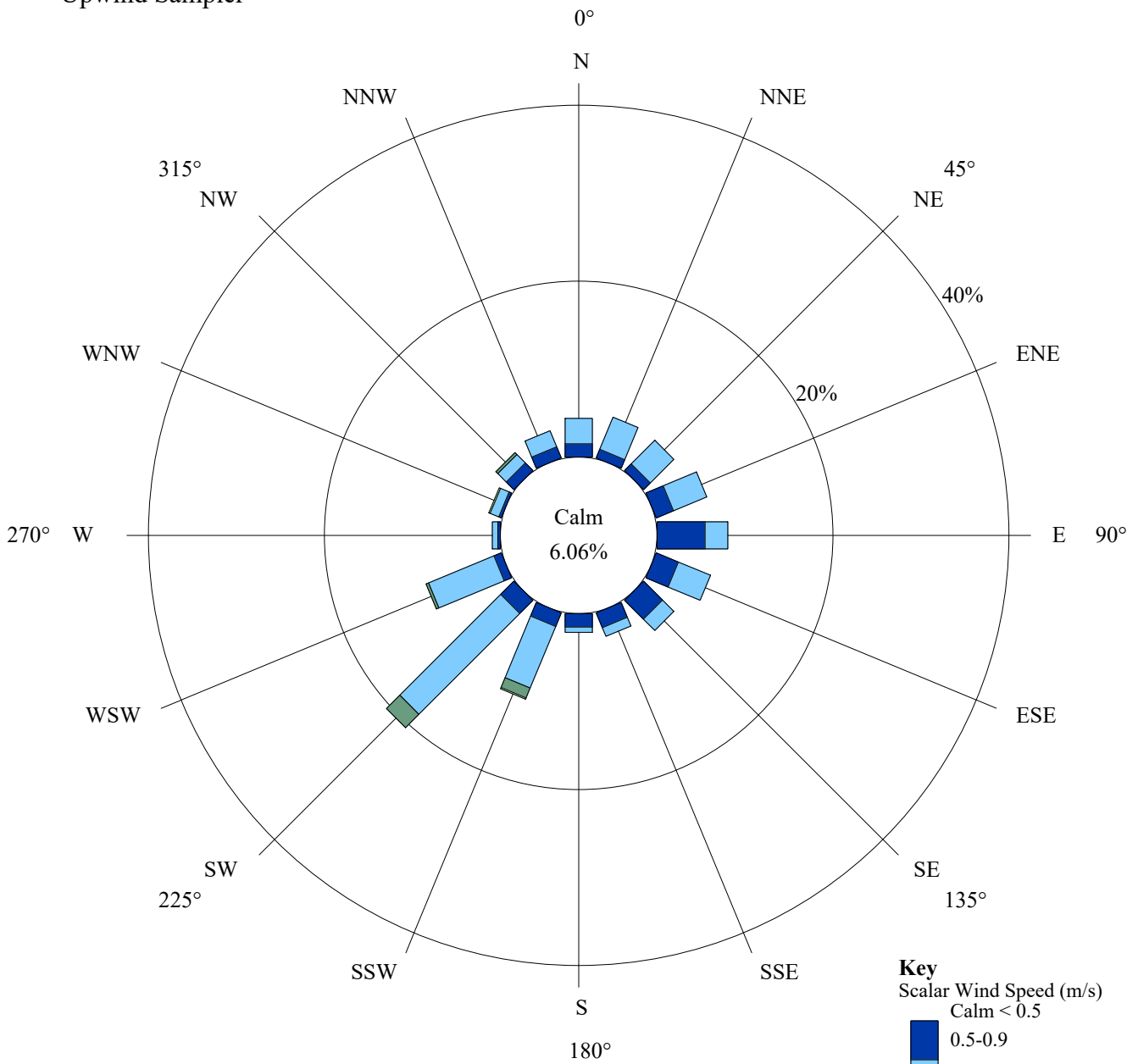
100.0% Collected 100.0% Valid
744 Possible /744 Collected /744 Valid
Collection Statistics Include:
Wind Speed and Wind Direction
(SWS-1; VWD-1)



Garfield County Colorado
Upwind Sampler

Figure 4-10
Wind Rose

02/01/2018 - 02/28/2018



98.2% Collected 98.2% Valid
672 Possible /660 Collected /660 Valid
Collection Statistics Include:
Wind Speed and Wind Direction
(SWS-1; VWD-1)

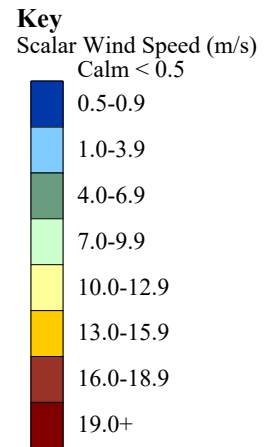
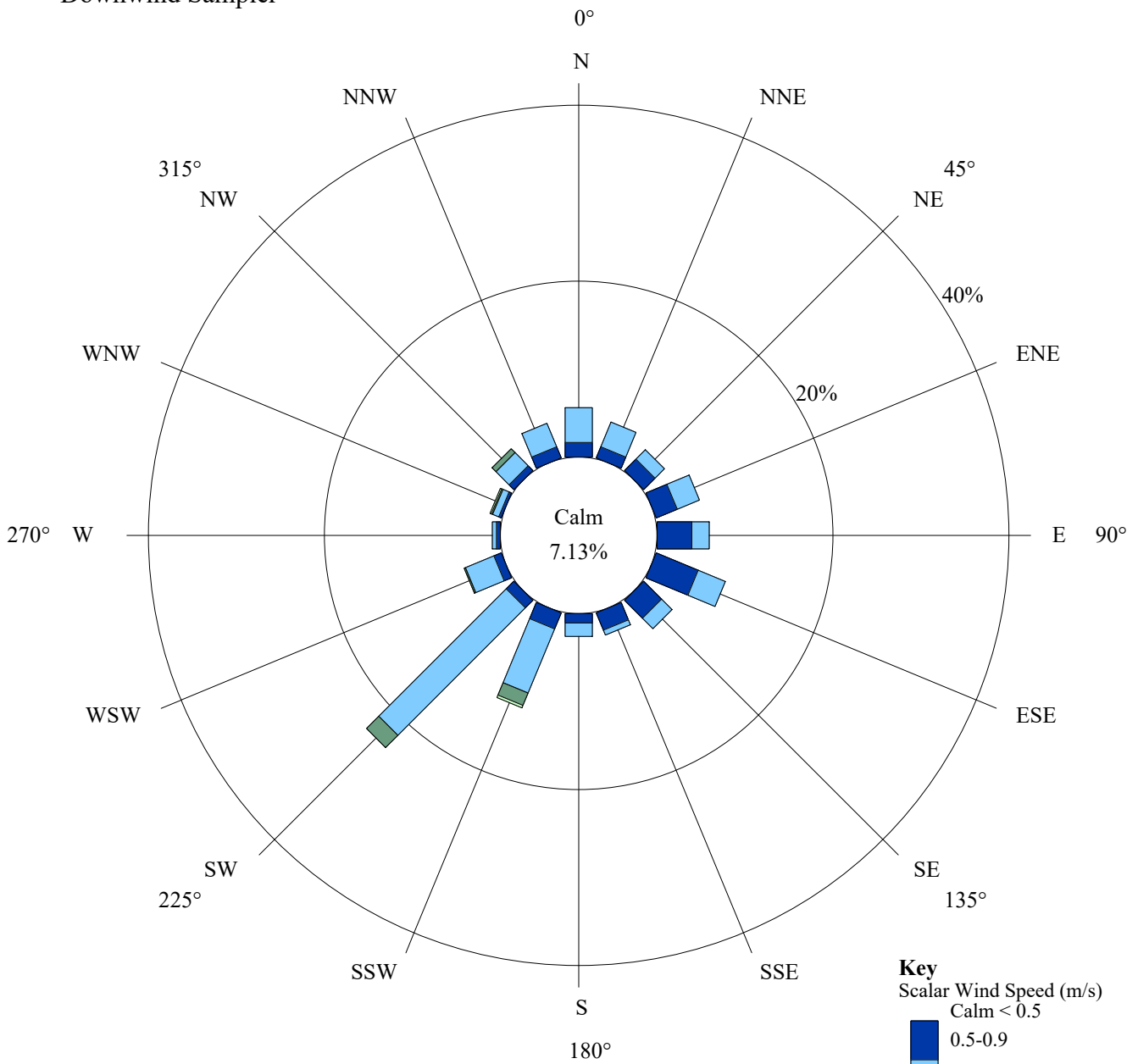


Figure 4-11

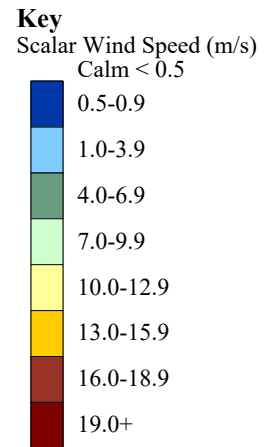
Garfiled County Colorado
Downwind Sampler

Wind Rose

02/01/2018 - 02/28/2018



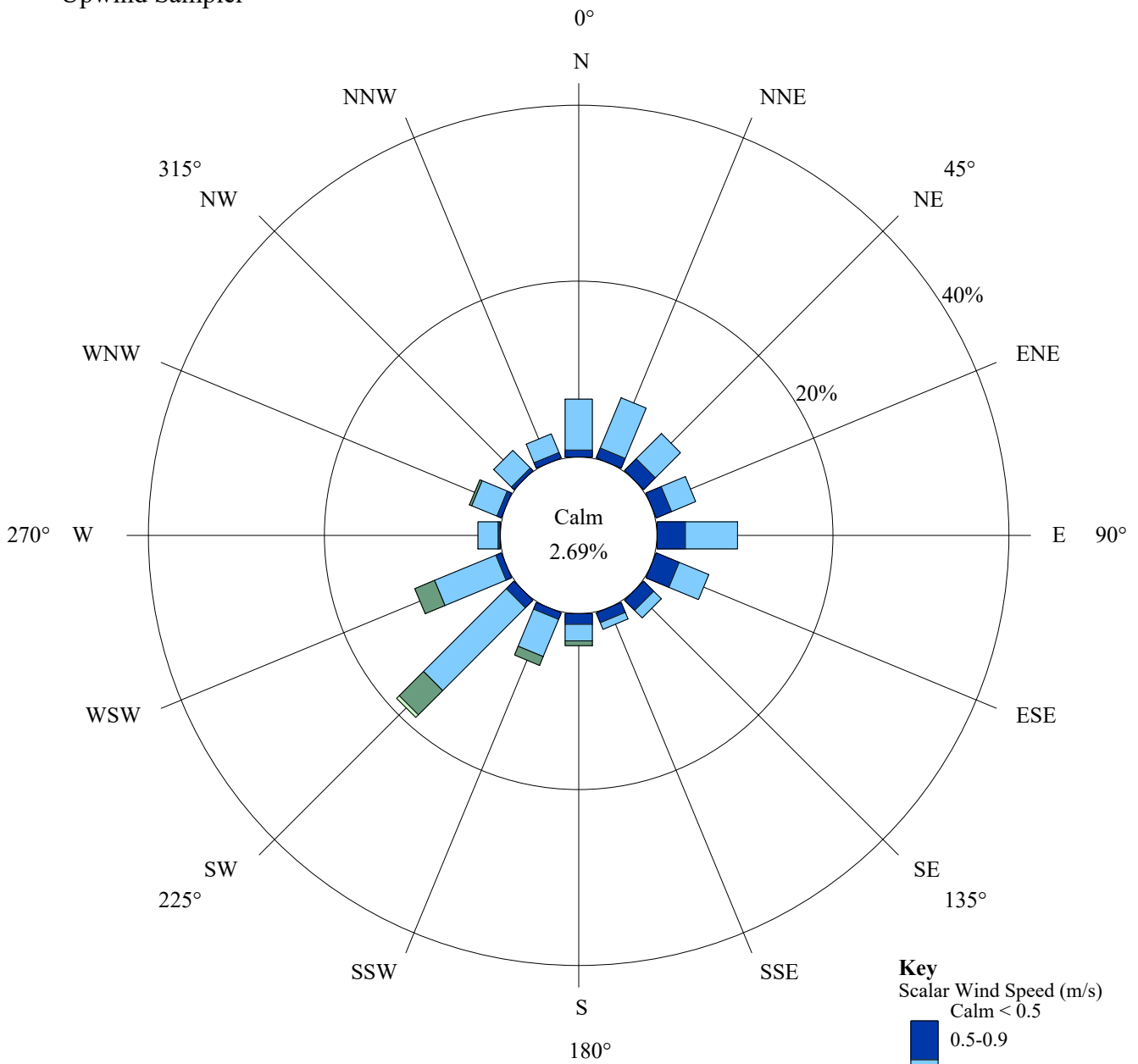
98.1% Collected 98.1% Valid
672 Possible /659 Collected /659 Valid
Collection Statistics Include:
Wind Speed and Wind Direction
(SWS-1; VWD-1)



Garfield County Colorado
Upwind Sampler

Figure 4-12
Wind Rose

03/01/2018 - 03/31/2018



100.0% Collected 100.0% Valid
744 Possible /744 Collected /744 Valid
Collection Statistics Include:
Wind Speed and Wind Direction
(SWS-1; VWD-1)

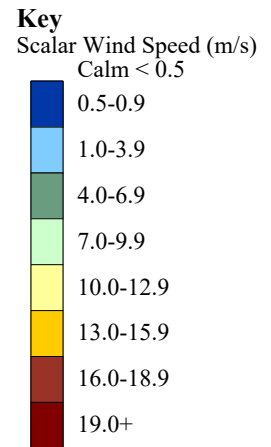
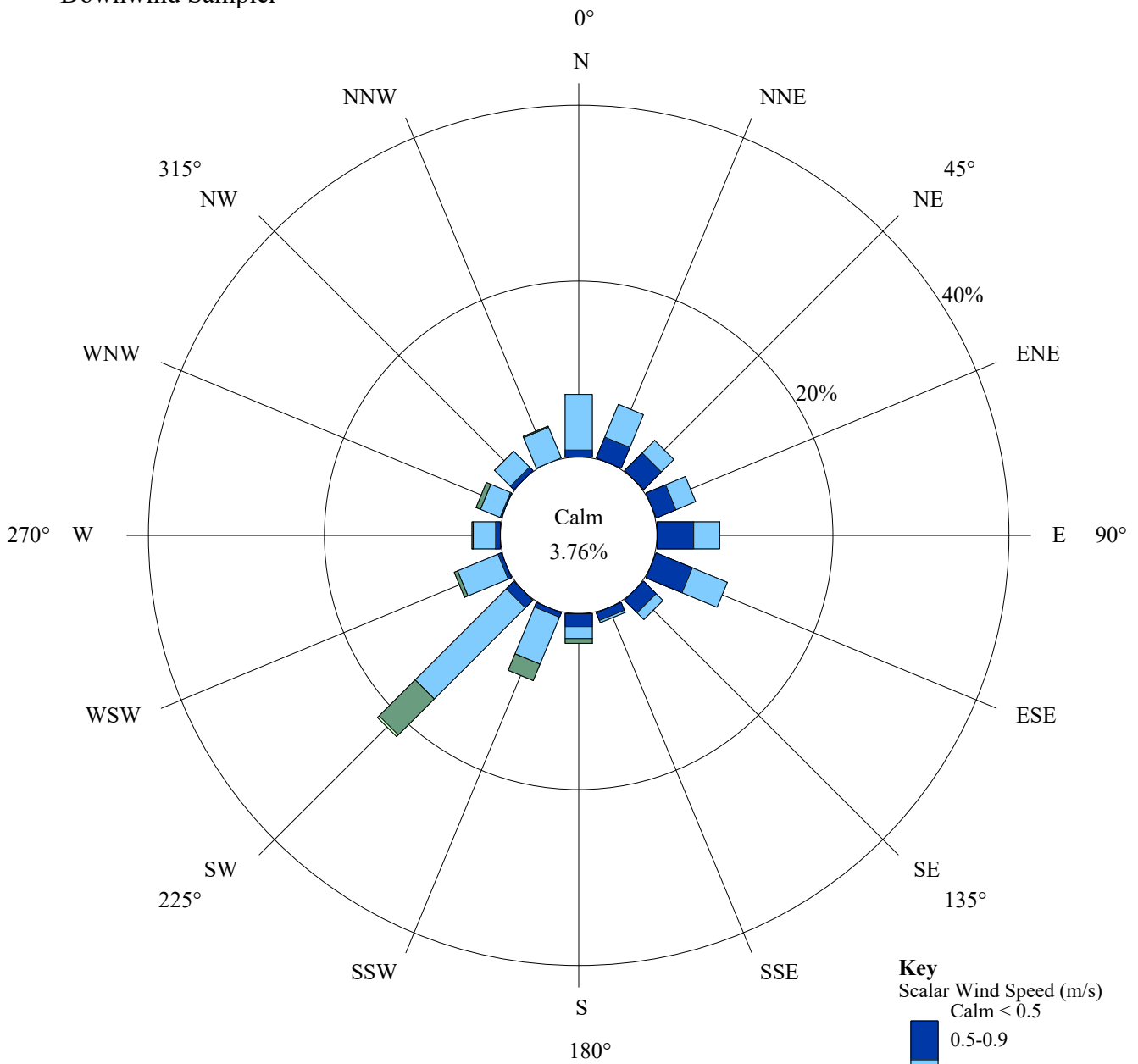


Figure 4-13

Garfiled County Colorado
Downwind Sampler

Wind Rose

03/01/2018 - 03/31/2018



100.0% Collected 100.0% Valid
744 Possible /744 Collected /744 Valid
Collection Statistics Include:
Wind Speed and Wind Direction
(SWS-1; VWD-1)

Appendix A

URSA Pad Site Specific Conditional Sampler Garfield County, Colorado

Speciated VOC Concentrations

Garfield County - URSA Pad Site Specific Conditional Sampler
 January 2018
 Upwind Canister

Detected Compound	Concentration (ppbV)	Comments
1,2,3-Trimethylbenzene	0.00956	U
1,2,4-Trimethylbenzene	0.09944	
1,3,5-Trimethylbenzene	0.07322	
1,3-Butadiene	0.01538	U
1-Butene	0.01563	CE, U
1-Dodecene	0.02546	U
1-Heptene	0.00589	U
1-Hexene	0.01633	
1-Nonene	0.03911	
1-Octene	0.10238	
1-Pentene	0.03820	
1-Tridecene	0.01108	U
1-Undecene	0.01773	U
2,2,3-Trimethylpentane	0.00358	U
2,2,4-Trimethylpentane	0.00825	U
2,2-Dimethylbutane	0.05350	
2,3,4-Trimethylpentane	0.00374	U
2,3-Dimethylbutane	0.10617	
2,3-Dimethylpentane	0.10614	
2,4-Dimethylpentane	0.06071	
2-Ethyl-1-butene	0.00498	U
2-Methyl-1-butene	0.00889	U
2-Methyl-1-pentene	0.00755	U
2-Methyl-2-butene	0.02870	U
2-Methylheptane	0.26375	
2-Methylhexane	0.00971	U
2-Methylpentane	0.46500	
3-Methyl-1-butene	0.02220	U
3-Methylheptane	0.21000	
3-Methylhexane	0.31857	
3-Methylpentane	0.28167	
4-Methyl-1-pentene	0.00651	U
Acetylene	0.34500	
a-Pinene	0.00945	U
Benzene	0.39000	
b-Pinene	0.02215	U
cis-2-Butene	0.00400	U
cis-2-Hexene	0.00525	U
cis-2-Pentene	0.00549	U
Cyclohexane	0.75833	
Cyclopentane	0.06480	

CE = Not reportable due to co-eluting compound

U = Under detection limit

Garfield County - URSA Pad Site Specific Conditional Sampler
 January 2018
 Upwind Canister

Detected Compound	Concentration (ppbV)	Comments
Cyclopentene	0.05150	CE, U
Ethane	16.45000	
Ethylbenzene	0.06150	
Ethylene	1.61000	
Isobutane	1.20500	
Isobutylene	0.01638	CE, U
Isopentane	0.00600	CE, U
Isoprene	0.00554	U
Isopropylbenzene	0.00497	U
m-Diethylbenzene	0.06520	
Methylcyclohexane	1.97143	
Methylcyclopentane	0.48167	
m-Ethyltoluene	0.06989	
m-Xylene/p-Xylene	0.54875	
n-Butane	1.48000	
n-Decane	0.16100	
n-Dodecane	0.05017	
n-Heptane	0.73714	
n-Hexane	0.72833	
n-Nonane	0.32778	
n-Octane	0.78250	
n-Pentane	0.72000	
n-Propylbenzene	0.00672	U
n-Tridecane	0.01138	U
n-Undecane	0.05755	
o-Ethyltoluene	0.03944	
o-Xylene	0.09425	
p-Diethylbenzene	0.00955	U
p-Ethyltoluene	0.03267	
Propane	5.20000	
Propylene	0.19900	
Propyne	0.00925	U
Styrene	0.01538	U
Toluene	1.85714	
trans-2-Butene	0.00448	U
trans-2-Hexene	0.00314	U
trans-2-Pentene	0.00500	U

CE = Not reportable due to co-eluting compound

U = Under detection limit

Garfield County - URSA Pad Site Specific Conditional Sampler
 January 2018
 Downwind Canister

Detected Compound	Concentration (ppbV)	Comments
1,2,3-Trimethylbenzene	0.00956	U
1,2,4-Trimethylbenzene	0.06667	
1,3,5-Trimethylbenzene	0.04211	
1,3-Butadiene	0.01538	U
1-Butene	0.01563	CE, U
1-Dodecene	0.02546	U
1-Heptene	0.00589	U
1-Hexene	0.02650	
1-Nonene	0.03111	
1-Octene	0.07788	
1-Pentene	0.04440	
1-Tridecene	0.01108	U
1-Undecene	0.01773	U
2,2,3-Trimethylpentane	0.00358	U
2,2,4-Trimethylpentane	0.00825	U
2,2-Dimethylbutane	0.03950	
2,3,4-Trimethylpentane	0.00374	U
2,3-Dimethylbutane	0.06850	
2,3-Dimethylpentane	0.04729	
2,4-Dimethylpentane	0.03571	
2-Ethyl-1-butene	0.00498	U
2-Methyl-1-butene	0.00889	U
2-Methyl-1-pentene	0.00755	U
2-Methyl-2-butene	0.02870	U
2-Methylheptane	0.13500	
2-Methylhexane	0.19429	
2-Methylpentane	0.30167	
3-Methyl-1-butene	0.02220	U
3-Methylheptane	0.11938	
3-Methylhexane	0.18286	
3-Methylpentane	0.17333	
4-Methyl-1-pentene	0.00651	U
Acetylene	0.30550	
a-Pinene	0.00945	U
Benzene	0.25000	
b-Pinene	0.09410	
cis-2-Butene	0.00400	U
cis-2-Hexene	0.00525	U
cis-2-Pentene	0.00549	U
Cyclohexane	0.43333	
Cyclopentane	0.04340	

CE = Not reportable due to co-eluting compound

U = Under detection limit

Garfield County - URSA Pad Site Specific Conditional Sampler
 January 2018
 Downwind Canister

Detected Compound	Concentration (ppbV)	Comments
Cyclopentene	0.05150	CE, U
Ethane	15.15000	
Ethylbenzene	0.03713	
Ethylene	1.62500	
Isobutane	1.06250	
Isobutylene	0.01638	CE, U
Isopentane	0.00600	CE, U
Isoprene	0.00554	U
Isopropylbenzene	0.00497	U
m-Diethylbenzene	0.04680	
Methylcyclohexane	1.06857	
Methylcyclopentane	0.28667	
m-Ethyltoluene	0.01217	U
m-Xylene/p-Xylene	0.28875	
n-Butane	1.29000	
n-Decane	0.08600	
n-Dodecane	0.01858	U
n-Heptane	0.39143	
n-Hexane	0.69500	
n-Nonane	0.17333	
n-Octane	0.40875	
n-Pentane	0.54800	
n-Propylbenzene	0.00672	U
n-Tridecane	0.01138	U
n-Undecane	0.03209	
o-Ethyltoluene	0.00844	U
o-Xylene	0.05838	
p-Diethylbenzene	0.00955	U
p-Ethyltoluene	0.01128	U
Propane	4.80000	
Propylene	0.23533	
Propyne	0.00925	U
Styrene	0.01538	U
Toluene	2.68571	
trans-2-Butene	0.00448	U
trans-2-Hexene	0.00314	U
trans-2-Pentene	0.00500	U

CE = Not reportable due to co-eluting compound

U = Under detection limit

Garfield County - URSA Pad Site Specific Conditional Sampler
February 2018
Upwind Canister

Detected Compound	Concentration (ppbV)	Comments
1,2,3-Trimethylbenzene	0.00956	U
1,2,4-Trimethylbenzene	0.07311	
1,3,5-Trimethylbenzene	0.06444	
1,3-Butadiene	0.01538	U
1-Butene	0.01563	CE, U
1-Dodecene	0.02546	U
1-Heptene	0.00589	U
1-Hexene	0.00967	U
1-Nonene	0.02378	
1-Octene	0.07200	
1-Pentene	0.02280	
1-Tridecene	0.01108	U
1-Undecene	0.01773	U
2,2,3-Trimethylpentane	0.00358	U
2,2,4-Trimethylpentane	0.00825	U
2,2-Dimethylbutane	0.03917	
2,3,4-Trimethylpentane	0.00374	U
2,3-Dimethylbutane	0.08350	
2,3-Dimethylpentane	0.09000	
2,4-Dimethylpentane	0.05186	
2-Ethyl-1-butene	0.00498	U
2-Methyl-1-butene	0.00889	U
2-Methyl-1-pentene	0.00755	U
2-Methyl-2-butene	0.02870	U
2-Methylheptane	0.25875	
2-Methylhexane	0.38286	
2-Methylpentane	0.37167	
3-Methyl-1-butene	0.02220	U
3-Methylheptane	0.20625	
3-Methylhexane	0.28714	
3-Methylpentane	0.22833	
4-Methyl-1-pentene	0.00651	U
Acetylene	0.21950	
a-Pinene	0.00945	U
Benzene	0.27833	
b-Pinene	0.02215	U
cis-2-Butene	0.00400	U
cis-2-Hexene	0.00525	U
cis-2-Pentene	0.00549	U
Cyclohexane	0.66500	
Cyclopentane	0.04700	

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Garfield County - URSA Pad Site Specific Conditional Sampler
 February 2018
 Upwind Canister

Detected Compound	Concentration (ppbV)	Comments
Cyclopentene	0.05150	U
Ethane	9.00000	
Ethylbenzene	0.04975	
Ethylene	1.16500	U
Isobutane	0.62750	
Isobutylene	0.01638	CE, U
Isopentane	0.00600	CE, U
Isoprene	0.00554	U
Isopropylbenzene	0.00497	U
m-Diethylbenzene	0.02230	U
Methylcyclohexane	1.88571	
Methylcyclopentane	0.41000	
m-Ethyltoluene	0.05600	
m-Xylene/p-Xylene	0.49125	
n-Butane	0.79000	
n-Decane	0.12800	
n-Dodecane	0.02125	U
n-Heptane	0.69286	
n-Hexane	0.59000	
n-Nonane	0.30667	
n-Octane	0.76500	
n-Pentane	0.48400	
n-Propylbenzene	0.00672	U
n-Tridecane	0.01138	U
n-Undecane	0.03645	
o-Ethyltoluene	0.03100	
o-Xylene	0.08025	
p-Diethylbenzene	0.00955	U
p-Ethyltoluene	0.02467	
Propane	2.74000	
Propylene	0.11900	
Propyne	0.00925	U
Styrene	0.01538	U
Toluene	1.02857	
trans-2-Butene	0.004475	U
trans-2-Hexene	0.003141667	U
trans-2-Pentene	0.005	U

CE = Not reportable due to co-eluting compound

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Garfield County - URSA Pad Site Specific Conditional Sampler
 February 2018
 Downwind Canister

Detected Compound	Concentration (ppbV)	Comments
1,2,3-Trimethylbenzene	0.00956	U
1,2,4-Trimethylbenzene	0.04733	
1,3,5-Trimethylbenzene	0.03956	
1,3-Butadiene	0.01538	U
1-Butene	0.01563	CE, U
1-Dodecene	0.02546	U
1-Heptene	0.00589	U
1-Hexene	0.00713	U
1-Nonene	0.01800	
1-Octene	0.04238	
1-Pentene	0.02000	
1-Tridecene	0.01108	U
1-Undecene	0.01773	U
2,2,3-Trimethylpentane	0.00358	U
2,2,4-Trimethylpentane	0.00825	U
2,2-Dimethylbutane	0.03300	
2,3,4-Trimethylpentane	0.00374	U
2,3-Dimethylbutane	0.06067	
2,3-Dimethylpentane	0.05014	
2,4-Dimethylpentane	0.03429	
2-Ethyl-1-butene	0.00498	U
2-Methyl-1-butene	0.00889	U
2-Methyl-1-pentene	0.00755	U
2-Methyl-2-butene	0.02870	U
2-Methylheptane	0.14875	
2-Methylhexane	0.26000	
2-Methylpentane	0.25333	
3-Methyl-1-butene	0.02220	U
3-Methylheptane	0.11338	
3-Methylhexane	0.18857	
3-Methylpentane	0.15617	
4-Methyl-1-pentene	0.00651	U
Acetylene	0.23150	
a-Pinene	0.00945	U
Benzene	0.21500	
b-Pinene	0.02215	U
cis-2-Butene	0.00400	U
cis-2-Hexene	0.00525	U
cis-2-Pentene	0.00549	U
Cyclohexane	0.42333	
Cyclopentane	0.03720	

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U = Under detection limit

Garfield County - URSA Pad Site Specific Conditional Sampler
 February 2018
 Downwind Canister

Detected Compound	Concentration (ppbV)	Comments
Cyclopentene	0.05150	U
Ethane	9.50000	
Ethylbenzene	0.03175	
Ethylene	1.11000	U
Isobutane	0.64250	
Isobutylene	0.01638	CE, U
Isopentane	0.00600	CE, U
Isoprene	0.00554	U
Isopropylbenzene	0.00497	U
m-Diethylbenzene	0.02230	U
Methylcyclohexane	1.11714	
Methylcyclopentane	0.28333	
m-Ethyltoluene	0.03522	
m-Xylene/p-Xylene	0.28625	
n-Butane	0.79500	
n-Decane	0.08150	
n-Dodecane	0.01854	U
n-Heptane	0.43714	
n-Hexane	0.51000	
n-Nonane	0.17778	
n-Octane	0.44000	
n-Pentane	0.42800	
n-Propylbenzene	0.00672	U
n-Tridecane	0.00562	U
n-Undecane	0.02600	U
o-Ethyltoluene	0.00844	U
o-Xylene	0.05263	
p-Diethylbenzene	0.00955	U
p-Ethyltoluene	0.01128	U
Propane	2.88667	
Propylene	0.12533	
Propyne	0.00925	U
Styrene	0.01538	U
Toluene	1.39714	
trans-2-Butene	0.00448	U
trans-2-Hexene	0.00314	U
trans-2-Pentene	0.00500	U

CE = Not reportable due to co-eluting compound

U = Under detection limit

Garfield County - URSA Pad Site Specific Conditional Sampler
 March 2018
 Upwind Canister

Detected Compound	Concentration (ppbV)	Comments
1,2,3-Trimethylbenzene	0.02000	
1,2,4-Trimethylbenzene	0.08811	
1,3,5-Trimethylbenzene	0.07856	
1,3-Butadiene	0.01538	U
1-Butene	0.01563	CE, U
1-Dodecene	0.02546	U
1-Heptene	0.00589	U
1-Hexene	0.00713	U
1-Nonene	0.02756	
1-Octene	0.06838	
1-Pentene	0.02420	
1-Tridecene	0.01108	U
1-Undecene	0.01773	U
2,2,3-Trimethylpentane	0.00358	U
2,2,4-Trimethylpentane	0.00825	U
2,2-Dimethylbutane	0.03633	
2,3,4-Trimethylpentane	0.00374	U
2,3-Dimethylbutane	0.07167	
2,3-Dimethylpentane	0.07214	
2,4-Dimethylpentane	0.04586	
2-Ethyl-1-butene	0.00498	U
2-Methyl-1-butene	0.00889	U
2-Methyl-1-pentene	0.00755	U
2-Methyl-2-butene	0.02870	U
2-Methylheptane	0.23000	
2-Methylhexane	0.27286	
2-Methylpentane	0.29667	
3-Methyl-1-butene	0.02220	U
3-Methylheptane	0.18250	
3-Methylhexane	0.23714	
3-Methylpentane	0.19833	
4-Methyl-1-pentene	0.00651	U
Acetylene	0.25550	
a-Pinene	0.00945	U
Benzene	0.32667	
b-Pinene	0.02215	U
cis-2-Butene	0.00400	U
cis-2-Hexene	0.00525	U
cis-2-Pentene	0.00549	U
Cyclohexane	0.58000	
Cyclopentane	0.04000	

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Garfield County - URSA Pad Site Specific Conditional Sampler
 March 2018
 Upwind Canister

Detected Compound	Concentration (ppbV)	Comments
Cyclopentene	0.05150	U
Ethane	5.75000	
Ethylbenzene	0.04700	
Ethylene	1.11500	U
Isobutane	0.44750	
Isobutylene	0.01638	CE, U
Isopentane	0.00600	CE, U
Isoprene	0.00554	U
Isopropylbenzene	0.02789	
m-Diethylbenzene	0.02230	U
Methylcyclohexane	1.57143	
Methylcyclopentane	0.34167	
m-Ethyltoluene	0.16111	
m-Xylene/p-Xylene	0.50000	
n-Butane	0.62500	
n-Decane	0.16400	
n-Dodecane	0.02342	U
n-Heptane	0.58714	
n-Hexane	0.50167	
n-Nonane	0.32444	
n-Octane	0.69125	
n-Pentane	0.40000	
n-Propylbenzene	0.00672	U
n-Tridecane	0.01138	U
n-Undecane	0.05491	
o-Ethyltoluene	0.00844	U
o-Xylene	0.08275	
p-Diethylbenzene	0.00955	U
p-Ethyltoluene	0.03356	
Propane	1.95667	
Propylene	0.12933	
Propyne	0.00925	U
Styrene	0.01538	U
Toluene	1.81429	
trans-2-Butene	0.00448	U
trans-2-Hexene	0.00314	U
trans-2-Pentene	0.00500	U

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Garfield County - URSA Pad Site Specific Conditional Sampler
 March 2018
 Downwind Canister

Detected Compound	Concentration (ppbV)	Comments
1,2,3-Trimethylbenzene	0.00956	U
1,2,4-Trimethylbenzene	0.04589	
1,3,5-Trimethylbenzene	0.02356	
1,3-Butadiene	0.01538	U
1-Butene	0.01563	CE, U
1-Dodecene	0.02546	U
1-Heptene	0.00589	U
1-Hexene	0.01967	
1-Nonene	0.01833	
1-Octene	0.04650	
1-Pentene	0.03800	
1-Tridecene	0.01108	U
1-Undecene	0.01773	U
2,2,3-Trimethylpentane	0.00358	U
2,2,4-Trimethylpentane	0.00825	U
2,2-Dimethylbutane	0.02333	
2,3,4-Trimethylpentane	0.00374	U
2,3-Dimethylbutane	0.04333	
2,3-Dimethylpentane	0.02957	
2,4-Dimethylpentane	0.02300	
2-Ethyl-1-butene	0.00498	U
2-Methyl-1-butene	0.00889	U
2-Methyl-1-pentene	0.00755	U
2-Methyl-2-butene	0.02870	U
2-Methylheptane	0.08538	
2-Methylhexane	0.10486	
2-Methylpentane	0.24833	
3-Methyl-1-butene	0.02220	U
3-Methylheptane	0.07050	
3-Methylhexane	0.12443	
3-Methylpentane	0.11000	
4-Methyl-1-pentene	0.00651	U
Acetylene	0.26000	
a-Pinene	0.00945	U
Benzene	0.18167	
b-Pinene	0.02215	U
cis-2-Butene	0.00400	U
cis-2-Hexene	0.00525	U
cis-2-Pentene	0.00549	U
Cyclohexane	0.27667	
Cyclopentane	0.02540	

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Garfield County - URSA Pad Site Specific Conditional Sampler
 March 2018
 Downwind Canister

Detected Compound	Concentration (ppbV)	Comments
Cyclopentene	0.05150	CE, U
Ethane	5.35000	
Ethylbenzene	0.01463	
Ethylene	1.36000	
Isobutane	0.40000	
Isobutylene	0.01638	CE, U
Isopentane	0.00600	CE, U
Isoprene	0.00554	U
Isopropylbenzene	0.00497	U
m-Diethylbenzene	0.02230	U
Methylcyclohexane	0.66857	
Methylcyclopentane	0.18333	
m-Ethyltoluene	0.02178	U
m-Xylene/p-Xylene	0.16500	
n-Butane	0.55750	
n-Decane	0.05220	
n-Dodecane	0.01854	U
n-Heptane	0.27000	
n-Hexane	0.46167	
n-Nonane	0.10089	
n-Octane	0.26500	
n-Pentane	0.31000	
n-Propylbenzene	0.00672	U
n-Tridecane	0.01138	U
n-Undecane	0.01864	U
o-Ethyltoluene	0.01178	U
o-Xylene	0.03538	
p-Diethylbenzene	0.00955	U
p-Ethyltoluene	0.01128	U
Propane	1.89000	
Propylene	0.22300	
Propyne	0.00925	U
Styrene	0.01538	U
Toluene	2.57143	
trans-2-Butene	0.00448	U
trans-2-Hexene	0.00314	U
trans-2-Pentene	0.00500	U

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