

# Mobile Air Monitoring Lab

Louisiana Department of Environmental Quality

August 27

2018

Grand Cane  
Natural Gas



## Executive Summary

This report details a three-day Mobile Air Monitoring Laboratory (MAML) monitoring effort in the Grand Cane, LA area starting August 27, 2018. Increased concerns over ongoing processes and activities in the area prompted LDEQ investigations including the deployment of the MAML. Some landowners in and around DeSoto Parish contend that the drilling and fracking for oil and gas is releasing contaminants into the ground water supply and to the air.

**MAML sampling yielded normal background levels of methane and no detectable levels of hydrogen sulfide.**

### **MAML Results:**

**The highest hourly average of hydrogen sulfide (H<sub>2</sub>S) detected was 1 ppb. The highest eight-hour average of hydrogen sulfide was 0 ppb. These results may be considered non-detect and instrument drift.**

**The highest hourly average of sulfur dioxide (SO<sub>2</sub>) detected was 2 ppb. These results may be considered non-detect and instrument drift.**

**The highest hourly average of methane was 12.35 ppmc.**

**No hydrogen sulfide odors were noted by LDEQ staff during this MAML project.**

**Low levels VOCs including hydrocarbons detected were of no concern**

## Contents

1.0	Description of Events .....	4
2.0	MAML Capabilities .....	4
3.0	MAML Results .....	5
3.1	Hydrogen Sulfide.....	5
3.2	Sulfur Dioxide.....	5
3.3	Methane, NMOC, and THC.....	6
3.4	Volatile Organic Compounds .....	6
	<b>Mission Specifics .....</b>	<b>9</b>
	Appendices.....	10
	Appendix A: Maps .....	11
	Appendix B: MAML Data.....	15
	Appendix C: MAML Calibration Reports .....	20
	Appendix D: Ambient VOC Reports .....	23
	Appendix E: Air Above Water Tank VOC Report.....	37

## 1.0 Description of Events

A recent lawsuit by some landowners in and around DeSoto Parish contend that nearby oil and gas drilling and fracking is releasing contaminants into the ground water supply and air. One contaminate of concern is hydrogen sulfide (H<sub>2</sub>S), a hazardous and toxic gas that can be dangerous in excessive concentrations or confined spaces. Natural gas and crude oil may contain H<sub>2</sub>S. One or more old and abandoned wells in the area have begun to release water and natural gas. Efforts are underway by the drilling contractors, namely Indigo Minerals LLC, to plug these wells and relieve pressure by drilling relief wells.

MAML staff regularly visited several abandoned well sites along with drilling and production sites and collected grab samples via canisters for VOC analysis. One sample (Hanson) was collected from a manifold that where vapors/gas could be seen and smelled when within a few feet. VOC samples were also collected using the sampling cane attached to the MAML. The MAML was located on Derbonne 27-34 pad near the intersection of Smyrna Rd and Hwy 3015 in DeSoto Parish. There were scattered showers in the area during this project. See maps in Appendix A for more information.

## 2.0 MAML Capabilities

The MAML is a vehicle equipped with specialized air monitoring and support equipment. It is a self-contained mobile laboratory capable of continuous, real-time sampling and analysis. It can detect chemicals in low parts per billion levels from various environmental sources. Monitoring results from the MAML are used for screening and represent the status of the air at the time of sampling. The MAML is capable of continuous monitoring for a variety of pollutants including sulfur dioxide (SO<sub>2</sub>), hydrogen sulfide (H<sub>2</sub>S), nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO), ozone (O<sub>3</sub>), mercury (elemental Hg), total hydrocarbons (THC, methane and non-methane), particulate matter 10.0 or 2.5 microns or smaller (PM<sub>10</sub> or PM<sub>2.5</sub>) and speciated volatile organic compounds (VOCs) using a modified EPA method TO-15. The VOC analysis is usually performed using summa canisters that may be collected as a one-time “grab” sample or a time integrated sample. The MAML is also equipped with meteorological sensors to monitor wind speed, wind direction, temperature, barometric pressure and relative humidity.

### 3.0 MAML Results

The results of this mission are best compared, where possible, to the state of Louisiana ambient air standards (LAAS) which are found in the Environmental Regulatory Code Title 33, Part III, Table 51.2 and Environmental Protection Agency (EPA) National Ambient Air Quality Standards (NAAQS).

#### 3.1 Hydrogen Sulfide

The highest hourly average of hydrogen sulfide detected by the MAML was 1 ppb while the highest eight-hour average was 0 ppb. The LAAS standard for hydrogen sulfide is 330  $\mu\text{g}/\text{m}^3$  (237 ppb) for an eight-hour period. Results may be considered non-detect and instrument drift. Hydrogen sulfide is a common component of crude oil and natural gas, landfill gas, and sewerage treatment plant emissions, and has a very low odor threshold. Hydrogen sulfide is also produced and emitted by industrial processes. Summarized results are presented in Table 1 below. For the complete data set see Appendix B.

**Table 1 Summarized MAML H<sub>2</sub>S Results**

ppb	H <sub>2</sub> S Hourly Average	LAAS 8-hr Standard	8-hour Average
<b>Maximum</b>	1	237	0
<b>Average</b>	0		0
<b>Median</b>	0		0
<b>Minimum</b>	0		0

#### 3.2 Sulfur Dioxide

The highest hourly average of sulfur dioxide was 2 ppb and can be considered non-detect and instrument drift. Flares found at some of the drilling and production sites may form sulfur dioxide from the combustion of hydrogen sulfide. The NAAQS standard is 75 ppb for a one-hour period. See complete data sets in Appendix B. Summarized results are presented in Table 2 below.

**Table 2 Summarized SO<sub>2</sub> Results**

Hourly Averages (ppb)	SO <sub>2</sub>	NAAQS 1-hour
<b>Maximum</b>	2	75
<b>Average</b>	0	
<b>Median</b>	0	
<b>Minimum</b>	0	

### 3.3 Methane, NMOC, and THC

Total hydrocarbon (THC) is a broad term used to describe all the hydrocarbon gases found in the air stream. THC is composed of methane, which is not considered toxic, and various non-methane organic compounds (NMOC), some of which may be toxic and some may be relatively harmless. There are no LAAS or NAAQS standards for either methane or NMOC. NMOC data is collected in order to make decisions regarding potential exposure to toxic compounds. NMOC values alone cannot quantify air quality and there are no established standards or exposure levels. The Lower Explosive Limit (LEL) for methane is approximately 5%. Methane is the primary component of natural gas and is often found with oil deposits as well.

Methane is always found in ambient air at background levels near 2 ppmc. If there is not much wind at night and in the early morning it is common for methane levels to rise. This pattern was evident here. NMOC levels were of no concern. For more details, see complete data sets in Appendix B.

**Table 3 Summarized THC Results**

<b>Hourly Averages (ppmc)</b>	<b>NMOC</b>	<b>Methane</b>	<b>THC</b>
<b>Maximum</b>	1.07	12.35	12.59
<b>Average</b>	0.34	3.63	3.97
<b>Median</b>	0.28	2.81	3.04
<b>Minimum</b>	0.05	1.92	2.04

### 3.4 Volatile Organic Compounds

Analysis of VOC samples collected revealed low levels of a variety of compounds including hydrocarbons that were of no concern. Minimum quantitation level of the MAML GC/MS is 0.5 ppbv. The compound with the highest concentration, 8.05 ppbv, was acetone which is often found in ambient air. Acetone can be formed by the decomposition and fermentation of organic matter. Benzene, toluene, Ethyl-benzene, and xylene, commonly known as BTEX, are constituents of petroleum fuels and one or more of these were detected in all samples.

At the Hanson well site, a manifold was separating water from gas emanating from a well. Vapors could be seen and smelled within a few feet of the manifold and water tank. This sample was collected over the water and near the vapors but not directly from the visible plume. See Table 4 and Chart 1 below for summaries and Appendix C for individual VOC reports.

**Table 4 VOC Summary – Maximum Concentrations of all Detections**

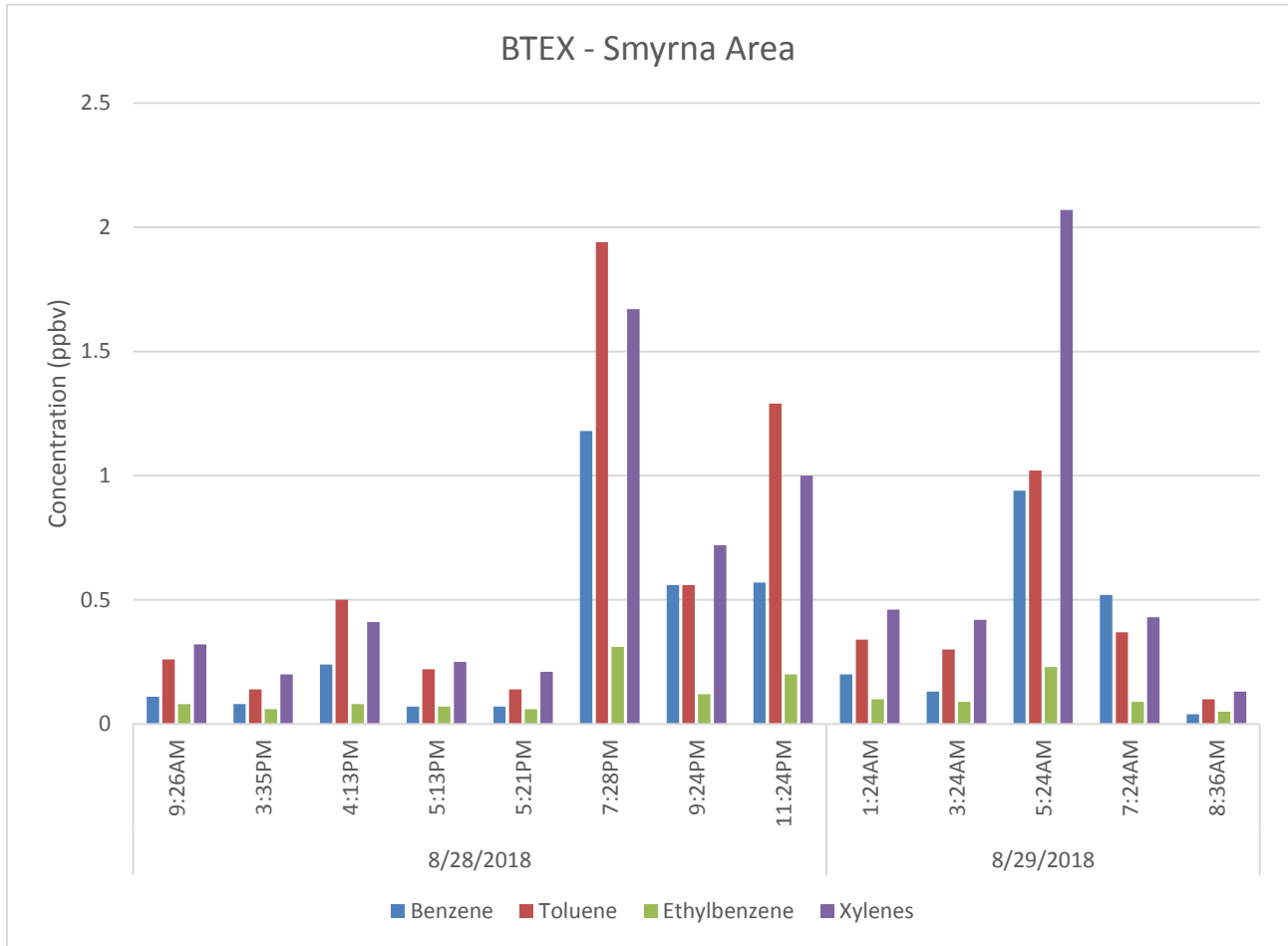
Minimum quantitation level is 0.5 ppbv

Compound	Maximum (ppbv)	LAAS (ppbv)
<b>1,1,2,2-Tetrachloroethane</b>	0.02	0.25 <sup>1</sup>
<b>1,2,4-Trichlorobenzene</b>	0.12	
<b>1,2,4-Trimethylbenzene</b>	0.44	
<b>1,3,5-Trimethylbenzene</b>	0.19	
<b>1-Ethyl-4-Methylbenzene</b>	0.38	
<b>2-Butanone</b>	0.21	4746.91 <sup>2</sup>
<b>Acetone</b>	8.05	
<b>Benzene</b>	1.18	3.76 <sup>1</sup>
<b>Benzyl Chloride</b>	0.04	
<b>Carbon Disulfide</b>	0.03	22.93 <sup>2</sup>
<b>Carbon Tetrachloride</b>	0.11	1.06 <sup>1</sup>
<b>Chlorobenzene</b>	0.02	238.94 <sup>2</sup>
<b>Chloromethane</b>	0.57	26.91 <sup>1</sup>
<b>Cyclohexane</b>	0.49	
<b>Ethylbenzene</b>	0.31	2372.00 <sup>2</sup>
<b>Freon 11</b>	0.25	
<b>Freon-113</b>	0.09	
<b>Freon-12</b>	0.82	
<b>m/p Xylene</b>	1.55	2372.00 <sup>2</sup>
<b>m-Dichlorobenzene</b>	0.05	
<b>Methylene Chloride</b>	0.7	61.25 <sup>2</sup>
<b>Naphthalene</b>	0.28	
<b>n-Heptane</b>	0.66	
<b>o Xylene</b>	0.52	2372.00 <sup>2</sup>
<b>o-Dichlorobenzene</b>	0.05	
<b>p-Dichlorobenzene</b>	0.05	237.85 <sup>2</sup>
<b>Styrene</b>	0.14	1190.22 <sup>2</sup>
<b>Tetrachloroethylene</b>	0.02	15.52 <sup>1</sup>
<b>Tetrahydrofuran</b>	0.96	
<b>Toluene</b>	1.94	2361.68 <sup>2</sup>

<sup>1</sup> Annual Average    <sup>2</sup> 8-Hour Average

### Chart 1 BTEX Results

Minimum Quantitation Level is 0.5 ppbv





## Mission Specifics

MAML is identified by Agency Interest (AI) 170062

GPS coordinates of MAML 32° 05' 40.75"N 93° 53' 36.83"W

Parish: DeSoto Parish

Dates: 8/27/2018 – 8/29/2018

An Advanced Pollution Instrumentation Model 101A Fluorescent Analyzer, following EPA Equivalent method EQSA-0990-077 was used for H<sub>2</sub>S. Detection limit: 0.4 ppb. Calibrations were within parameters specified within Standard Operating Procedures (SOP)

An Advanced Pollution Instrumentation (API) Model 100A Fluorescent Analyzer following EPA Equivalent method EQSA-0990-077 was used for SO<sub>2</sub> analysis. Detection limit: 0.4 ppb. Calibrations were within parameters specified within Standard Operating Procedures (SOP)

For THC (Methane/non-methane) analysis, a Thermo Electron model 55i analyzer was employed. There is no EPA reference method for this analysis. Detection limit: Methane 20ppbc, NMOC 150ppbc

For VOC analysis the MAML uses an Agilent 7890A gas chromatograph equipped with an Agilent 5975C mass spectrometer and follows a modified EPA method TO-15. The quantitation limit is 0.5 ppbv. Detection limit: N/A

Personnel directly involved during sampling mission Randy Creighton, David Wagenecht

# Appendices

Appendix A: Maps

Appendix B: MAML Data

Appendix C: MAML Calibration Reports

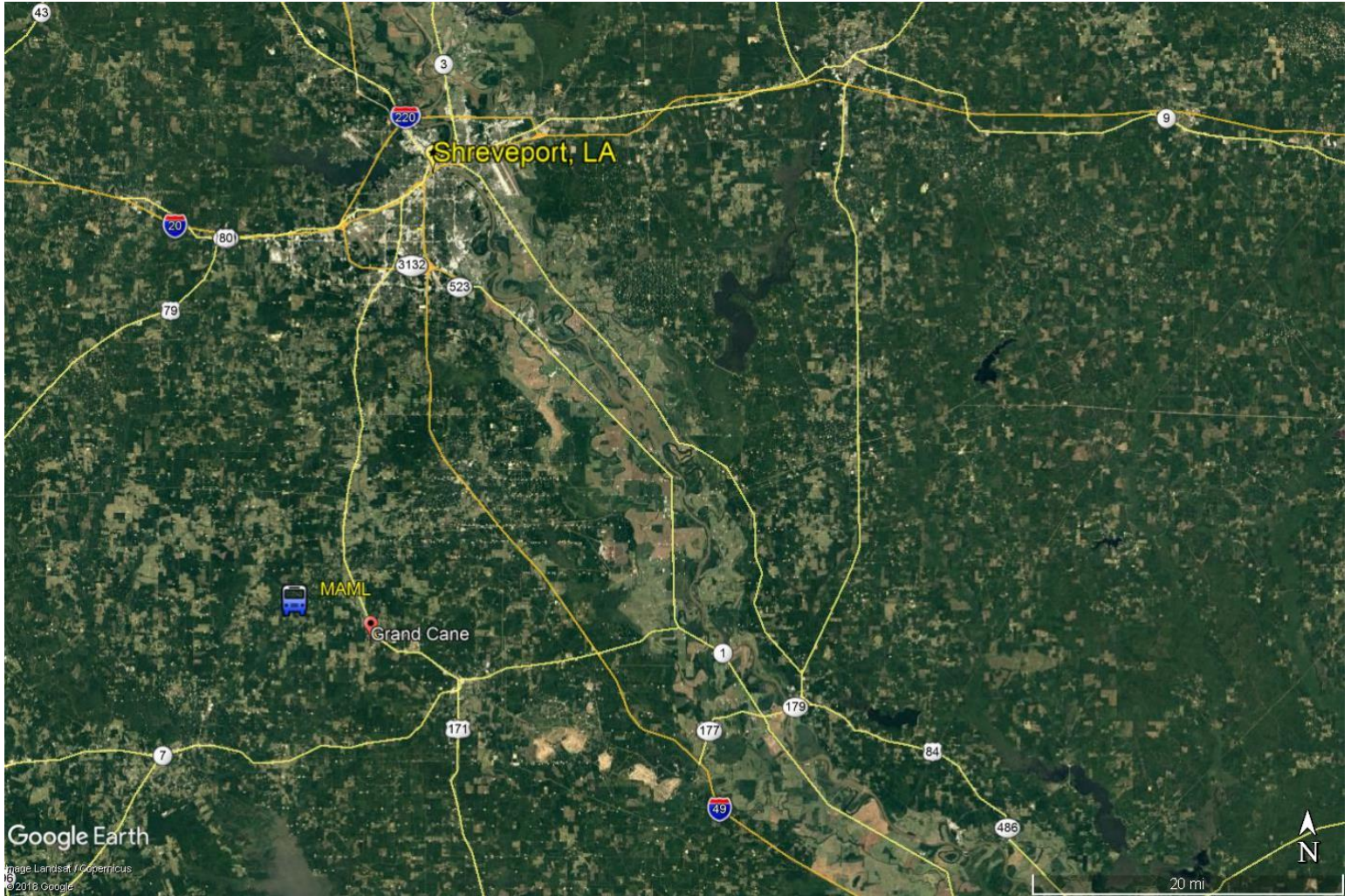
Appendix D: Ambient Air VOC Reports

Appendix E: Air Above Water Tank VOC Report

# Appendix A: Maps

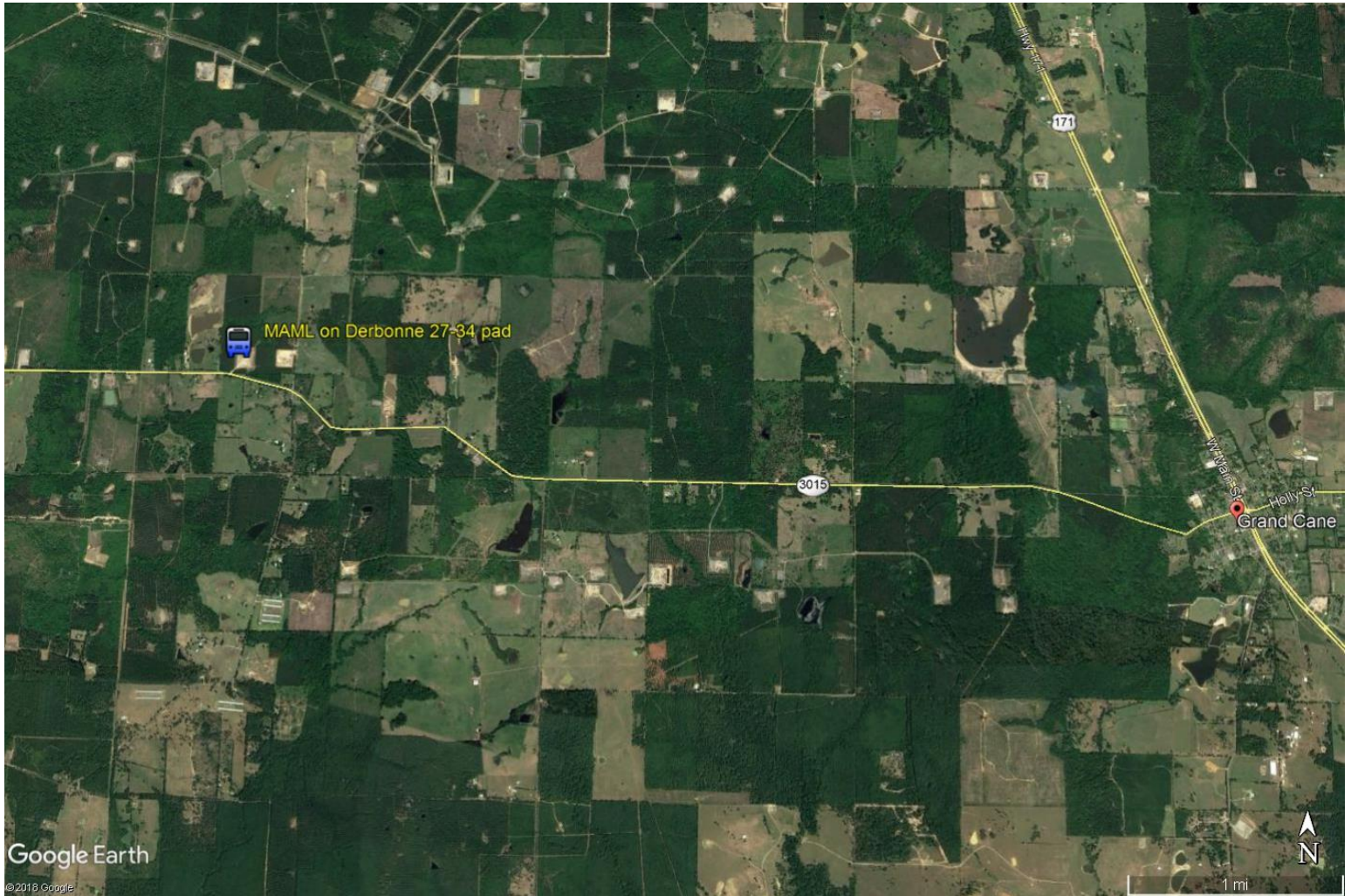
# Map 1

## Relative MAML Location



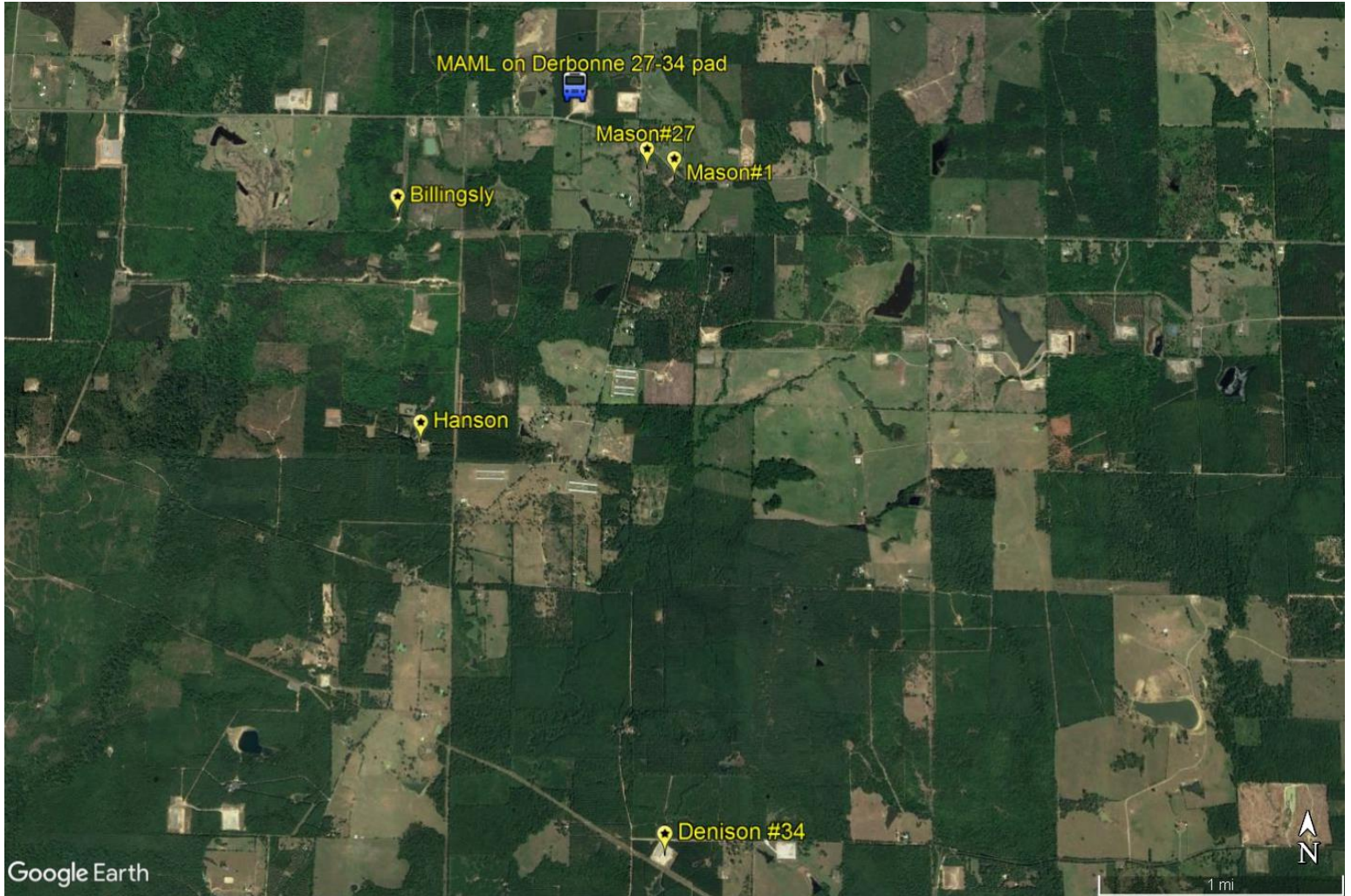


**Map 2**  
**Relative MAML Location**





**Map 3**  
**VOC Sample Locations**



# Appendix B: MAML Data

# MAML Data Report

Project: natural gas wells

MAML Location: Derbonne 27-34 pad, Grand Cane, LA area

average starts at time listed

Date	Hour	SO <sub>2</sub>	OTEMP	WSP	WDIR	RH	H <sub>2</sub> S	BAR.PR.	NMOC	METHANE	THC
	CDST	ppb	C°	mph	degrees	%	pp	in. Hg	ppmc	ppmc	ppmc
8/27/2018	16	2	35.0	5	151	43	1	29.62	0.30	2.07	2.37
8/27/2018	17	1	34.5	6	183	45	1	29.61	0.36	1.92	2.28
8/27/2018	18	1	32.5	4	166	51	0	29.61	0.27	1.92	2.19
8/27/2018	19	1	31.0	4	155	56	0	29.61	0.17	1.93	2.10
8/27/2018	20	2	29.2	2	158	66	0	29.62	0.07	1.97	2.04
8/27/2018	21	2	27.9	2	129	74	0	29.63	0.24	4.42	4.66
8/27/2018	22	1	26.9	2	143	80	0	29.64	1.07	2.95	4.02
8/27/2018	23	1	26.3	1	157	83	0	29.65	0.38	2.66	3.04
8/28/2018	0	1	25.7	1	133	85	0	29.65	0.47	6.88	7.35
8/28/2018	1	1	25.3	2	119	88	0	29.66	1.07	5.26	6.33
8/28/2018	2	1	25.0	2	141	89	0	29.66	0.70	3.44	4.14
8/28/2018	3	0	24.6	1	152	91	0	29.65	0.60	3.26	3.86
8/28/2018	4	0	24.4	2	129	92	0	29.66	0.61	7.76	8.37
8/28/2018	5	0	24.0	2	128	94	0	29.67	0.57	5.28	5.85
8/28/2018	6	0	23.9	2	128	94	0	29.67	0.36	5.21	5.57
8/28/2018	7	0	24.7	3	130	91	0	29.69	0.29	4.68	4.97
8/28/2018	8	0	27.1	3	144	83	0	29.70	0.20	2.27	2.47
8/28/2018	9	1	29.4	3	178	74	0	29.70	0.18	2.00	2.18
8/28/2018	10	0	31.2	4	188	64	0	29.71	0.23	1.95	2.18
8/28/2018	11	0	33.6	2	247	54	0	29.70	0.28	1.94	2.22
8/28/2018	12	0	35.0	3	170	46	0	29.68	0.31	2.00	2.31
8/28/2018	13	0	35.2	4	141	43	0	29.66	0.43	2.07	2.50
8/28/2018	14	0	34.8	2	140	45	0	29.64	0.26	2.08	2.34
8/28/2018	15	0	36.9	2	45	41	0	29.62	0.46	2.22	2.68
8/28/2018	16	1	31.6	7	100	60	0	29.64	0.39	3.18	3.57
8/28/2018	17	1	25.3	2	151	89	0	29.67	0.11	2.75	2.86
8/28/2018	18	1	25.0	1	108	90	0	29.67	0.62	4.28	4.90
8/28/2018	19	0	24.7	1	127	90	0	29.65	0.57	4.96	5.53
8/28/2018	20	0	24.5	1	107	92	0	29.67	0.29	5.30	5.59
8/28/2018	21	0	24.6	4	122	92	0	29.68	0.38	3.79	4.17
8/28/2018	22	0	24.5	5	124	92	0	29.69	0.42	2.95	3.37
8/28/2018	23	0	24.5	4	143	93	0	29.68	0.25	2.33	2.58



# MAML Data Report

**Project:** natural gas wells

**MAML Location:** Derbonne 27-34 pad, Grand Cane, LA area

average starts at time listed

Date	Hour	SO <sub>2</sub>	OTEMP	WSP	WDIR	RH	H <sub>2</sub> S	BAR.PR.	NMOC	METHANE	THC
	CDST	ppb	C°	mph	degrees	%	pp	in. Hg	ppmc	ppmc	ppmc
8/29/2018	0	0	24.5	3	149	94	0	29.69	0.14	2.09	2.23
8/29/2018	1	0	24.4	2	140	94	0	29.69	0.13	2.30	2.43
8/29/2018	2	0	24.3	2	140	95	0	29.70	0.05	2.81	2.86
8/29/2018	3	0	24.0	1	143	96	0	29.69	0.07	3.22	3.29
8/29/2018	4	0	23.9	1	120	96	0	29.69	0.25	8.09	8.34
8/29/2018	5	0	23.7	1	116	97	0	29.70	0.24	12.35	12.59
8/29/2018	6	0	23.6	2	117	97	0	29.72	0.21	8.56	8.77
8/29/2018	7	0	23.9	1	140	97	0	29.73	0.15	4.01	4.16
8/29/2018	8	0	25.1	3	147	95	0	29.75	0.17	2.30	2.47
8/29/2018	9	0	26.2	2	173	91	0	29.76	0.11	2.05	2.16
8/29/2018	10	0	28.3	3	141	81	0	29.76	0.22	2.21	2.43
8/29/2018	11	0	30.3	0	253	72	1	29.76	0.38	2.33	2.71
8/29/2018	12	0	24.9	2	228	89	0	29.76	0.27	3.28	3.55
	<b>Maximum</b>	2	36.9	7		97	1	29.76	1.07	12.35	12.59
	<b>Average</b>	0	27.5	2		79	0	29.68	0.34	3.63	3.97
	<b>Median</b>	0	25.3	2		89	0	29.67	0.28	2.81	3.04
	<b>Minimum</b>	0	23.6	0		41	0	29.61	0.05	1.92	2.04

# MAML Data Report

**Project:** natural gas wells

**MAML Location:** Derbonne 27-34 pad, Grand Cane, LA area

average starts at time listed

Date	Hour	H <sub>2</sub> S	rolling eight
	CDST	pp	hour average
8/27/2018	16	1	
8/27/2018	17	1	
8/27/2018	18	0	
8/27/2018	19	0	
8/27/2018	20	0	
8/27/2018	21	0	
8/27/2018	22	0	
8/27/2018	23	0	0
8/28/2018	0	0	0
8/28/2018	1	0	0
8/28/2018	2	0	0
8/28/2018	3	0	0
8/28/2018	4	0	0
8/28/2018	5	0	0
8/28/2018	6	0	0
8/28/2018	7	0	0
8/28/2018	8	0	0
8/28/2018	9	0	0
8/28/2018	10	0	0
8/28/2018	11	0	0
8/28/2018	12	0	0
8/28/2018	13	0	0
8/28/2018	14	0	0
8/28/2018	15	0	0
8/28/2018	16	0	0
8/28/2018	17	0	0
8/28/2018	18	0	0
8/28/2018	19	0	0
8/28/2018	20	0	0
8/28/2018	21	0	0
8/28/2018	22	0	0
8/28/2018	23	0	0

## MAML Data Report

**Project:** natural gas wells

**MAML Location:** Derbonne 27-34 pad, Grand Cane, LA area

average starts at time listed

<b>Date</b>	<b>Hour</b>	<b>H<sub>2</sub>S</b>	<b>rolling eight</b>
	<b>CDST</b>	<b>pp</b>	<b>hour average</b>
8/29/2018	0	0	0
8/29/2018	1	0	0
8/29/2018	2	0	0
8/29/2018	3	0	0
8/29/2018	4	0	0
8/29/2018	5	0	0
8/29/2018	6	0	0
8/29/2018	7	0	0
8/29/2018	8	0	0
8/29/2018	9	0	0
8/29/2018	10	0	0
8/29/2018	11	1	0
8/29/2018	12	0	0
	<b>Maximum</b>	1	0
	<b>Average</b>	0	0
	<b>Median</b>	0	0
	<b>Minimum</b>	0	0

# Appendix C: MAML Calibration Reports

### MAML SO<sub>2</sub> Calibration Audit

Instrument: API 100A; s/n1175; tag 50-11770

Date: 8/27/2018

Analyst: David Wagenecht

PPBa	5min. Avg.	%Dev ( ± 10%)
0	0	N/A
200	201	0.5

### MAML SO<sub>2</sub> Calibration Audit

Instrument: API 100A; s/n1175; tag 50-11770

Date: 8/29/2018

Analyst: David Wagenecht

PPBa	5min. Avg.	%Dev ( ± 10%)
0	-1	N/A
200	199	-0.5

### MAML H<sub>2</sub>S Calibration Audit

Instrument: API 101A s/n 1802

Date: 8/27/2018

Analyst: David Wagenecht

PPBa	5min. Avg.	%Dev. ± 10%
0	3	N/A
200	204	2.0

### MAML H<sub>2</sub>S Calibration Audit

Instrument: API 101A s/n 1802

Date: 8/29/2018

Analyst: David Wagenecht

PPBa	5min. Avg.	%Dev. ± 10%
0	1	N/A
200	189	-5.5

### MAML THC Calibration Audit

Instrument: Thermo 55i; s/n1170250012; tag500052821

Date: 8-27-2018

Analyst: David Wagenecht

Type	Time	Methane-a	NMOC-a	Methane	%Dev ± 10%	NMOC	%Dev ± 10%
cal	2:02 PM	1.96	2.91				
cc	4:02 PM	1.96	2.91	1.96	0.0	2.91	0.0

### MAML THC Calibration Audit

Instrument: Thermo 55i; s/n1170250012; tag500052821

Date: 8-30-2018

Analyst: David Wagenecht

Type	Time	Methane-a	NMOC-a	Methane	%Dev ± 10%	NMOC	%Dev ± 10%
CC	9:23 AM	1.96	2.91	1.97	0.5	2.93	0.7

## MAML Sonic Calibration Audit

**Date:** 8/27/2018

**Instrument:** MetOne sn B3199

**Operators:** David Wagenecht

Sonic	Expected w/speed	Observed	% Deviation
Block N/S	112.0	111.4	-0.5
Block E/W	112.0	111.4	-0.5
Block Both	112.0	111.4	-0.5
Bag	0.00	0.04	N/A
	Expected raw direction	Observed	% Deviation
Block N/S	10.0	9.9	-1.0
Block E/W	160.0	160.0	0.0
Both	170	169.9	-0.1

## MAML Sonic Calibration Audit

**Date:** 8/29/2018

**Instrument:** MetOne sn B3199

**Operators:** David Wagenecht

Sonic	Expected w/speed	Observed	% Deviation
Block N/S	112.0	111.4	-0.5
Block E/W	112.0	111.4	-0.5
Block Both	112.0	111.4	-0.5
Bag	0.00	0.03	N/A
	Expected raw direction	Observed	% Deviation
Block N/S	10.0	9.9	-1.0
Block E/W	160.0	160	0.0
Both	170	170	-0.1

# **Appendix D: Ambient VOC Reports**

# Louisiana Department of Environmental Quality

## Mobile Air Monitoring Laboratory

Sample ID: 8281808.D  
 Canister ID: LA2293  
 Sample Date: 8/28/2018  
 Start Time: 9:26 AM  
 Analysis ID: 08281808.D

Duration: GRAB  
 Method: TO-15 (GC/MS)

Project: Smyrna Area Air Quality Testing  
 Sample Location: Mason#1

Sample Collector: Randy Creighton  
 Analyzed By: Randy Creighton

Compound	ppbv	LAAS (ppbv)	Exceeds LAAS
1,1,1-Trichloroethane	nd	8284.41 <sup>1</sup>	No
1,1,2,2-Tetrachloroethane	nd	0.25 <sup>2</sup>	No
1,1,2-Trichloroethane	nd	1.15 <sup>2</sup>	No
1,1-Dichloroethane	nd		
1,1-Dichloroethene	nd	0.50 <sup>2</sup>	No
1,2,4-Trichlorobenzene	0.12		
1,2,4-Trimethylbenzene	0.12		
1,2-Dibromoethane	nd	0.06 <sup>2</sup>	No
1,2-Dichloroethane	nd	0.95 <sup>2</sup>	No
1,2-Dichloropropane	nd	1787.39 <sup>1</sup>	No
1,3,5-Trimethylbenzene	0.05		
1,3-Butadiene	nd	0.42 <sup>2</sup>	No
1,3-Hexachlorobutadiene	nd	0.43 <sup>2</sup>	No
1-Ethyl-4-Methylbenzene	0.10		
2-Butanone	nd	4746.91 <sup>1</sup>	No
2-Hexanone	nd		
4-Methyl-2-Pentanone	nd	1190.78 <sup>1</sup>	No
Acetone	3.52		
Benzene	0.11	3.76 <sup>2</sup>	No
Benzyl Chloride	0.04		
Bromodichloromethane	nd		
Bromoform	nd		
Bromomethane	nd		
Carbon Disulfide	0.03	22.93 <sup>1</sup>	No
Carbon Tetrachloride	0.09	1.06 <sup>2</sup>	No
Chlorobenzene	0.02	238.94 <sup>1</sup>	No
Chloroethane	nd	2383.98 <sup>1</sup>	No
Chloroform	nd	0.88 <sup>2</sup>	No

Compound	ppbv	LAAS (ppbv)	Exceeds LAAS
Chloromethane	nd	26.91 <sup>2</sup>	No
cis-1,2-Dichloroethene	nd		
cis-1,3-Dichloropropene	nd	23.58 <sup>1</sup>	No
Cyclohexane	nd		
Dibromochloromethane	nd		
Ethyl Acetate	nd		
Ethylbenzene	0.08	2372.00 <sup>1</sup>	No
Freon-11	0.20		
Freon-113	0.07		
Freon-114	nd		
Freon-12	0.49		
m/p-Xylene	0.24	2372.00 <sup>1</sup>	No
m-Dichlorobenzene	0.05		
Methylene Chloride	0.52	61.25 <sup>2</sup>	No
MTBE	nd		
n- Heptane	nd		
Naphthalene	0.17	227.01 <sup>1</sup>	No
o-Dichlorobenzene	0.05		
o-Xylene	0.08	2372.00 <sup>1</sup>	No
p-Dichlorobenzene	0.05	237.85 <sup>1</sup>	No
Styrene	0.04	1190.22 <sup>1</sup>	No
Tetrachloroethylene	0.02	15.52 <sup>2</sup>	No
Tetrahydrofuran	nd		
Toluene	0.26	2361.68 <sup>1</sup>	No
trans-1,2-Dichloroethene	nd		
trans-1,3-Dichloropropene	nd	23.58 <sup>1</sup>	No
Trichloroethylene	nd	10.94 <sup>2</sup>	No
Vinyl Chloride	nd	0.47 <sup>2</sup>	No

Notes: Concentrations below 0.5 ppbv are estimated values below the Practical Quantitation Limit (PQL) and may include false positives.

<sup>1</sup> Eight Hour Louisiana Ambient Air Standard.

<sup>2</sup> Annual Louisiana Ambient Air Standard – **Provided for informational purposes only.** It is scientifically inappropriate to compare short-term monitored values with regulatory or health-based standards protective of long periods of exposure.

Tentatively Identified Compounds: Concentrations (in ppbv) are estimations only.

Butane, 2-Methyl- = 1.09

1,3-Pentadiene = 0.66

Ethanol = 0.66

Pentane, 2-Methyl- = 0.38

Unknown System Artifact = 1.69

Acetic Acid = 2.81

1-Hexanol, 2-Ethyl- = 1.35

Phenol = 0.23

Unknown = 0.14



# Louisiana Department of Environmental Quality

## Mobile Air Monitoring Laboratory

Sample ID: 8281809.D  
 Canister ID: LA2455  
 Sample Date: 8/28/2018  
 Start Time: 3:35 PM  
 Analysis ID: 08281809.D

Duration: GRAB  
 Method: TO-15 (GC/MS)

Project: Smyrna Area Air Quality Testing  
 Sample Location: Derbonne

Sample Collector: Randy Creighton  
 Analyzed By: Randy Creighton

Compound	ppbv	LAAS (ppbv)	Exceeds LAAS
1,1,1-Trichloroethane	nd	8284.41 <sup>1</sup>	No
1,1,2,2-Tetrachloroethane	nd	0.25 <sup>2</sup>	No
1,1,2-Trichloroethane	nd	1.15 <sup>2</sup>	No
1,1-Dichloroethane	nd		
1,1-Dichloroethene	nd	0.50 <sup>2</sup>	No
1,2,4-Trichlorobenzene	0.10		
1,2,4-Trimethylbenzene	0.08		
1,2-Dibromoethane	nd	0.06 <sup>2</sup>	No
1,2-Dichloroethane	nd	0.95 <sup>2</sup>	No
1,2-Dichloropropane	nd	1787.39 <sup>1</sup>	No
1,3,5-Trimethylbenzene	0.04		
1,3-Butadiene	nd	0.42 <sup>2</sup>	No
1,3-Hexachlorobutadiene	nd	0.43 <sup>2</sup>	No
1-Ethyl-4-Methylbenzene	0.07		
2-Butanone	0.14	4746.91 <sup>1</sup>	No
2-Hexanone	nd		
4-Methyl-2-Pentanone	nd	1190.78 <sup>1</sup>	No
Acetone	8.05		
Benzene	0.08	3.76 <sup>2</sup>	No
Benzyl Chloride	0.03		
Bromodichloromethane	nd		
Bromoform	nd		
Bromomethane	nd		
Carbon Disulfide	0.02	22.93 <sup>1</sup>	No
Carbon Tetrachloride	0.07	1.06 <sup>2</sup>	No
Chlorobenzene	0.02	238.94 <sup>1</sup>	No
Chloroethane	nd	2383.98 <sup>1</sup>	No
Chloroform	nd	0.88 <sup>2</sup>	No

Compound	ppbv	LAAS (ppbv)	Exceeds LAAS
Chloromethane	nd	26.91 <sup>2</sup>	No
cis-1,2-Dichloroethene	nd		
cis-1,3-Dichloropropene	nd	23.58 <sup>1</sup>	No
Cyclohexane	nd		
Dibromochloromethane	nd		
Ethyl Acetate	nd		
Ethylbenzene	0.06	2372.00 <sup>1</sup>	No
Freon-11	0.19		
Freon-113	0.06		
Freon-114	nd		
Freon-12	0.42		
m/p-Xylene	0.15	2372.00 <sup>1</sup>	No
m-Dichlorobenzene	0.04		
Methylene Chloride	0.39	61.25 <sup>2</sup>	No
MTBE	nd		
n- Heptane	nd		
Naphthalene	0.13	227.01 <sup>1</sup>	No
o-Dichlorobenzene	0.04		
o-Xylene	0.05	2372.00 <sup>1</sup>	No
p-Dichlorobenzene	0.04	237.85 <sup>1</sup>	No
Styrene	0.04	1190.22 <sup>1</sup>	No
Tetrachloroethylene	0.02	15.52 <sup>2</sup>	No
Tetrahydrofuran	nd		
Toluene	0.14	2361.68 <sup>1</sup>	No
trans-1,2-Dichloroethene	nd		
trans-1,3-Dichloropropene	nd	23.58 <sup>1</sup>	No
Trichloroethylene	nd	10.94 <sup>2</sup>	No
Vinyl Chloride	nd	0.47 <sup>2</sup>	No

Notes: Concentrations below 0.5 ppbv are estimated values below the Practical Quantitation Limit (PQL) and may include false positives.

<sup>1</sup> Eight Hour Louisiana Ambient Air Standard.

<sup>2</sup> Annual Louisiana Ambient Air Standard – **Provided for informational purposes only.** It is scientifically inappropriate to compare short-term monitored values with regulatory or health-based standards protective of long periods of exposure.

Tentatively Identified Compounds: Concentrations (in ppbv) are estimations only.

1,3-Butadiene, 2-Methyl- = 0.96

Acetic Acid = 0.57

# Louisiana Department of Environmental Quality

## Mobile Air Monitoring Laboratory

Sample ID: 8281810.D  
 Canister ID: LA2535  
 Sample Date: 8/28/2018  
 Start Time: 4:13 PM  
 Analysis ID: 08281810.D

Duration: GRAB  
 Method: TO-15 (GC/MS)

Project: Smyrna Area Air Quality Testing  
 Sample Location: Billings(cleaning out drill hole)

Sample Collector: Randy Creighton  
 Analyzed By: Randy Creighton

Compound	ppbv	LAAS (ppbv)	Exceeds LAAS
1,1,1-Trichloroethane	nd	8284.41 <sup>1</sup>	No
1,1,2,2-Tetrachloroethane	nd	0.25 <sup>2</sup>	No
1,1,2-Trichloroethane	nd	1.15 <sup>2</sup>	No
1,1-Dichloroethane	nd		
1,1-Dichloroethene	nd	0.50 <sup>2</sup>	No
1,2,4-Trichlorobenzene	0.09		
1,2,4-Trimethylbenzene	0.10		
1,2-Dibromoethane	nd	0.06 <sup>2</sup>	No
1,2-Dichloroethane	nd	0.95 <sup>2</sup>	No
1,2-Dichloropropane	nd	1787.39 <sup>1</sup>	No
1,3,5-Trimethylbenzene	0.06		
1,3-Butadiene	nd	0.42 <sup>2</sup>	No
1,3-Hexachlorobutadiene	nd	0.43 <sup>2</sup>	No
1-Ethyl-4-Methylbenzene	0.09		
2-Butanone	0.21	4746.91 <sup>1</sup>	No
2-Hexanone	nd		
4-Methyl-2-Pentanone	nd	1190.78 <sup>1</sup>	No
Acetone	4.53		
Benzene	0.24	3.76 <sup>2</sup>	No
Benzyl Chloride	nd		
Bromodichloromethane	nd		
Bromoform	nd		
Bromomethane	nd		
Carbon Disulfide	0.02	22.93 <sup>1</sup>	No
Carbon Tetrachloride	0.07	1.06 <sup>2</sup>	No
Chlorobenzene	0.01	238.94 <sup>1</sup>	No
Chloroethane	nd	2383.98 <sup>1</sup>	No
Chloroform	nd	0.88 <sup>2</sup>	No

Compound	ppbv	LAAS (ppbv)	Exceeds LAAS
Chloromethane	nd	26.91 <sup>2</sup>	No
cis-1,2-Dichloroethene	nd		
cis-1,3-Dichloropropene	nd	23.58 <sup>1</sup>	No
Cyclohexane	0.13		
Dibromochloromethane	nd		
Ethyl Acetate	nd		
Ethylbenzene	0.08	2372.00 <sup>1</sup>	No
Freon-11	0.18		
Freon-113	0.07		
Freon-114	nd		
Freon-12	0.42		
m/p-Xylene	0.31	2372.00 <sup>1</sup>	No
m-Dichlorobenzene	0.03		
Methylene Chloride	0.50	61.25 <sup>2</sup>	No
MTBE	nd		
n- Heptane	0.18		
Naphthalene	0.12	227.01 <sup>1</sup>	No
o-Dichlorobenzene	0.04		
o-Xylene	0.10	2372.00 <sup>1</sup>	No
p-Dichlorobenzene	0.04	237.85 <sup>1</sup>	No
Styrene	0.03	1190.22 <sup>1</sup>	No
Tetrachloroethylene	nd	15.52 <sup>2</sup>	No
Tetrahydrofuran	nd		
Toluene	0.50	2361.68 <sup>1</sup>	No
trans-1,2-Dichloroethene	nd		
trans-1,3-Dichloropropene	nd	23.58 <sup>1</sup>	No
Trichloroethylene	nd	10.94 <sup>2</sup>	No
Vinyl Chloride	nd	0.47 <sup>2</sup>	No

Notes: Concentrations below 0.5 ppbv are estimated values below the Practical Quantitation Limit (PQL) and may include false positives.

<sup>1</sup> Eight Hour Louisiana Ambient Air Standard.

<sup>2</sup> Annual Louisiana Ambient Air Standard – **Provided for informational purposes only.** It is scientifically inappropriate to compare short-term monitored values with regulatory or health-based standards protective of long periods of exposure.

Tentatively Identified Compounds: Concentrations (in ppbv) are estimations only.

Butane, 2-Methyl- = 0.41

1,4-Pentadiene = 2.35

Acetic Acid = 0.59

.Alpha.-Pinene = 0.58

Camphene = 0.14

D-Limonene = 0.46

Unknown = 0.19

Unknown = 0.17

# Louisiana Department of Environmental Quality

## Mobile Air Monitoring Laboratory

Sample ID: 8281811.D  
 Canister ID: LA2295  
 Sample Date: 8/28/2018  
 Start Time: 5:13 PM  
 Analysis ID: 08281811.D

Duration: GRAB  
 Method: TO-15 (GC/MS)

Project: Smyrna Area Air Quality Testing  
 Sample Location: Mason#27

Sample Collector: Randy Creighton  
 Analyzed By: Randy Creighton

Compound	ppbv	LAAS (ppbv)	Exceeds LAAS
1,1,1-Trichloroethane	nd	8284.41 <sup>1</sup>	No
1,1,2,2-Tetrachloroethane	0.02	0.25 <sup>2</sup>	No
1,1,2-Trichloroethane	nd	1.15 <sup>2</sup>	No
1,1-Dichloroethane	nd		
1,1-Dichloroethene	nd	0.50 <sup>2</sup>	No
1,2,4-Trichlorobenzene	0.07		
1,2,4-Trimethylbenzene	0.09		
1,2-Dibromoethane	nd	0.06 <sup>2</sup>	No
1,2-Dichloroethane	nd	0.95 <sup>2</sup>	No
1,2-Dichloropropane	nd	1787.39 <sup>1</sup>	No
1,3,5-Trimethylbenzene	0.03		
1,3-Butadiene	nd	0.42 <sup>2</sup>	No
1,3-Hexachlorobutadiene	nd	0.43 <sup>2</sup>	No
1-Ethyl-4-Methylbenzene	0.07		
2-Butanone	nd	4746.91 <sup>1</sup>	No
2-Hexanone	nd		
4-Methyl-2-Pentanone	nd	1190.78 <sup>1</sup>	No
Acetone	4.03		
Benzene	0.07	3.76 <sup>2</sup>	No
Benzyl Chloride	0.03		
Bromodichloromethane	nd		
Bromoform	nd		
Bromomethane	nd		
Carbon Disulfide	nd	22.93 <sup>1</sup>	No
Carbon Tetrachloride	0.09	1.06 <sup>2</sup>	No
Chlorobenzene	0.01	238.94 <sup>1</sup>	No
Chloroethane	nd	2383.98 <sup>1</sup>	No
Chloroform	nd	0.88 <sup>2</sup>	No

Compound	ppbv	LAAS (ppbv)	Exceeds LAAS
Chloromethane	nd	26.91 <sup>2</sup>	No
cis-1,2-Dichloroethene	nd		
cis-1,3-Dichloropropene	nd	23.58 <sup>1</sup>	No
Cyclohexane	nd		
Dibromochloromethane	nd		
Ethyl Acetate	nd		
Ethylbenzene	0.07	2372.00 <sup>1</sup>	No
Freon-11	0.20		
Freon-113	0.07		
Freon-114	nd		
Freon-12	0.59		
m/p-Xylene	0.19	2372.00 <sup>1</sup>	No
m-Dichlorobenzene	0.03		
Methylene Chloride	0.62	61.25 <sup>2</sup>	No
MTBE	nd		
n- Heptane	nd		
Naphthalene	0.10	227.01 <sup>1</sup>	No
o-Dichlorobenzene	0.04		
o-Xylene	0.06	2372.00 <sup>1</sup>	No
p-Dichlorobenzene	0.03	237.85 <sup>1</sup>	No
Styrene	nd	1190.22 <sup>1</sup>	No
Tetrachloroethylene	nd	15.52 <sup>2</sup>	No
Tetrahydrofuran	nd		
Toluene	0.22	2361.68 <sup>1</sup>	No
trans-1,2-Dichloroethene	nd		
trans-1,3-Dichloropropene	nd	23.58 <sup>1</sup>	No
Trichloroethylene	nd	10.94 <sup>2</sup>	No
Vinyl Chloride	nd	0.47 <sup>2</sup>	No

Notes: Concentrations below 0.5 ppbv are estimated values below the Practical Quantitation Limit (PQL) and may include false positives.

<sup>1</sup> Eight Hour Louisiana Ambient Air Standard.

<sup>2</sup> Annual Louisiana Ambient Air Standard – **Provided for informational purposes only.** It is scientifically inappropriate to compare short-term monitored values with regulatory or health-based standards protective of long periods of exposure.

Tentatively Identified Compounds: Concentrations (in ppbv) are estimations only.

1,3-Butadiene, 2-Methyl- = 0.57

Unknown System Artifact = 1.23

Acetic Acid = 0.52

# Louisiana Department of Environmental Quality

## Mobile Air Monitoring Laboratory

Sample ID: 8281812.D  
 Canister ID: Sampling Cane  
 Sample Date: 8/28/2018  
 Start Time: 7:28 PM  
 Analysis ID: 08281812.D

Duration: GRAB  
 Method: TO-15 (GC/MS)

Project: Smyrna Area Air Quality Testing  
 Sample Location: Derbonne 1

Sample Collector: Randy Creighton  
 Analyzed By: Randy Creighton

Compound	ppbv	LAAS (ppbv)	Exceeds LAAS
1,1,1-Trichloroethane	nd	8284.41 <sup>1</sup>	No
1,1,2,2-Tetrachloroethane	0.02	0.25 <sup>2</sup>	No
1,1,2-Trichloroethane	nd	1.15 <sup>2</sup>	No
1,1-Dichloroethane	nd		
1,1-Dichloroethene	nd	0.50 <sup>2</sup>	No
1,2,4-Trichlorobenzene	0.05		
1,2,4-Trimethylbenzene	0.44		
1,2-Dibromoethane	nd	0.06 <sup>2</sup>	No
1,2-Dichloroethane	nd	0.95 <sup>2</sup>	No
1,2-Dichloropropane	nd	1787.39 <sup>1</sup>	No
1,3,5-Trimethylbenzene	0.14		
1,3-Butadiene	nd	0.42 <sup>2</sup>	No
1,3-Hexachlorobutadiene	nd	0.43 <sup>2</sup>	No
1-Ethyl-4-Methylbenzene	0.38		
2-Butanone	nd	4746.91 <sup>1</sup>	No
2-Hexanone	nd		
4-Methyl-2-Pentanone	nd	1190.78 <sup>1</sup>	No
Acetone	2.23		
Benzene	1.18	3.76 <sup>2</sup>	No
Benzyl Chloride	nd		
Bromodichloromethane	nd		
Bromoform	nd		
Bromomethane	nd		
Carbon Disulfide	nd	22.93 <sup>1</sup>	No
Carbon Tetrachloride	0.08	1.06 <sup>2</sup>	No
Chlorobenzene	0.01	238.94 <sup>1</sup>	No
Chloroethane	nd	2383.98 <sup>1</sup>	No
Chloroform	nd	0.88 <sup>2</sup>	No

Compound	ppbv	LAAS (ppbv)	Exceeds LAAS
Chloromethane	nd	26.91 <sup>2</sup>	No
cis-1,2-Dichloroethene	nd		
cis-1,3-Dichloropropene	nd	23.58 <sup>1</sup>	No
Cyclohexane	0.49		
Dibromochloromethane	nd		
Ethyl Acetate	nd		
Ethylbenzene	0.31	2372.00 <sup>1</sup>	No
Freon-11	0.22		
Freon-113	0.07		
Freon-114	nd		
Freon-12	0.48		
m/p-Xylene	1.24	2372.00 <sup>1</sup>	No
m-Dichlorobenzene	0.02		
Methylene Chloride	0.51	61.25 <sup>2</sup>	No
MTBE	nd		
n- Heptane	0.66		
Naphthalene	0.28	227.01 <sup>1</sup>	No
o-Dichlorobenzene	0.03		
o-Xylene	0.43	2372.00 <sup>1</sup>	No
p-Dichlorobenzene	0.03	237.85 <sup>1</sup>	No
Styrene	0.13	1190.22 <sup>1</sup>	No
Tetrachloroethylene	nd	15.52 <sup>2</sup>	No
Tetrahydrofuran	nd		
Toluene	1.94	2361.68 <sup>1</sup>	No
trans-1,2-Dichloroethene	nd		
trans-1,3-Dichloropropene	nd	23.58 <sup>1</sup>	No
Trichloroethylene	nd	10.94 <sup>2</sup>	No
Vinyl Chloride	nd	0.47 <sup>2</sup>	No

Notes: Concentrations below 0.5 ppbv are estimated values below the Practical Quantitation Limit (PQL) and may include false positives.

<sup>1</sup> Eight Hour Louisiana Ambient Air Standard.

<sup>2</sup> Annual Louisiana Ambient Air Standard – **Provided for informational purposes only.** It is scientifically inappropriate to compare short-term monitored values with regulatory or health-based standards protective of long periods of exposure.

Tentatively Identified Compounds: Concentrations (in ppbv) are estimations only.

Silane, Difluorodimethyl- = 2.09

Butane = 1.61

Butane, 2-Methyl- = 14.39

Cyclopropane, 1,1-Dimethyl- = 1.40

Butane, 2,2-Dimethyl- = 1.51

Pentane, 2-Methyl- = 5.39

N-Hexane = 1.98

Cyclopentane, Methyl- = 0.88

Unknown System Artifact = 7.91

Acetic Acid = 0.82

# Louisiana Department of Environmental Quality

## Mobile Air Monitoring Laboratory

Sample ID: 8281813.D  
 Canister ID: Sampling Cane  
 Sample Date: 8/28/2018  
 Start Time: 9:24 PM  
 Analysis ID: 08281813.D

Duration: GRAB  
 Method: TO-15 (GC/MS)

Project: Smyrna Area Air Quality Testing  
 Sample Location: Derbonne 2

Sample Collector: Randy Creighton  
 Analyzed By: Randy Creighton

Compound	ppbv	LAAS (ppbv)	Exceeds LAAS
1,1,1-Trichloroethane	nd	8284.41 <sup>1</sup>	No
1,1,2,2-Tetrachloroethane	0.02	0.25 <sup>2</sup>	No
1,1,2-Trichloroethane	nd	1.15 <sup>2</sup>	No
1,1-Dichloroethane	nd		
1,1-Dichloroethene	nd	0.50 <sup>2</sup>	No
1,2,4-Trichlorobenzene	0.06		
1,2,4-Trimethylbenzene	0.24		
1,2-Dibromoethane	nd	0.06 <sup>2</sup>	No
1,2-Dichloroethane	nd	0.95 <sup>2</sup>	No
1,2-Dichloropropane	nd	1787.39 <sup>1</sup>	No
1,3,5-Trimethylbenzene	0.08		
1,3-Butadiene	nd	0.42 <sup>2</sup>	No
1,3-Hexachlorobutadiene	nd	0.43 <sup>2</sup>	No
1-Ethyl-4-Methylbenzene	0.18		
2-Butanone	nd	4746.91 <sup>1</sup>	No
2-Hexanone	nd		
4-Methyl-2-Pentanone	nd	1190.78 <sup>1</sup>	No
Acetone	4.34		
Benzene	0.56	3.76 <sup>2</sup>	No
Benzyl Chloride	nd		
Bromodichloromethane	nd		
Bromoform	nd		
Bromomethane	nd		
Carbon Disulfide	nd	22.93 <sup>1</sup>	No
Carbon Tetrachloride	0.11	1.06 <sup>2</sup>	No
Chlorobenzene	0.01	238.94 <sup>1</sup>	No
Chloroethane	nd	2383.98 <sup>1</sup>	No
Chloroform	nd	0.88 <sup>2</sup>	No

Compound	ppbv	LAAS (ppbv)	Exceeds LAAS
Chloromethane	nd	26.91 <sup>2</sup>	No
cis-1,2-Dichloroethene	nd		
cis-1,3-Dichloropropene	nd	23.58 <sup>1</sup>	No
Cyclohexane	0.14		
Dibromochloromethane	nd		
Ethyl Acetate	nd		
Ethylbenzene	0.12	2372.00 <sup>1</sup>	No
Freon-11	0.23		
Freon-113	0.07		
Freon-114	nd		
Freon-12	0.77		
m/p-Xylene	0.56	2372.00 <sup>1</sup>	No
m-Dichlorobenzene	0.02		
Methylene Chloride	0.46	61.25 <sup>2</sup>	No
MTBE	nd		
n- Heptane	0.25		
Naphthalene	0.23	227.01 <sup>1</sup>	No
o-Dichlorobenzene	0.03		
o-Xylene	0.16	2372.00 <sup>1</sup>	No
p-Dichlorobenzene	0.02	237.85 <sup>1</sup>	No
Styrene	0.08	1190.22 <sup>1</sup>	No
Tetrachloroethylene	nd	15.52 <sup>2</sup>	No
Tetrahydrofuran	nd		
Toluene	0.56	2361.68 <sup>1</sup>	No
trans-1,2-Dichloroethene	nd		
trans-1,3-Dichloropropene	nd	23.58 <sup>1</sup>	No
Trichloroethylene	nd	10.94 <sup>2</sup>	No
Vinyl Chloride	nd	0.47 <sup>2</sup>	No

Notes: Concentrations below 0.5 ppbv are estimated values below the Practical Quantitation Limit (PQL) and may include false positives.

<sup>1</sup> Eight Hour Louisiana Ambient Air Standard.

<sup>2</sup> Annual Louisiana Ambient Air Standard – **Provided for informational purposes only.** It is scientifically inappropriate to compare short-term monitored values with regulatory or health-based standards protective of long periods of exposure.

Tentatively Identified Compounds: Concentrations (in ppbv) are estimations only.

Unknown = 0.70

Butane, 2-Methyl- = 1.58

Pentane, 2-Methyl- = 0.70

N-Hexane = 0.92

Unknown System Artifact = 6.37

.Alpha.-Pinene = 0.16

Unknown = 0.23

# Louisiana Department of Environmental Quality

## Mobile Air Monitoring Laboratory

Sample ID: 8281814.D  
 Canister ID: Sampling Cane  
 Sample Date: 8/28/2018  
 Start Time: 11:24 PM  
 Analysis ID: 08281814.D

Duration: GRAB  
 Method: TO-15 (GC/MS)

Project: Smyrna Area Air Quality Testing  
 Sample Location: Derbonne 3

Sample Collector: Randy Creighton  
 Analyzed By: Randy Creighton

Compound	ppbv	LAAS (ppbv)	Exceeds LAAS
1,1,1-Trichloroethane	nd	8284.41 <sup>1</sup>	No
1,1,2,2-Tetrachloroethane	nd	0.25 <sup>2</sup>	No
1,1,2-Trichloroethane	nd	1.15 <sup>2</sup>	No
1,1-Dichloroethane	nd		
1,1-Dichloroethene	nd	0.50 <sup>2</sup>	No
1,2,4-Trichlorobenzene	0.04		
1,2,4-Trimethylbenzene	0.31		
1,2-Dibromoethane	nd	0.06 <sup>2</sup>	No
1,2-Dichloroethane	nd	0.95 <sup>2</sup>	No
1,2-Dichloropropane	nd	1787.39 <sup>1</sup>	No
1,3,5-Trimethylbenzene	0.09		
1,3-Butadiene	nd	0.42 <sup>2</sup>	No
1,3-Hexachlorobutadiene	nd	0.43 <sup>2</sup>	No
1-Ethyl-4-Methylbenzene	0.27		
2-Butanone	nd	4746.91 <sup>1</sup>	No
2-Hexanone	nd		
4-Methyl-2-Pentanone	nd	1190.78 <sup>1</sup>	No
Acetone	5.82		
Benzene	0.57	3.76 <sup>2</sup>	No
Benzyl Chloride	nd		
Bromodichloromethane	nd		
Bromoform	nd		
Bromomethane	nd		
Carbon Disulfide	nd	22.93 <sup>1</sup>	No
Carbon Tetrachloride	0.09	1.06 <sup>2</sup>	No
Chlorobenzene	0.01	238.94 <sup>1</sup>	No
Chloroethane	nd	2383.98 <sup>1</sup>	No
Chloroform	nd	0.88 <sup>2</sup>	No

Compound	ppbv	LAAS (ppbv)	Exceeds LAAS
Chloromethane	nd	26.91 <sup>2</sup>	No
cis-1,2-Dichloroethene	nd		
cis-1,3-Dichloropropene	nd	23.58 <sup>1</sup>	No
Cyclohexane	0.24		
Dibromochloromethane	nd		
Ethyl Acetate	nd		
Ethylbenzene	0.20	2372.00 <sup>1</sup>	No
Freon-11	0.21		
Freon-113	0.08		
Freon-114	nd		
Freon-12	0.77		
m/p-Xylene	0.76	2372.00 <sup>1</sup>	No
m-Dichlorobenzene	0.02		
Methylene Chloride	0.70	61.25 <sup>2</sup>	No
MTBE	nd		
n- Heptane	0.34		
Naphthalene	0.22	227.01 <sup>1</sup>	No
o-Dichlorobenzene	0.03		
o-Xylene	0.24	2372.00 <sup>1</sup>	No
p-Dichlorobenzene	0.02	237.85 <sup>1</sup>	No
Styrene	0.14	1190.22 <sup>1</sup>	No
Tetrachloroethylene	nd	15.52 <sup>2</sup>	No
Tetrahydrofuran	0.96		
Toluene	1.29	2361.68 <sup>1</sup>	No
trans-1,2-Dichloroethene	nd		
trans-1,3-Dichloropropene	nd	23.58 <sup>1</sup>	No
Trichloroethylene	nd	10.94 <sup>2</sup>	No
Vinyl Chloride	nd	0.47 <sup>2</sup>	No

Notes: Concentrations below 0.5 ppbv are estimated values below the Practical Quantitation Limit (PQL) and may include false positives.

<sup>1</sup> Eight Hour Louisiana Ambient Air Standard.

<sup>2</sup> Annual Louisiana Ambient Air Standard – **Provided for informational purposes only.** It is scientifically inappropriate to compare short-term monitored values with regulatory or health-based standards protective of long periods of exposure.

Tentatively Identified Compounds: Concentrations (in ppbv) are estimations only.

Butane, 2-Methyl- = 4.48

1,4-Pentadiene = 0.90

Pentane, 2-Methyl- = 2.32

N-Hexane = 6.46

Cyclopentane, Methyl- = 1.59

Cyclopentyl Acetylene = 12.14

Unknown = 1.34

# Louisiana Department of Environmental Quality

## Mobile Air Monitoring Laboratory

Sample ID: 8281815.D  
 Canister ID: Sampling Cane  
 Sample Date: 8/29/2018  
 Start Time: 1:24 AM  
 Analysis ID: 08281815.D

Duration: GRAB  
 Method: TO-15 (GC/MS)

Project: Smyrna Area Air Quality Testing  
 Sample Location: Derbonne 4

Sample Collector: Randy Creighton  
 Analyzed By: Randy Creighton

Compound	ppbv	LAAS (ppbv)	Exceeds LAAS
1,1,1-Trichloroethane	nd	8284.41 <sup>1</sup>	No
1,1,2,2-Tetrachloroethane	nd	0.25 <sup>2</sup>	No
1,1,2-Trichloroethane	nd	1.15 <sup>2</sup>	No
1,1-Dichloroethane	nd		
1,1-Dichloroethene	nd	0.50 <sup>2</sup>	No
1,2,4-Trichlorobenzene	0.05		
1,2,4-Trimethylbenzene	0.18		
1,2-Dibromoethane	nd	0.06 <sup>2</sup>	No
1,2-Dichloroethane	nd	0.95 <sup>2</sup>	No
1,2-Dichloropropane	nd	1787.39 <sup>1</sup>	No
1,3,5-Trimethylbenzene	0.06		
1,3-Butadiene	nd	0.42 <sup>2</sup>	No
1,3-Hexachlorobutadiene	nd	0.43 <sup>2</sup>	No
1-Ethyl-4-Methylbenzene	0.14		
2-Butanone	nd	4746.91 <sup>1</sup>	No
2-Hexanone	nd		
4-Methyl-2-Pentanone	nd	1190.78 <sup>1</sup>	No
Acetone	2.26		
Benzene	0.20	3.76 <sup>2</sup>	No
Benzyl Chloride	nd		
Bromodichloromethane	nd		
Bromoform	nd		
Bromomethane	nd		
Carbon Disulfide	nd	22.93 <sup>1</sup>	No
Carbon Tetrachloride	0.10	1.06 <sup>2</sup>	No
Chlorobenzene	0.01	238.94 <sup>1</sup>	No
Chloroethane	nd	2383.98 <sup>1</sup>	No
Chloroform	nd	0.88 <sup>2</sup>	No

Compound	ppbv	LAAS (ppbv)	Exceeds LAAS
Chloromethane	0.48	26.91 <sup>2</sup>	No
cis-1,2-Dichloroethene	nd		
cis-1,3-Dichloropropene	nd	23.58 <sup>1</sup>	No
Cyclohexane	0.04		
Dibromochloromethane	nd		
Ethyl Acetate	nd		
Ethylbenzene	0.10	2372.00 <sup>1</sup>	No
Freon-11	0.23		
Freon-113	0.09		
Freon-114	nd		
Freon-12	0.73		
m/p-Xylene	0.36	2372.00 <sup>1</sup>	No
m-Dichlorobenzene	0.02		
Methylene Chloride	0.58	61.25 <sup>2</sup>	No
MTBE	nd		
n- Heptane	0.15		
Naphthalene	0.20	227.01 <sup>1</sup>	No
o-Dichlorobenzene	0.03		
o-Xylene	0.10	2372.00 <sup>1</sup>	No
p-Dichlorobenzene	0.03	237.85 <sup>1</sup>	No
Styrene	0.07	1190.22 <sup>1</sup>	No
Tetrachloroethylene	nd	15.52 <sup>2</sup>	No
Tetrahydrofuran	nd		
Toluene	0.34	2361.68 <sup>1</sup>	No
trans-1,2-Dichloroethene	nd		
trans-1,3-Dichloropropene	nd	23.58 <sup>1</sup>	No
Trichloroethylene	nd	10.94 <sup>2</sup>	No
Vinyl Chloride	nd	0.47 <sup>2</sup>	No

Notes: Concentrations below 0.5 ppbv are estimated values below the Practical Quantitation Limit (PQL) and may include false positives.

<sup>1</sup> Eight Hour Louisiana Ambient Air Standard.

<sup>2</sup> Annual Louisiana Ambient Air Standard – **Provided for informational purposes only.** It is scientifically inappropriate to compare short-term monitored values with regulatory or health-based standards protective of long periods of exposure.

Tentatively Identified Compounds: Concentrations (in ppbv) are estimations only.

Unknown System Artifact = 4.19



# Louisiana Department of Environmental Quality

## Mobile Air Monitoring Laboratory

Sample ID: 8281816.D  
 Canister ID: Sampling Cane  
 Sample Date: 8/29/2018  
 Start Time: 3:24 AM  
 Analysis ID: 08281816.D

Duration: GRAB  
 Method: TO-15 (GC/MS)

Project: Smyrna Area Air Quality Testing  
 Sample Location: Derbonne 5

Sample Collector: Randy Creighton  
 Analyzed By: Randy Creighton

Compound	ppbv	LAAS (ppbv)	Exceeds LAAS
1,1,1-Trichloroethane	nd	8284.41 <sup>1</sup>	No
1,1,2,2-Tetrachloroethane	nd	0.25 <sup>2</sup>	No
1,1,2-Trichloroethane	nd	1.15 <sup>2</sup>	No
1,1-Dichloroethane	nd		
1,1-Dichloroethene	nd	0.50 <sup>2</sup>	No
1,2,4-Trichlorobenzene	0.05		
1,2,4-Trimethylbenzene	0.17		
1,2-Dibromoethane	nd	0.06 <sup>2</sup>	No
1,2-Dichloroethane	nd	0.95 <sup>2</sup>	No
1,2-Dichloropropane	nd	1787.39 <sup>1</sup>	No
1,3,5-Trimethylbenzene	0.05		
1,3-Butadiene	nd	0.42 <sup>2</sup>	No
1,3-Hexachlorobutadiene	nd	0.43 <sup>2</sup>	No
1-Ethyl-4-Methylbenzene	0.13		
2-Butanone	nd	4746.91 <sup>1</sup>	No
2-Hexanone	nd		
4-Methyl-2-Pentanone	nd	1190.78 <sup>1</sup>	No
Acetone	2.38		
Benzene	0.13	3.76 <sup>2</sup>	No
Benzyl Chloride	nd		
Bromodichloromethane	nd		
Bromoform	nd		
Bromomethane	nd		
Carbon Disulfide	nd	22.93 <sup>1</sup>	No
Carbon Tetrachloride	0.09	1.06 <sup>2</sup>	No
Chlorobenzene	0.01	238.94 <sup>1</sup>	No
Chloroethane	nd	2383.98 <sup>1</sup>	No
Chloroform	nd	0.88 <sup>2</sup>	No

Compound	ppbv	LAAS (ppbv)	Exceeds LAAS
Chloromethane	0.52	26.91 <sup>2</sup>	No
cis-1,2-Dichloroethene	nd		
cis-1,3-Dichloropropene	nd	23.58 <sup>1</sup>	No
Cyclohexane	nd		
Dibromochloromethane	nd		
Ethyl Acetate	nd		
Ethylbenzene	0.09	2372.00 <sup>1</sup>	No
Freon-11	0.23		
Freon-113	0.08		
Freon-114	nd		
Freon-12	0.80		
m/p-Xylene	0.33	2372.00 <sup>1</sup>	No
m-Dichlorobenzene	0.02		
Methylene Chloride	0.63	61.25 <sup>2</sup>	No
MTBE	nd		
n- Heptane	nd		
Naphthalene	0.18	227.01 <sup>1</sup>	No
o-Dichlorobenzene	0.02		
o-Xylene	0.09	2372.00 <sup>1</sup>	No
p-Dichlorobenzene	0.02	237.85 <sup>1</sup>	No
Styrene	0.07	1190.22 <sup>1</sup>	No
Tetrachloroethylene	nd	15.52 <sup>2</sup>	No
Tetrahydrofuran	nd		
Toluene	0.30	2361.68 <sup>1</sup>	No
trans-1,2-Dichloroethene	nd		
trans-1,3-Dichloropropene	nd	23.58 <sup>1</sup>	No
Trichloroethylene	nd	10.94 <sup>2</sup>	No
Vinyl Chloride	nd	0.47 <sup>2</sup>	No

Notes: Concentrations below 0.5 ppbv are estimated values below the Practical Quantitation Limit (PQL) and may include false positives.

<sup>1</sup> Eight Hour Louisiana Ambient Air Standard.

<sup>2</sup> Annual Louisiana Ambient Air Standard – **Provided for informational purposes only.** It is scientifically inappropriate to compare short-term monitored values with regulatory or health-based standards protective of long periods of exposure.

Tentatively Identified Compounds: Concentrations (in ppbv) are estimations only.

Unknown System Artifact = 4.13



# Louisiana Department of Environmental Quality

## Mobile Air Monitoring Laboratory

Sample ID: 8281817.D  
 Canister ID: Sampling Cane  
 Sample Date: 8/29/2018  
 Start Time: 5:24 AM  
 Analysis ID: 08281817.D

Duration: GRAB  
 Method: TO-15 (GC/MS)

Project: Smyrna Area Air Quality Testing  
 Sample Location: Derbonne 6

Sample Collector: Randy Creighton  
 Analyzed By: Randy Creighton

Compound	ppbv	LAAS (ppbv)	Exceeds LAAS
1,1,1-Trichloroethane	nd	8284.41 <sup>1</sup>	No
1,1,2,2-Tetrachloroethane	nd	0.25 <sup>2</sup>	No
1,1,2-Trichloroethane	nd	1.15 <sup>2</sup>	No
1,1-Dichloroethane	nd		
1,1-Dichloroethene	nd	0.50 <sup>2</sup>	No
1,2,4-Trichlorobenzene	0.05		
1,2,4-Trimethylbenzene	0.42		
1,2-Dibromoethane	nd	0.06 <sup>2</sup>	No
1,2-Dichloroethane	nd	0.95 <sup>2</sup>	No
1,2-Dichloropropane	nd	1787.39 <sup>1</sup>	No
1,3,5-Trimethylbenzene	0.19		
1,3-Butadiene	nd	0.42 <sup>2</sup>	No
1,3-Hexachlorobutadiene	nd	0.43 <sup>2</sup>	No
1-Ethyl-4-Methylbenzene	0.35		
2-Butanone	nd	4746.91 <sup>1</sup>	No
2-Hexanone	nd		
4-Methyl-2-Pentanone	nd	1190.78 <sup>1</sup>	No
Acetone	2.10		
Benzene	0.94	3.76 <sup>2</sup>	No
Benzyl Chloride	nd		
Bromodichloromethane	nd		
Bromoform	nd		
Bromomethane	nd		
Carbon Disulfide	nd	22.93 <sup>1</sup>	No
Carbon Tetrachloride	0.10	1.06 <sup>2</sup>	No
Chlorobenzene	0.01	238.94 <sup>1</sup>	No
Chloroethane	nd	2383.98 <sup>1</sup>	No
Chloroform	nd	0.88 <sup>2</sup>	No

Compound	ppbv	LAAS (ppbv)	Exceeds LAAS
Chloromethane	0.57	26.91 <sup>2</sup>	No
cis-1,2-Dichloroethene	nd		
cis-1,3-Dichloropropene	nd	23.58 <sup>1</sup>	No
Cyclohexane	0.15		
Dibromochloromethane	nd		
Ethyl Acetate	nd		
Ethylbenzene	0.23	2372.00 <sup>1</sup>	No
Freon-11	0.21		
Freon-113	0.07		
Freon-114	nd		
Freon-12	0.77		
m/p-Xylene	1.55	2372.00 <sup>1</sup>	No
m-Dichlorobenzene	0.02		
Methylene Chloride	0.57	61.25 <sup>2</sup>	No
MTBE	nd		
n- Heptane	0.19		
Naphthalene	0.20	227.01 <sup>1</sup>	No
o-Dichlorobenzene	0.02		
o-Xylene	0.52	2372.00 <sup>1</sup>	No
p-Dichlorobenzene	0.02	237.85 <sup>1</sup>	No
Styrene	0.08	1190.22 <sup>1</sup>	No
Tetrachloroethylene	nd	15.52 <sup>2</sup>	No
Tetrahydrofuran	nd		
Toluene	1.02	2361.68 <sup>1</sup>	No
trans-1,2-Dichloroethene	nd		
trans-1,3-Dichloropropene	nd	23.58 <sup>1</sup>	No
Trichloroethylene	nd	10.94 <sup>2</sup>	No
Vinyl Chloride	nd	0.47 <sup>2</sup>	No

Notes: Concentrations below 0.5 ppbv are estimated values below the Practical Quantitation Limit (PQL) and may include false positives.

<sup>1</sup> Eight Hour Louisiana Ambient Air Standard.

<sup>2</sup> Annual Louisiana Ambient Air Standard – **Provided for informational purposes only.** It is scientifically inappropriate to compare short-term monitored values with regulatory or health-based standards protective of long periods of exposure.

Tentatively Identified Compounds: Concentrations (in ppbv) are estimations only.

Butane, 2-Methyl- = 0.59

Unknown System Artifact = 3.14

.Alpha.-Pinene = 0.17

Adamantane = 0.19

Unknown = 0.42

Adamantane, 1,3-Dimethyl- = 0.37

# Louisiana Department of Environmental Quality

## Mobile Air Monitoring Laboratory

Sample ID: 8281818.D  
 Canister ID: Sampling Cane  
 Sample Date: 8/29/2018  
 Start Time: 7:24 AM  
 Analysis ID: 08281818.D

Duration: GRAB  
 Method: TO-15 (GC/MS)

Project: Smyrna Area Air Quality Testing  
 Sample Location: Derbonne 7

Sample Collector: Randy Creighton  
 Analyzed By: Randy Creighton

Compound	ppbv	LAAS (ppbv)	Exceeds LAAS
1,1,1-Trichloroethane	nd	8284.41 <sup>1</sup>	No
1,1,2,2-Tetrachloroethane	nd	0.25 <sup>2</sup>	No
1,1,2-Trichloroethane	nd	1.15 <sup>2</sup>	No
1,1-Dichloroethane	nd		
1,1-Dichloroethene	nd	0.50 <sup>2</sup>	No
1,2,4-Trichlorobenzene	0.05		
1,2,4-Trimethylbenzene	0.15		
1,2-Dibromoethane	nd	0.06 <sup>2</sup>	No
1,2-Dichloroethane	nd	0.95 <sup>2</sup>	No
1,2-Dichloropropane	nd	1787.39 <sup>1</sup>	No
1,3,5-Trimethylbenzene	0.05		
1,3-Butadiene	nd	0.42 <sup>2</sup>	No
1,3-Hexachlorobutadiene	nd	0.43 <sup>2</sup>	No
1-Ethyl-4-Methylbenzene	0.12		
2-Butanone	nd	4746.91 <sup>1</sup>	No
2-Hexanone	nd		
4-Methyl-2-Pentanone	nd	1190.78 <sup>1</sup>	No
Acetone	2.49		
Benzene	0.52	3.76 <sup>2</sup>	No
Benzyl Chloride	nd		
Bromodichloromethane	nd		
Bromoform	nd		
Bromomethane	nd		
Carbon Disulfide	nd	22.93 <sup>1</sup>	No
Carbon Tetrachloride	0.11	1.06 <sup>2</sup>	No
Chlorobenzene	0.01	238.94 <sup>1</sup>	No
Chloroethane	nd	2383.98 <sup>1</sup>	No
Chloroform	nd	0.88 <sup>2</sup>	No

Compound	ppbv	LAAS (ppbv)	Exceeds LAAS
Chloromethane	nd	26.91 <sup>2</sup>	No
cis-1,2-Dichloroethene	nd		
cis-1,3-Dichloropropene	nd	23.58 <sup>1</sup>	No
Cyclohexane	0.08		
Dibromochloromethane	nd		
Ethyl Acetate	nd		
Ethylbenzene	0.09	2372.00 <sup>1</sup>	No
Freon-11	0.25		
Freon-113	0.08		
Freon-114	nd		
Freon-12	0.82		
m/p-Xylene	0.33	2372.00 <sup>1</sup>	No
m-Dichlorobenzene	0.02		
Methylene Chloride	0.55	61.25 <sup>2</sup>	No
MTBE	nd		
n- Heptane	0.24		
Naphthalene	0.16	227.01 <sup>1</sup>	No
o-Dichlorobenzene	0.02		
o-Xylene	0.10	2372.00 <sup>1</sup>	No
p-Dichlorobenzene	0.02	237.85 <sup>1</sup>	No
Styrene	0.06	1190.22 <sup>1</sup>	No
Tetrachloroethylene	nd	15.52 <sup>2</sup>	No
Tetrahydrofuran	nd		
Toluene	0.37	2361.68 <sup>1</sup>	No
trans-1,2-Dichloroethene	nd		
trans-1,3-Dichloropropene	nd	23.58 <sup>1</sup>	No
Trichloroethylene	nd	10.94 <sup>2</sup>	No
Vinyl Chloride	nd	0.47 <sup>2</sup>	No

Notes: Concentrations below 0.5 ppbv are estimated values below the Practical Quantitation Limit (PQL) and may include false positives.

<sup>1</sup> Eight Hour Louisiana Ambient Air Standard.

<sup>2</sup> Annual Louisiana Ambient Air Standard – **Provided for informational purposes only.** It is scientifically inappropriate to compare short-term monitored values with regulatory or health-based standards protective of long periods of exposure.

Tentatively Identified Compounds: Concentrations (in ppbv) are estimations only.

Unknown System Artifact = 1.83

.Alpha.-Pinene = 0.17

# Louisiana Department of Environmental Quality

## Mobile Air Monitoring Laboratory

Sample ID: 8281819.D  
 Canister ID: Sampling Cane  
 Sample Date: 8/29/2018  
 Start Time: 8:36 AM  
 Analysis ID: 08281819.D

Duration: GRAB  
 Method: TO-15 (GC/MS)

Project: Smyrna Area Air Quality Testing  
 Sample Location: Derbonne 8

Sample Collector: Randy Creighton  
 Analyzed By: Randy Creighton

Compound	ppbv	LAAS (ppbv)	Exceeds LAAS
1,1,1-Trichloroethane	nd	8284.41 <sup>1</sup>	No
1,1,2,2-Tetrachloroethane	0.01	0.25 <sup>2</sup>	No
1,1,2-Trichloroethane	nd	1.15 <sup>2</sup>	No
1,1-Dichloroethane	nd		
1,1-Dichloroethene	nd	0.50 <sup>2</sup>	No
1,2,4-Trichlorobenzene	0.03		
1,2,4-Trimethylbenzene	0.04		
1,2-Dibromoethane	nd	0.06 <sup>2</sup>	No
1,2-Dichloroethane	nd	0.95 <sup>2</sup>	No
1,2-Dichloropropane	nd	1787.39 <sup>1</sup>	No
1,3,5-Trimethylbenzene	0.02		
1,3-Butadiene	nd	0.42 <sup>2</sup>	No
1,3-Hexachlorobutadiene	nd	0.43 <sup>2</sup>	No
1-Ethyl-4-Methylbenzene	0.04		
2-Butanone	nd	4746.91 <sup>1</sup>	No
2-Hexanone	nd		
4-Methyl-2-Pentanone	nd	1190.78 <sup>1</sup>	No
Acetone	0.25		
Benzene	0.04	3.76 <sup>2</sup>	No
Benzyl Chloride	nd		
Bromodichloromethane	nd		
Bromoform	nd		
Bromomethane	nd		
Carbon Disulfide	0.01	22.93 <sup>1</sup>	No
Carbon Tetrachloride	nd	1.06 <sup>2</sup>	No
Chlorobenzene	nd	238.94 <sup>1</sup>	No
Chloroethane	nd	2383.98 <sup>1</sup>	No
Chloroform	nd	0.88 <sup>2</sup>	No

Compound	ppbv	LAAS (ppbv)	Exceeds LAAS
Chloromethane	nd	26.91 <sup>2</sup>	No
cis-1,2-Dichloroethene	nd		
cis-1,3-Dichloropropene	nd	23.58 <sup>1</sup>	No
Cyclohexane	nd		
Dibromochloromethane	nd		
Ethyl Acetate	nd		
Ethylbenzene	0.05	2372.00 <sup>1</sup>	No
Freon-11	nd		
Freon-113	nd		
Freon-114	nd		
Freon-12	nd		
m/p-Xylene	0.10	2372.00 <sup>1</sup>	No
m-Dichlorobenzene	0.01		
Methylene Chloride	0.18	61.25 <sup>2</sup>	No
MTBE	nd		
n- Heptane	nd		
Naphthalene	0.04	227.01 <sup>1</sup>	No
o-Dichlorobenzene	0.02		
o-Xylene	0.03	2372.00 <sup>1</sup>	No
p-Dichlorobenzene	0.01	237.85 <sup>1</sup>	No
Styrene	nd	1190.22 <sup>1</sup>	No
Tetrachloroethylene	nd	15.52 <sup>2</sup>	No
Tetrahydrofuran	nd		
Toluene	0.10	2361.68 <sup>1</sup>	No
trans-1,2-Dichloroethene	nd		
trans-1,3-Dichloropropene	nd	23.58 <sup>1</sup>	No
Trichloroethylene	nd	10.94 <sup>2</sup>	No
Vinyl Chloride	nd	0.47 <sup>2</sup>	No

Notes: Concentrations below 0.5 ppbv are estimated values below the Practical Quantitation Limit (PQL) and may include false positives.

<sup>1</sup> Eight Hour Louisiana Ambient Air Standard.

<sup>2</sup> Annual Louisiana Ambient Air Standard – **Provided for informational purposes only.** It is scientifically inappropriate to compare short-term monitored values with regulatory or health-based standards protective of long periods of exposure.

Tentatively Identified Compounds: Concentrations (in ppbv) are estimations only.

# Louisiana Department of Environmental Quality

## Mobile Air Monitoring Laboratory

Sample ID: 8291807.D  
 Canister ID: LA2512  
 Sample Date: 8/28/2018  
 Start Time: 5:21 PM  
 Analysis ID: 08291807.D

Duration: GRAB  
 Method: TO-15 (GC/MS)

Project: Smyrna Area Air Quality Testing  
 Sample Location: Dennison

Sample Collector: Randy Creighton  
 Analyzed By: Randy Creighton

Compound	ppbv	LAAS (ppbv)	Exceeds LAAS
1,1,1-Trichloroethane	nd	8284.41 <sup>1</sup>	No
1,1,2,2-Tetrachloroethane	0.02	0.25 <sup>2</sup>	No
1,1,2-Trichloroethane	nd	1.15 <sup>2</sup>	No
1,1-Dichloroethane	nd		
1,1-Dichloroethene	nd	0.50 <sup>2</sup>	No
1,2,4-Trichlorobenzene	0.08		
1,2,4-Trimethylbenzene	0.07		
1,2-Dibromoethane	nd	0.06 <sup>2</sup>	No
1,2-Dichloroethane	nd	0.95 <sup>2</sup>	No
1,2-Dichloropropane	nd	1787.39 <sup>1</sup>	No
1,3,5-Trimethylbenzene	0.04		
1,3-Butadiene	nd	0.42 <sup>2</sup>	No
1,3-Hexachlorobutadiene	nd	0.43 <sup>2</sup>	No
1-Ethyl-4-Methylbenzene	0.06		
2-Butanone	nd	4746.91 <sup>1</sup>	No
2-Hexanone	nd		
4-Methyl-2-Pentanone	nd	1190.78 <sup>1</sup>	No
Acetone	3.34		
Benzene	0.07	3.76 <sup>2</sup>	No
Benzyl Chloride	0.03		
Bromodichloromethane	nd		
Bromoform	nd		
Bromomethane	nd		
Carbon Disulfide	nd	22.93 <sup>1</sup>	No
Carbon Tetrachloride	0.08	1.06 <sup>2</sup>	No
Chlorobenzene	0.02	238.94 <sup>1</sup>	No
Chloroethane	nd	2383.98 <sup>1</sup>	No
Chloroform	nd	0.88 <sup>2</sup>	No

Compound	ppbv	LAAS (ppbv)	Exceeds LAAS
Chloromethane	0.41	26.91 <sup>2</sup>	No
cis-1,2-Dichloroethene	nd		
cis-1,3-Dichloropropene	nd	23.58 <sup>1</sup>	No
Cyclohexane	nd		
Dibromochloromethane	nd		
Ethyl Acetate	nd		
Ethylbenzene	0.06	2372.00 <sup>1</sup>	No
Freon-11	0.20		
Freon-113	0.08		
Freon-114	nd		
Freon-12	0.66		
m/p-Xylene	0.16	2372.00 <sup>1</sup>	No
m-Dichlorobenzene	0.03		
Methylene Chloride	0.64	61.25 <sup>2</sup>	No
MTBE	nd		
n- Heptane	nd		
Naphthalene	0.12	227.01 <sup>1</sup>	No
o-Dichlorobenzene	0.04		
o-Xylene	0.05	2372.00 <sup>1</sup>	No
p-Dichlorobenzene	0.04	237.85 <sup>1</sup>	No
Styrene	0.03	1190.22 <sup>1</sup>	No
Tetrachloroethylene	0.02	15.52 <sup>2</sup>	No
Tetrahydrofuran	nd		
Toluene	0.14	2361.68 <sup>1</sup>	No
trans-1,2-Dichloroethene	nd		
trans-1,3-Dichloropropene	nd	23.58 <sup>1</sup>	No
Trichloroethylene	nd	10.94 <sup>2</sup>	No
Vinyl Chloride	nd	0.47 <sup>2</sup>	No

Notes: Concentrations below 0.5 ppbv are estimated values below the Practical Quantitation Limit (PQL) and may include false positives.

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<sup>2</sup> Annual Louisiana Ambient Air Standard – **Provided for informational purposes only.** It is scientifically inappropriate to compare short-term monitored values with regulatory or health-based standards protective of long periods of exposure.

Tentatively Identified Compounds: Concentrations (in ppbv) are estimations only.

Unknown System Artifact = 0.74

## **Appendix E: Air Above Water Tank VOC Report**

# Louisiana Department of Environmental Quality

## Mobile Air Monitoring Laboratory

Sample ID: 8291808.D  
 Canister ID: LA2134  
 Sample Date: 8/28/2018  
 Start Time: 4:37 PM  
 Analysis ID: 08291808.D

Duration: GRAB  
 Method: TO-15 (GC/MS)

Project: Smyrna Area Air Quality Testing  
 Sample Location: Hansen, air above water tank

Sample Collector: Randy Creighton  
 Analyzed By: Randy Creighton

Compound	ppbv	LAAS (ppbv)	Exceeds LAAS
1,1,1-Trichloroethane	nd	8284.41 <sup>1</sup>	No
1,1,2,2-Tetrachloroethane	0.06	0.25 <sup>2</sup>	No
1,1,2-Trichloroethane	nd	1.15 <sup>2</sup>	No
1,1-Dichloroethane	nd		
1,1-Dichloroethene	nd	0.50 <sup>2</sup>	No
1,2,4-Trichlorobenzene	0.08		
1,2,4-Trimethylbenzene	0.22		
1,2-Dibromoethane	nd	0.06 <sup>2</sup>	No
1,2-Dichloroethane	nd	0.95 <sup>2</sup>	No
1,2-Dichloropropane	nd	1787.39 <sup>1</sup>	No
1,3,5-Trimethylbenzene	0.12		
1,3-Butadiene	nd	0.42 <sup>2</sup>	No
1,3-Hexachlorobutadiene	nd	0.43 <sup>2</sup>	No
1-Ethyl-4-Methylbenzene	0.19		
2-Butanone	nd	4746.91 <sup>1</sup>	No
2-Hexanone	nd		
4-Methyl-2-Pentanone	nd	1190.78 <sup>1</sup>	No
Acetone	2.96		
Benzene	9.59	3.76 <sup>2</sup>	Yes
Benzyl Chloride	0.03		
Bromodichloromethane	nd		
Bromoform	nd		
Bromomethane	nd		
Carbon Disulfide	0.10	22.93 <sup>1</sup>	No
Carbon Tetrachloride	0.07	1.06 <sup>2</sup>	No
Chlorobenzene	0.01	238.94 <sup>1</sup>	No
Chloroethane	nd	2383.98 <sup>1</sup>	No
Chloroform	nd	0.88 <sup>2</sup>	No

Compound	ppbv	LAAS (ppbv)	Exceeds LAAS
Chloromethane	nd	26.91 <sup>2</sup>	No
cis-1,2-Dichloroethene	nd		
cis-1,3-Dichloropropene	nd	23.58 <sup>1</sup>	No
Cyclohexane	18.17		
Dibromochloromethane	nd		
Ethyl Acetate	nd		
Ethylbenzene	0.20	2372.00 <sup>1</sup>	No
Freon-11	nd		
Freon-113	0.06		
Freon-114	nd		
Freon-12	0.43		
m/p-Xylene	1.40	2372.00 <sup>1</sup>	No
m-Dichlorobenzene	0.03		
Methylene Chloride	nd	61.25 <sup>2</sup>	No
MTBE	nd		
n- Heptane	7.47		
Naphthalene	0.10	227.01 <sup>1</sup>	No
o-Dichlorobenzene	0.03		
o-Xylene	0.29	2372.00 <sup>1</sup>	No
p-Dichlorobenzene	0.03	237.85 <sup>1</sup>	No
Styrene	nd	1190.22 <sup>1</sup>	No
Tetrachloroethylene	nd	15.52 <sup>2</sup>	No
Tetrahydrofuran	nd		
Toluene	4.78	2361.68 <sup>1</sup>	No
trans-1,2-Dichloroethene	nd		
trans-1,3-Dichloropropene	nd	23.58 <sup>1</sup>	No
Trichloroethylene	nd	10.94 <sup>2</sup>	No
Vinyl Chloride	nd	0.47 <sup>2</sup>	No

Notes: Concentrations below 0.5 ppbv are estimated values below the Practical Quantitation Limit (PQL) and may include false positives.

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<sup>2</sup> Annual Louisiana Ambient Air Standard – **Provided for informational purposes only.** It is scientifically inappropriate to compare short-term monitored values with regulatory or health-based standards protective of long periods of exposure.

Tentatively Identified Compounds: Concentrations (in ppbv) are estimations only.

Propane = 248.00

Isobutane = 279.00

Butane = 112.00

Neopentane = 25.70

Butane, 2-Methyl- = 59.00

Pentane = 19.80

Butane, 2,2-Dimethyl- = 23.20

Pentane, 2-Methyl- = 22.40

Pentane, 3-Methyl- = 9.02

N-Hexane = 7.29