

AQRP Monthly Technical Report

PROJECT TITLE	Identifying and Apportioning Ozone Producing Volatile Organic Compounds in Central Texas	PROJECT #	17-053
PROJECT PARTICIPANTS	Aerodyne Research, Inc.	DATE SUBMITTED	3/8/2017
REPORTING PERIOD	From: February 1, 2017 To: February 28, 2017	REPORT #	2

A Financial Status Report (FSR) and Invoice will be submitted separately from each of the Project Participants reflecting charges for this Reporting Period. I understand that the FSR and Invoice are due to the AQRP by the 15th of the month following the reporting period shown above.

Detailed Accomplishments by Task

Fourth planning meeting March 7th

Calendar:

3/20-3/21 Scott Herndon and Tara Yacovitch will visit University of Texas, San Antonio campus to look at site and power. We are in discussion with Mark Estes to also look at Floresville on this scouting trip.

5/8 is the targeted beginning of data collection at UTSA and we will run to 5/31.

Instruments:

Berk Knighton, Ed Fortner and Scott Herndon travelled to Environment Canada to be trained on the PTR-TOF instrument.

The GC-EI-TOF has come online with a sample loop front end. The two stage sorbent front end is begin developed now. We are targeting the following compounds for in-field data reporting (next page).

Species	Format	Use	Species	Format	Use
i-Pentane	Mixing ratio	Air-mass source	Methylcyclopentane	Mixing ratio	O&NG wetness
n-Pentane	Mixing ratio	Air-mass source	Cyclohexane	Mixing ratio	O&NG wetness
n-Hexane	Mixing ratio	O&NG wetness	Methylcyclohexane	Mixing ratio	O&NG wetness
n-Octane	Mixing ratio	O&NG wetness			
n-Decane	Norm. area	O&NG wetness	Isoprene	Norm. area	Biogenic
			β -Pinene	Norm. area	Biogenic
Benzene	Mixing ratio	Air mass source			
Toluene	Mixing ratio	Air mass source	Ethyl nitrate	Norm. area	Photochem. age
o-Xylene	Mixing ratio	Photochem. age	i-Propyl nitrate	Norm. area	Photochem. age
1,3,5-Trimethylbenzene	Norm. area	Photochem. age	n-Propyl nitrate	Norm. area	Photochem. age
			2-Butyl nitrate	Norm. area	Photochem. age
CCl4	Raw area	Normalization			

We have secured a radiometric measurement that will produce calibrated $j(\text{NO}_2)$.

We will likely deploy with the following breakdown between mobile labs.

AML

iodide CIMS

QCL: C1-C3 alkane,

CO/N2O/H2O, HCHO

LTOF AMS w/CPC; SMPS; OPC?

ECHAMP & Alkyl-nitrates

Licor; FID; NO, CAPS NO2, O3; SO2

minAML

GC-EI-TOF

PTR-TOF

Preliminary Analysis

none

Data Collected

none

Identify Problems or Issues Encountered and Proposed Solutions or Adjustments

Project is underway, planning issues are not yet problems.

Goals and Anticipated Issues for the Succeeding Reporting Period

In the next report, we need to have sites selected and logistics worked out. Instrument integration schedules will be more fully developed as well.

Detailed Analysis of the Progress of the Task Order to Date

Do you have any publications related to this project currently under development? If so, please provide a working title, and the journals you plan to submit to.

Yes No

Do you have any publications related to this project currently under review by a journal? If so, what is the working title and the journal name? Have you sent a copy of the article to your AQR Project Manager and your TCEQ Liaison?

Yes No

Do you have any bibliographic publications related to this project that have been published? If so, please list the reference information. List all items for the lifetime of the project.

Yes No

Do you have any presentations related to this project currently under development? If so, please provide working title, and the conference you plan to present it (this does not include presentations for the AQRP Workshop).

Yes No, all presentations are internal or amongst performers

Do you have any presentations related to this project that have been published? If so, please list reference information. List all items for the lifetime of the project.

Yes No

Submitted to AQRP by Scott Herndon

Principal Investigator