

AQRP Monthly Technical Report

PROJECT TITLE	Dallas Field Study (DFS); Ozone Precursors, Local Sources and Remote Transport Including Biomass Burning	PROJECT #	22-010
PROJECT PARTICIPANTS	Dr. Ed Fortner PI	DATE SUBMITTED	11/10/2022
REPORTING PERIOD	From: 10/01/2022 To: 10/31/2022	REPORT #	3

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 for reporting period

Task 2: Base Site Selection:

The Fort Worth Northwest Site owned by TCEQ at the Meachum field airport remains the preferred staging site at this time although other sites including the TCEQ site at Arlington Municipal Airport are also being considered. Currently Vince Torres and RoseAnna Goewey (TX AQRP) are coordinating with the airport manager Dakota Shaw at Fort Worth Meachum Field to execute a site access agreement at the Fort Worth Northwest Site. Dr. Sascha Usenko at Baylor University has also contacted a local electrical company to conduct work at the Northwest Site which will benefit the related AQRP project 22-006 as well as AQRP project 22-010. This company will visit the site soon to give an estimate of the cost to improve the electrical capacity of the site to accommodate powering the Aerodyne Mobile Laboratory.

Task 3: Campaign Planning:

Concerns which are being focused on at this time are establishing a field staffing plan for the rotation of Aerodyne personnel during this campaign. Some personnel will be on-site for the entire campaign while others will be split into first and second half crews. The Aerodyne Mobile Laboratory itself and key instrument availability is also being scheduled for the time period of March-April with May considered to be an alternate measurement month if needed. A two-week integration plan at Aerodyne is scheduled to occur prior to the deployment of the Aerodyne Mobile Laboratory. The necessary ordering of calibration equipment is also occurring to ensure its availability for the measurement campaign.

Preliminary Analysis

N/A

Data Collected

N/A

Identify Any Problems or Issues Encountered and Proposed Solutions or Adjustments

No problems identified yet.

Goals and Anticipated Issues for the Succeeding Reporting Period

Progressing on the Northwest site electrical needs is a priority over the next few weeks. Issues which may arise here will be a point of focus for both the 22-006 and the 22-010 projects.

Detailed Analysis of the Progress of the Task Order to Date

Tasks 2 and 3 are proceeding on schedule at this point.

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 AQRP Project Manager and your TCEQ Liaison?

Yes No

Do you have any bibliographic publications (ie: publications that cite the project) 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

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

Have any personnel changes occurred that were not listed in the original proposal? If so, please include a detailed description of the personnel change(s) below.

Yes No

Regarding conducting GC-EI-ToF-MS measurements we have always planned to have a combination of Dr. Megan Claflin and Dr. Brian Lerner executing these measurements and that is still the staffing plan for this instrument. Dr. Lerner will now take the lead in these measurements however due to Dr. Claflin having commitments to other projects. Since Dr Lerner will be leading these measurements a bio for Dr. Lerner is now included below.

Dr. Brian Lerner

Dr. Brian Lerner is an analytical chemist with 19 years of postdoctoral experience. His research interests include advanced gas chromatographic and mass spectrometric techniques for the detection and quantification of gas phase species. Currently, he leads the GC development work at Aerodyne Research, Inc., including pre-concentration systems and the Aerodyne GC-EI-ToF. Dr. Lerner holds a Ph.D. in Chemistry and a master's degree in Environmental Science from University of Colorado. He has over 100 publications. He has participated in multiple field campaigns with ARI, including the 2019 FIREX-AQ campaign in the Western US, the 2020 NSF CLOROX field campaign at Oliktok Point, AK and the 2021 NASA Michigan-Ontario Ozone Source Experiment (MOOSE). For these campaigns the Aerodyne GC-EI-TOF-MS and GC-Vocus-TOFMS quantified hydrocarbon, halocarbon, and oxygenated volatile organic compounds (VOCs).

Are any delays expected in the progress of the research? If so, please include a detailed description of the potential delay below.

Yes No

Describe any possible concerns/issues (technical or non-technical) that AQRP should be made aware of.

No new concerns or issues.

Are you anticipating using all the available funds allocated to this project by the end date? If not, why and approximately what is the amount to be returned?

Yes No

Submitted to AQRP by

Dr. Ed Fortner, PI