

AQRP Monthly Technical Report

PROJECT TITLE	Quantification and Characterization of Ozone Formation in Central San Antonio	PROJECT #	20-028
PROJECT PARTICIPANTS	Ezra Wood, Alexa Rhoads, Andrew Lindsay, Kyle Banecker	DATE SUBMITTED	1/8/2021
REPORTING PERIOD	From: 12/1/2020 To: 12/31/2020	REPORT #	4

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

The goal of Task #1 is to prepare for the field deployment to San Antonio which is currently scheduled for the first two weeks of May 2021. The main activities conducted during the reporting period as part of this task were continued training of graduate student Alexa Rhoads to use the ECHAMP peroxy radical sensor and laboratory investigations to quantify the amount of nitrous acid (HONO) in the tubing used to deliver NO to the inlet as described in the prior report. Due to the academic schedule, winter holidays, and increase in COVID infection rates, little progress (or expenditures) were made this past month.

No work has been done on Task #2 (Field Deployment), Task #3 (Data Quality Assurance), or Task #4 (Data Analysis). Limited work has been done for Task #5 (Project Reporting and Presentation) including this report.

Preliminary Analysis

No preliminary analysis has been conducted.

Data Collected

No data have been collected.

Identify Problems or Issues Encountered and Proposed Solutions or Adjustments

No problems were encountered during the reporting period.

Goals and Anticipated Issues for the Succeeding Reporting Period

Alex Rhoads will continue her training to use the ECHAMP peroxy radical sensor and the required analytical software tools. Our plan is for her to conduct calibrations of the instrument using both of the two calibration methods we use (the water vapor photolysis method and the methyl iodide calibration method). This will be conducted with guidance from Andrew Lindsay (graduate student) and PI Ezra Wood. Additionally we will continue to assess the possible HONO interference in the sampling lines. We plan to test the current inlet design by illuminating the entire inlet with broadband light from a xenon arc lamp or similar.

Detailed Analysis of the Progress of the Task Order to Date

Tasks 1 and 5 are in progress. Tasks 2, 3, and 4 have not started.

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 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

Submitted to AQRP by

Ezra Wood,
Principal Investigator