

# AQRP Monthly Technical Report

<b>PROJECT TITLE</b>	Characterization of Corpus Christi and San Antonio Air Quality During the 2020 Ozone Season	<b>PROJECT #</b>	20-003
<b>PROJECT PARTICIPANTS</b>	Robert Griffin, Rice James Flynn and Yuxuan Wang, UH Rebecca Sheesley and Sascha Usenko, Baylor	<b>DATE SUBMITTED</b>	8 January 2021
<b>REPORTING PERIOD</b>	<b>From:</b> 1 December 2020 <b>To:</b> 31 December 2020	<b>REPORT #</b>	5

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 15<sup>th</sup> of the month following the reporting period shown above.

---

## Detailed Accomplishments by Task for reporting period

Work performed in this month was related to Task #1, campaign preparation. This includes having conversations with AQRP personnel regarding housing arrangements and pre-approval. This also includes beginning the modifications and upgrades to the “MAQL2” after conversations amongst all field measurement PIs. These efforts include purchasing supplies (as well as those for expendables for instrumentation), requesting quotes, and scheduling installation of an improved air ride system. With regard to specific instrumentation, the gas-phase suite (excluding the proton-transfer reaction mass spectrometer) was installed into racks, and all associated electrical and data acquisition wiring was connected, labeled, and secured. For the aerosol mass spectrometer, the newly purchased computer arrived and installation began; subsequent maintenance was planned. Training of staff and graduate students on all of these instruments continues.

Additional work was performed for Task #3, data analysis, which includes three-dimensional modeling. This includes continued implementation of larger-scale GEOS-Chem outputs as boundary conditions to drive the WRF-GC model and preparing emission files for the fine-resolution WRF-GC runs to be performed as part of this project.

## Preliminary Analysis

None yet

## Data Collected

None yet

## Identify Any Problems or Issues Encountered and Proposed Solutions or Adjustments

As referenced in the first four monthly reports, delays in finalizing task orders and issues associated with the COVID pandemic have necessitated shifting the field work from fall 2020 to spring 2021. With approval from the AQRP, we have adjusted and added to the scientific questions to be addressed using our field data analysis and modeling.

### **Goals and Anticipated Issues for the Succeeding Reporting Period**

Model: Continue generation of appropriate input files for three-dimensional modeling efforts, continued training of researchers on use of the three-dimensional model

Field: Continue preparation of mobile air quality laboratory, continue assessment of equipment maintenance needs, and continue training of researchers on equipment usage.

### **Detailed Analysis of the Progress of the Task Order to Date**

Given the late start and the approved change in project field work, we believe that our progress on the project has been appropriate.

**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

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

**Yes**       **No**

See response above regarding problems encountered. This is more a shift in timing as it will not impact our ability to complete the project by the scheduled end date, assuming no further delays associated with COVID-19.

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

None not addressed previously.

**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      Robert J. Griffin