AQRP Monthly Technical Report

PROJECT TITLE	Analysis of Airborne Formaldehyde Data Over Houston Texas Acquired During the 2013 DISCOVER-AQ and SEAC^{4}RS Campaigns	**PROJECT #**	14-002
PROJECT PARTICIPANTS	Alan Fried, Christopher P. Loughner, and Ken Pickering	**DATE SUBMITTED**	11/7/2014
REPORTING PERIOD	**From:** June 26, 2014 **To:** October 31, 2014	**REPORT #**	1

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
With input from AQRP and TCEQ, the proposing team prepared and submitted a final project Work Plan and Quality Assurance Project Plan.

Team members coordinated and reviewed by telecom the specific tasks assigned to each group. The UMD/NASA Goddard Group started their efforts in preparing WRF and CMAQ simulations down to 1 km resolution. The CU team initiated their efforts to identify P3 and DC8 aircraft sampling periods arising from clearly identifiable sources. These periods will then be used for further study by WRF and CMAQ.

Preliminary Analysis
Preliminary analyses are not available for this reporting period since the Master Agreement was not signed until October.

Data Collected
Final data from the DISCOVER-AQ and NASA SEAC^{4}RS Houston field deployments are in the NASA data archive. Data from the former is publicly available online.

Identify Problems or Issues Encountered and Proposed Solutions or Adjustments
No problems or issues.

Goals and Anticipated Issues for the Succeeding Reporting Period
The WRF model will be run for a 1 km horizontal resolution modeling domain, and CMAQ input files will be created for the 1 km domain. WRF and CMAQ have already been run for the 36, 12, and 4 km domains. However, additional WRF sensitivity simulations for all four domains (36, 12, 4, and 1 km horizontal resolution domains) are being performed to improve the model

representation of the bay breeze on September 25. The completed 4 km WRF run simulated a weaker bay breeze than observed. WRF model output will begin to be processed to prepare input files for the RIP (Read/Interpolate/Plot) program, which will be used to calculate back trajectories. The CU team will provide to the UMD/Goddard team interesting time periods for further analysis. Initial efforts will focus on P3 sampling on September 25, 2013.

Detailed Analysis of the Progress of the Task Order to Date

The AQRP task order was executed over 4 months after the anticipated start date established in the Work Plan. Although we don't anticipate issues that will retard progress, the late start will necessitate pushing back the accomplishments of each Milestone.

Submitted to AQRP by: Alan Fried

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