

## AQRP Monthly Technical Report

<b>PROJECT TITLE</b>	Characterization of Boundary-Layer Meteorology During DISCOVER-AQ Using Radar Wind Profiler and Balloon Sounding Measurements	<b>PROJECT #</b>	14-006
<b>PROJECT PARTICIPANTS</b>	Sonoma Technology, Inc., and Gary Morris (St. Edwards University)	<b>DATE SUBMITTED</b>	11/6/2014
<b>REPORTING PERIOD</b>	<b>From:</b> October 1, 2014 <b>To:</b> October 31, 2014	<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.

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### Detailed Accomplishments by Task

Task 1: Characterize the Atmospheric Boundary Layer

- Continued to review upper-air and surface meteorological data, surface ozone data, and satellite and radar imagery from flight days and days with high ozone levels during the DISCOVER-AQ program.
- Continued to review radar wind profiler (RWP) data from flight days and days with high ozone levels during the DISCOVER-AQ program to aid in characterization of boundary layer meteorological conditions.
- Began documenting findings for draft report.

Task 2: Determine Representativeness of Meteorological Conditions

- No activities performed on this task.

Task 3: Derive and Deliver Continuous Mixing Heights

- Continued processing of upper-air data from the seven radar wind profilers (RWP) operated in the Houston area as part of the DISCOVER-AQ program.

### Preliminary Analysis

Not applicable.

### Data Collected this Period

Not applicable.

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

We are still awaiting the raw data from the RWP operated at the University of Houston Coastal Center. Data from the other six RWP sites have been processed and analyzed. We will be able to complete Task 3 of this project upon receiving and processing the final RWP data set.

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

During the month of November 2014, we plan to complete deriving continuous mixing heights from the RWPs and the ozonesonde for Task 3. We had hoped to complete this task during the previous month but are still awaiting final data from the University of Houston Coastal Center site. We will use this data to help complete analysis for Tasks 1 and 2. We will also continue to document our findings as part of the draft final report.

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

We have continued to focus on Task 3 of this project as the data required to complete this task are readily available and the derived mixing heights will be necessary in completing Tasks 1 and 2. We are still awaiting the raw data from the RWP operated at the University of Houston Coastal Center and will be able to quickly complete Task 3 of this project upon receiving and processing this data set. We completed much of the data analysis required for Task 1 and have begun documenting results in the final draft report. No major technical or data quality issues have arisen regarding the air quality and meteorological data that have been collected thus far, aside from five ozonesonde launches that experienced data loss. The budget for this Task Order remains on track.

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Submitted to AQRP by: Daniel M. Alrick

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