# AQRP Monthly Technical Report

| | | | |
|---|---|---|---|
| **PROJECT TITLE** | Characterization of Boundary-Layer Meteorology During DISCOVER-AQ Using Radar Wind Profiler and Balloon Sounding Measurements | **PROJECT #** | 14-006 |
| **PROJECT PARTICIPANTS** | Sonoma Technology, Inc., and Gary Morris (St. Edwards University) | **DATE SUBMITTED** | 12/3/2014 |
| **REPORTING PERIOD** | **From:** November 1, 2014<br>**To:** November 30, 2014 | **REPORT #** | 6 |

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**

Task 1: Characterize the Atmospheric Boundary Layer

- Reviewed 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.
- Reviewed 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.
- Documented 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

- Processed upper-air data from six of the seven radar wind profilers (RWP) operated in the Houston area as part of the DISCOVER-AQ program.
- Derived and delivered estimated continuous mixing heights from six of the RWPs.

**Preliminary Analysis**

Not applicable.

**Data Collected this Period**

Not applicable.

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

Not applicable.

**Goals and Anticipated Issues for the Succeeding Reporting Period**
During the month of December 2014, we plan to complete deriving continuous mixing heights from the final RWP. We will continue to use this data to help complete analysis for Task 1 and begin analysis for Task 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 nearly completed Task 3 of this project and are progressing on Task 1. We completed much of the data analysis required for Task 1 and have begun documenting results in the final draft report. Work on Task 2 will commence in December. 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.

---

Submitted to AQRP by: Daniel M. Alrick

Principal Investigator: Clinton P. MacDonald