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**

There are eleven tasks associated with this project, to be completed collaboratively by researchers from Rice University and the University of Houston (UH). Tasks 4 through 7 and 9 through 11 focus on deployment, route planning during the DISCOVER-AQ campaign, data collection and provision, performance of QA/QC on that data, and preparation and provision of final reports. These tasks will not be addressed fully until the month prior to the campaign, the month of the campaign, and the two months after the campaign, though a conference call among various mobile laboratory participants was held Friday, July 12, 2013 to continue preliminary discussions on route planning (primarily to avoid overlap). Another conference call is scheduled for August 9, 2013. Task 8 is the provision of this monthly report (to be repeated monthly). Therefore, as was the case with previous monthly reports (hence the similarity), this report will focus on the first three tasks. However, it should be noted that plans for co-located/individual stationary operations have been organized with representatives from TCEQ. As a result, the PILS of the Griffin group will be deployed to Manvel Croix on Monday, August 26, 2013.

Task 1 synopsis: Upgrade the mobile laboratory, identify and develop ground sites

Based on expected load, the power system, air conditioning, shocks, and tires for the mobile laboratory have been upgraded to accommodate all of the planned instrumentation. This will ensure smooth operation during the upcoming campaign. In addition, the instrument configuration plan within the bed has been finalized, as has the layout and design for the inlets. Mock frames of all instruments have been constructed and placed into the mobile laboratory to ensure that the layout will work geometrically. This caused a slight change in the instrument layout, with the HR-ToF-AMS and the PTRMS being switched (PTRMS moved toward the front
and HR-ToF-AMS moved toward the back on the driver’s side). Mobile laboratory preparations are nearly complete, and upload should start the week of August 5, 2013.

Team member Dr. Barry Lefer is a member of the NASA team that has discussed flight plans, and he and team members Drs. Lefer, Robert Griffin, and James Flynn participated in the last sets of DISCOVER-AQ conference calls (led by both TCEQ and NASA). These calls occur generally on a bi-weekly basis though are scheduled to switch to weekly as of August 2013. Locations beneath spirals that will occur during flights (Manvel-Croix, Jones Forest or Conroe, etc.) were selected as locations for additional surface deployments, including with the mobile laboratory. We have requested logistical assistance (power, security, access to facilities, etc.) to enable placing the mobile laboratory in some of these locations to allow for overnight sampling. These tasks are complete. Staff members to participate in overnight operations currently are being identified, with a team meeting scheduled for August 8, 2013 to finalize such assignments. In addition, the facility at the UH Energy Research Park is being developed as an overnight site for one or multiple mobile laboratories to allow for intercomparison (with NASA and Aerodyne mobile facilities) as well as for calibration/maintenance during the campaign (i.e., not for data collection).

Task 2 synopsis: Purchase necessary equipment and supplies

Students and staff from both universities continue to assemble lists of supplies necessary to perform the campaign. Some (those that do not have any expiration date, for example) have been and will continue to be purchased in the short term, while others will be purchased closer to the deployment (August).

Task 3 synopsis: Train staff who will participate in field program on instruments that will be deployed

Students and staff continue to be trained on instrumentation with which they are unfamiliar. This is particularly true for members of the Griffin group who need to be trained on the HR-ToF-AMS and PILS. A graduate student who participated in the group’s deployment to the Eagle Mountain Lake site in 2011 has trained an undergraduate on the PILS. This undergraduate will participate in the field campaign in September and used the PILS in the field during the early part of the summer of 2013 to ensure that he understands in-field issues associated with the instrument. The first field deployment of the PILS was complete in mid-July. That graduate student and a second graduate student are being trained on the HR-ToF-AMS. They likewise deployed the HR-ToF-AMS in the early part of the summer as part of their training for this mission; as with the PILS, the first field deployment was complete in mid-July.

Preliminary Analysis
No data have been generated yet so no analysis is possible; see below.

Data Collected
No data have been generated yet.
Identify Problems or Issues Encountered and Proposed Solutions or Adjustments
No problems identified to date, though in an attempt to alleviate the demands on the mobile laboratory and allow more flexibility, the UH team is attempting to rent a second, separate vehicle to operate the SOF (separate AQRP project).

Goals and Anticipated Issues for the Succeeding Reporting Period
No anticipated issues. Goals are to continue preparation of the mobile laboratory, discussions of airplane flight patterns and ground-site development with NASA and TCEQ/AQRP, purchase of requisite supplies, and training of students on instrumentation to be deployed. Instruments will be uploaded during the next reporting period.

Detailed Analysis of the Progress of the Task Order to Date
Progress to date has been appropriate. Efforts on the first three tasks will continue through early-to-mid August. Uploading (Task 4) and initial start-up will occur in early-to-mid August as well. Participation in the campaign (Tasks 5 and 6) will occur in September. Data QA/QC (Task 7) will occur throughout the campaign in September and through the provision of the data at the end of the project. Reporting (Task 8) will occur each month and at the end of the project (Tasks 9 and 10). Data also will be provided at the end of the project (Task 11).

Submitted to AQRP by: Robert Griffin
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