

# AQRP Monthly Technical Report

<b>PROJECT TITLE</b>	A Next Generation Modelling System for Estimating Texas Biogenic VOC Emissions	<b>PROJECT #</b>	16-011
<b>PROJECT PARTICIPANTS</b>	Ramboll Environ Alex Guenther	<b>DATE SUBMITTED</b>	01/09/2017
<b>REPORTING PERIOD</b>	<b>From:</b> December 1, 2016 <b>To:</b> December 31, 2016	<b>REPORT #</b>	3

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: Development and Application of a Transparent Approach for Estimating BVOC Emission Factor Distributions*

During December, Alex Guenther revised the model framework for calculating BVOC emission factors based on discussions with Ramboll Environ and TCEQ staff. Ramboll Environ explored various database options for system development and arrived at a Python/SQLite database platform in consultation with TCEQ and Alex Guenther. Ramboll Environ developed a draft schema of database tables and their relationships.

### *Task 2: Emission Factor Development*

Task 2 was initiated in December. Alex Guenther populated the emission measurement and specific leaf mass database with results summarizing more than 400 published studies.

### *Task 3: Development of MEGAN3*

Approaches for clarifying/improving the MEGAN code were developed and documented by Alex Guenther and provided to Ramboll Environ to be implemented in the MEGAN code.

### *Task 4: MEGAN Evaluation and Sensitivity Study*

Task 4 has not yet been initiated.

### *Task 5: Project Management and Reporting*

This task is ongoing.

## **Preliminary Analysis**

None.

## **Data Collected**

None.

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

None.

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

Improvements and clarifications to the MEGAN code will be made during January. The conversion of the prototype database to an open source code will continue during January.

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

None.

**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 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

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Submitted to AQRP by      Sue Kemball-Cook

Principal Investigator      Sue Kemball-Cook