AQRP Monthly Technical Report

PROJECT TITLE	Development and Evaluation of the FINNv.2 Global Model Application and Fire Emissions Estimates for the Expanded Texas Air Quality Modeling Domain	PROJECT #	18-022
PROJECT PARTICIPANTS	University of Texas at Austin Sonoma Technology, Inc. Dr. Christine Wiedinmyer	DATE SUBMITTED	2/7/2019
REPORTING PERIOD	From: 1/1/2019 To: 1/31/2019	REPORT #	4

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. Development and Release of the FINN v.2 Global Application
The overall objective of this task is to produce a fully operational, documented global FINN application that is reflective of the state of the science.

1.1 Preprocessor and Model Development
The emphasis during this past month has been completing the implementation of the FINN preprocessor within the Docker environment.

The Texas Forest Service provided a dataset of fire detections and burn perimeters; it is a relatively new dataset and lacks complete documentation. However, the team has been making preliminary comparisons with the FINN burned area algorithm as well as the MODIS burned area product.

1.2 Accessibility for Global Scale Application
Test cases are being run to guide refinements to improve ease of use and to develop a user tutorial for the preprocessor. Dr. Kimura has a planned trip to UC Boulder to work with Dr. Wiedinmyer and Mr. Joseph the week of February 4th. The primary objectives will be to make selected updates to emission factors, fuel loadings and other data as deemed appropriate in the main FINN code, to complete the development of the preprocessor and quality assure the FINN modeling system, and to complete a global simulation for 2012 with the new version of the model.

1.3. Porting and Testing
Not yet initiated.

Task 2. FINN v.2 Global Emissions Estimates

Not yet initiated.

Task 3. Assessment of FINN Performance Using Satellite Observations
No new activities this reporting period.

Preliminary Analysis
As above.

Data Collected
None.

Identify Problems or Issues Encountered and Proposed Solutions or Adjustments
None.

Goals and Anticipated Issues for the Succeeding Reporting Period
Major goals for the next reporting period include completion of the FINN model development, global simulations, and initiate writing of the model documentation.

Detailed Analysis of the Progress of the Task Order to Date
The project is proceeding as planned.

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   __X_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   _X__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   __X_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   _X_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   _X__No

Submitted to AQRP by

Elena McDonald-Buller