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**	12/2/2018
REPORTING PERIOD	**From:** 11/1/2018 **To:** 11/30/2018	**REPORT #**	2

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 team has requested but not yet received ground-based fire information for Texas offered by the Texas A&M University Forest Service. It is anticipated to include identification, date/time, location, and burn perimeter or area. This type of data could support evaluation of the burned area estimation approach used in FINN for Texas.

1.2 Accessibility for Global Scale Application
To facilitate portability, the Docker (https://www.docker.com/) environment has been selected to house the FINN tools; much of this month's effort has focused on that development. Mr. Max Joseph, an Analytics Hub Data Scientist at the University of Colorado, Boulder, who is being funded externally to this project, has been working with Dr. Kimura and Dr. Wiedinmyer on the preparation of the Dockerfile and testing of the global simulation.

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
Not yet initiated.

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
Goals for the next reporting period include review of new literature regarding fire emissions estimates, continued progress on the development of the Docker environment, and testing of the global simulation.

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