

AQRP Monthly Technical Report

PROJECT TITLE	Improved Land Cover and Emission Factor Inputs for Estimating Biogenic Isoprene and Monoterpene Emissions for Texas Air Quality Simulations	PROJECT #	14-016
PROJECT PARTICIPANTS	Alex Guenther (Battelle/PNNL) Joost de Gouw (NOAA) Greg Yarwood, Sue Kemball-Cook (ENVIRON)	DATE SUBMITTED	9/8/2014
REPORTING PERIOD	From: August 1, 2014 To: August 31, 2014	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 4: Development of MEGAN Biogenic Emission Inventories and Inventory Evaluation using Regional Photochemical Modeling

ENVIRON continued evaluation of Weather Research and Forecast (WRF) Model (Skamarock et al. 2008) 12 km grid output fields for the period June 1-July 15, 2013 against CAMS station solar radiation data within Texas and ds472 wind, temperature and humidity data within and outside of Texas.

ENVIRON evaluated methods and datasets for comparing WRF modeled precipitation and clouds with observed precipitation and cloud data.

ENVIRON began development of software to perform CAMx model performance evaluation along aircraft flight tracks.

Task 5: Project Management

ENVIRON completed subcontracts with NOAA and PNNL/Battelle for work to be done under Tasks 1-3.

Preliminary Analysis

Data Collected

Archived satellite images were identified for the WRF model cloud evaluation.

Identify Problems or Issues Encountered and Proposed Solutions or Adjustments

None to date

Goals and Anticipated Issues for the Succeeding Reporting Period

Tasks 1-3: Begin work on Tasks 1-3.

Task 4: Complete WRF model performance evaluation for initial run against ds472 surface observations within the 12 km grid, observed precipitation, and satellite cloud observations and CAMS solar radiation observations. Evaluate whether rerun of WRF in different configuration is needed based on results of performance evaluation of initial run. Complete development of software to perform CAMx model performance evaluation along aircraft flight tracks.

Detailed Analysis of the Progress of the Task Order to Date

The project remains on schedule and budget for completion and delivery of the final AQRP-reviewed report by the AQRP contract end date of June 30, 2015.

References

Skamarock, W. C., J. B. Klemp, J. Dudhia, D. O. Gill, D. M. Barker, W. Wang, and J. G. Powers, 2008. A description of the Advanced Research WRF Version 3. NCAR Tech Notes-475+STR. http://www.mmm.ucar.edu/wrf/users/docs/arw_v3.pdf.

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