

AQRP Monthly Technical Report

PROJECT TITLE	Condensed Chemical Mechanisms for Ozone and Particulate Matter Incorporating the Latest in Isoprene Chemistry	PROJECT #	16-031
PROJECT PARTICIPANTS	William Vizquete Jason Surratt	DATE SUBMITTED	8/5/17
REPORTING PERIOD	From: 7/1/17 To: 7/30/17	REPORT #	7

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 Updated SAPRC-07 and Aerosol Module for Isoprene Oxidation

Preliminary Analysis

Begun our analysis of the output files from our box modeling system of the SAPRC16 chemical mechanism.

Data Collected

Processed files from our box modeling system of the SAPRC16 chemical mechanism.

Identify Problems or Issues Encountered and Proposed Solutions or Adjustments

N/A

Goals and Anticipated Issues for the Succeeding Reporting Period

We will investigate the SAPRC16 mechanism model performance in simulations of UNC chamber data.

Detailed Analysis of the Progress of the Task Order to Date

The progress on the task is on schedule.

Task 2 Chamber Experiments: Interplay of Particle-Phase Composition, Phase, and Viscosity on IEPOX Multiphase Chemistry

Preliminary Analysis

We have completed processing and quality assuring data from online measurements and obtaining γ_{IEPOX} for toluene and naphthalene coating experiments. We have also completed the quality assurance of the nucleation experiments. We prepared this analysis for the final report.

Data Collected

We have collected the data from our coatings and nucleation experiments.

Identify Problems or Issues Encountered and Proposed Solutions or Adjustments

N/A

Goals and Anticipated Issues for the Succeeding Reporting Period

Continue analysis and prepare for the draft final report.

Detailed Analysis of the Progress of the Task Order to Date

We are nearly complete in our proposed experimental schedule.

Task 3 Implementation in a regulatory air quality model

Preliminary Analysis

Began quality assuring modeling runs including sensitivities of key parameters that could affect IEPOX-SOA yield calculations based on experimental data generated by this project.

Data Collected

Quality assured modeling output as a sensitivity analysis on IEPOX-SOA yield and aerosol phase diffusivity.

Identify Problems or Issues Encountered and Proposed Solutions or Adjustments

N/A

Goals and Anticipated Issues for the Succeeding Reporting Period

We will visualize and analyze the results of our sensitivity runs ensuring our ability to compare with previous simulations and observational data.

Detailed Analysis of the Progress of the Task Order to Date

We are on schedule.

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

Submitted to AQRP by

Principal Investigator

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