

AQRP Monthly Technical Report

PROJECT TITLE	Evaluating Methods for Determining the Vapor Pressure of Heavy Refinery Liquids	PROJECT #	16-007
PROJECT PARTICIPANTS	UT Austin	DATE SUBMITTED	June 5, 2017
REPORTING PERIOD	From: May 1, 2017 To: May 31, 2017	REPORT #	07

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

During the month of May, the project team (PT) made progress on the following activities:

Task 4.2 Project reports and presentation

The April Monthly Technical Report was prepared and submitted.

Task 4.3 Purchase and receipt of Automated Mini-method Instrument

The Grabner instrument was returned from repairs and team members worked to familiarize themselves with its operation. Unfortunately the unit failed a second time and had to be returned again for repair. Discussions with Eralytics resulted in this unit also being made available for the study within the project budget. A purchase order for rental of the Eralytics unit was issued and the unit is expected to arrive June 1.

Task 4.4 Identify labs to conduct the ASTM D2879, E1719, and D323 testing

All labs to be used by the project have been identified.

Task 4.5 Obtain Materials for testing and Material Safety Data Sheets

All sample materials to be used have arrived.

4.6 Remove Identifying and VP Information from MSDSs, Prepare Samples, and Send First Stage Samples with "Sanitized" MSDSs to Labs for Testing

The assembly of the sample-dispensing system was completed and dispensing of samples began after a standard operating procedure was written and a labeling system to blind the samples was established.

Task 4.7 For first stage of samples, UT Austin measures VP of materials using Automated Mini-method and reports results; Commercial labs conduct their sample measurements of first stage samples and report results

No work performed on this task during the reporting period.

Task 4.8 Conduct study of activity model binary interaction parameters to gain insight into the applicability of using light end composition and Raoult's Law to estimate the vapor pressure of heavy refinery liquids

No additional work was performed on this task during the reporting period.

Task 4.9 Analyze and Assess the VP Measurements for First Stage Samples

No additional work was performed on this task during the reporting period.

Task 4.10 Remove Identifying and VP Information from MSDSs, Prepare Samples, and Send Second Stage Samples with "Sanitized" MSDSs to Labs for Testing

No work was performed on this task during the reporting period.

Task 4.11 For the Second Stage of Samples, Test Samples Using an Automated Mini-method Designed to Measure the VP of Low Volatility Materials (e.g., the Grabner MINIVAP VPXpert-L); Commercial Labs Conduct their Sample Measurements of First Stage Samples and Report Results

No work was performed on this task during the reporting period.

Preliminary Analysis

None performed during the report period.

Data Collected

None collected during the report period.

Identify Problems or Issues Encountered and Proposed Solutions or Adjustments

None.

Goals and Anticipated Issues for the Succeeding Reporting Period

Complete dispensing of all sample materials and sent to the commercial labs for vapor pressure measurements.

Detailed Analysis of the Progress of the Task Order to Date

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 AQR 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 Vincent M. Torres