

## AQRP Monthly Technical Report

<b>PROJECT TITLE</b>	Emission Inventory Development and Projections for the Transforming Mexican Energy Sector	<b>PROJECT #</b>	19-023
<b>PROJECT PARTICIPANTS</b>	The University of Texas at Austin (UT Austin) Ramboll	<b>DATE SUBMITTED</b>	11/5//2018
<b>REPORTING PERIOD</b>	<b>From:</b> 9/5/2018 <b>To:</b> 10/31/2018	<b>REPORT #</b>	1

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 15<sup>th</sup> of the month following the reporting period shown above.

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### Detailed Accomplishments by Task

#### *Task 1. Base Year Emission Inventory Estimates*

UT Austin began extraction, summary, and visualization of available data from the Exploration and Production (E&P) and Midstream Essentials data domains for Mexico from IHS Markit's EDIN database. Ramboll developed an initial outline of the emission inventory scope and development methods to be applied in the project. The teams are working to identify data parameters and records that could be important for the base year emission source category development and to characterize their availability and completeness in the EDIN database.

As a basis for comparison, UT Austin examined data for Mexico reported in the U.S. Environmental Protection Agency's (EPA's) National Emission Inventory (NEI). In December 2014, Eastern Research Group (ERG) updated the existing 2008 Mexico National Emissions Inventory (INEM) and developed 2018, 2025, and 2030 emission projections based on the 2008 INEM. UT Austin summarized the Mexican inventory developed for year 2018 with an emphasis on oil and gas sources (refer to NEI data file entitled "2017ek\_cb6v2\_v6\_11g\_inputs\_oth.zip" obtained from <ftp://newftp.epa.gov/air/emismod/2011/v3platform/2017emissions/>). These summaries are providing an understanding of the types of sources reported by ERG for each of the oil and gas categories and included in the NEI platform.

UT Austin also obtained monthly oil and gas (associated and non-associated) production data at the well level from Mexico's National Hydrocarbons Information Center (CNIH; [https://portal.cnih.cnh.gob.mx/dashboard-sih.php?lng=en\\_US](https://portal.cnih.cnh.gob.mx/dashboard-sih.php?lng=en_US)). Spatial mappings of active oil and gas well locations sized by CNIH 2016 annual production were created. Preliminary comparison of well locations in the IHS EDIN database indicated reasonable overall agreement with the CNIH well locations. It should be noted that the EDIN database provides monthly oil and gas production at the field not well level. Monthly oil and gas production totals for Mexico between the two datasets for 2016 were in strong agreement.

*Task 2. Mexico Bid Rounds and Future Projection Scenarios*

Not yet initiated.

**Preliminary Analysis**

As above.

**Data Collected**

As above.

**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

**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       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

Dr. McDonald-Buller is planning to give an invited talk (*Emission Inventory Development and Projections for the Transforming Mexican Energy Sector*) at the American Geophysical Union (AGU) fall meeting, session A045: Emissions of atmospheric pollutants from oil, gas, and coal operations, on December 12, 2018.

**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**

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Submitted to AQRP by

Elena McDonald-Buller