

## 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>	3/8/2019
<b>REPORTING PERIOD</b>	<b>From:</b> 2/1/2019 <b>To:</b> 2/28/2019	<b>REPORT #</b>	5

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*

##### **On-Shore Well Sites (Upstream Sector)**

Development of emissions factors for on-shore oil and gas drilling and producing well sites is on-going. Mexico basins are broadly being divided into northern (primarily natural gas production) and southern (oil/gas production) regions for the purposes of the emissions factor development. The team received information from the TCEQ that is helping to account for differences between U.S. and Mexican control factors such that U.S. based emissions factors used in the development of the on-shore and off-shore upstream sector inventories can be modified accordingly.

##### **Off-Shore Platforms (Upstream Sector)**

Off-shore production in Mexico has been occurring in shallow waters (<200ft). Development of production-based emissions factors for off-shore oil and gas well sites is on-going. U.S data from sources such as the Bureau of Ocean Energy Management (BOEM) are being leveraged to define emission factors by area and source classification codes (SCC) that will be applied at off-shore well locations.

##### **Natural Gas Compressor Stations (Midstream Sector)**

Emission factors for natural gas compressor stations are under development. The IHS data capture large compressor stations along major trunk lines as well as smaller compressor stations both in-field and along pipelines. The level of information available varies for different compressor stations. For compressor stations for which horsepower information is available, per horsepower emission factors are being developed. Emission factors for the remaining compressors, which are broadly characterized as “gathering”, “distribution”, or “main trunkline” for the purposes of this project, will be assumed for each of these three categories based on the ~20 known compressors with per horsepower-based emissions factors. We note that overall there

appears to be a lack of public data available on U.S. compressors that could assist with the development of the Mexican inventory.

**Natural Gas Processing Plants (Midstream Sector)**

Initial facility-wide annual emissions estimates of NO<sub>x</sub>, CO, SO<sub>2</sub>, VOC, PM<sub>2.5</sub>, PM<sub>10</sub>, and NH<sub>3</sub> have been developed for natural gas processing gas processing plants that were active during 2016. A draft of a report section describing the methodology and results has been developed.

**Electric Generating Units**

Major efforts this month have included the development of emissions factors for Mexico's power plants; mapping of individual power plants is still on-going. Summaries of grid-wide capacity and generation by technology and fuel types are providing perspectives on Mexico's electricity sector.

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

No new activities to report.

**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**

The team will continue the development of emissions estimates.

**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 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**

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Submitted to AQRP by

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