BOEM ENVIRONMENTAL STUDIES PROGRAM: ONGOING STUDIES

BOEM OCS Region: Gulf of Mexico

Planning Area: Western and Central

Title: Year 2011 Gulfwide Emissions Inventory Study (GM-10-02)

Total Cost: $325,000 **Period of Performance:** FY 2009-2013

Conducting Organization: Eastern Research Group, Inc.

BOEM Contact: Holli Ensz

Description:

Background: On March 12, 2008, the Environmental Protection Agency (EPA) significantly strengthened its National Ambient Air Quality Standards (NAAQS) for ground-level ozone. EPA revised the 8-hour "primary" ozone standard to a level of 75 parts per billion (ppb) and strengthened the "secondary" standard to the same level of 75 ppb, making it identical to the revised primary standard. States must make recommendations to EPA no later than March 2009 for areas to be designated attainment, nonattainment, and unclassifiable. EPA will then issue final designations no later than March 2010, unless there is insufficient information to make these designation decisions. In that case, EPA will issue designations no later than March 2011. States must submit State Implementation Plans (SIPs) detailing how they will reduce pollution to meet the standards by a date that EPA will establish in a separate rule. That date will be no later than three years after EPA's final designations. If EPA issues designations in 2010, then these plans would be due no later than 2013.

Previously, EPA also enacted stronger particulate matter ($PM_{2.5}$) standards and regional haze regulations to improve visibility. Due to the more stringent NAAQS, it is likely that many of the regions adjacent to the Gulf of Mexico will face even greater challenges in attaining air quality standards in their respective states in 2011. The changes to all these standards/regulations may require state agencies to perform air quality photochemical modeling for ozone and regional haze for use in their SIPs. In order to conduct this modeling, emission inventories must be generated as inputs to the models. The 2011 gulfwide emissions inventory will be available to assist states in conducting modeling for additional SIP demonstrations to meet the new requirements. The collection and compilation of an air emissions inventory is one of the tasks that BOEM conducts to assure coordination of air pollution control regulations between Outer Continental Shelf (OCS) offshore sources and state's sources onshore (as per Section 328(b) of the 1990 CAAA).

The 1990 Clean Air Act Amendments (CAAA) specifies that states are to prepare emission inventories every three years, starting in 1996. The proposed 2011 gulfwide

emissions inventory will correspond with the next EPA onshore periodic emissions inventory. BOEM has completed a 2000 and 2005 gulf-wide emissions inventories, and is currently developing a 2008 gulf-wide emissions inventory. By conducting a 2011 gulfwide emissions inventory, BOEM is working concurrently with EPA's routine, 3 year reporting cycle.

Recently, Congress directed EPA to publish a mandatory greenhouse gas reporting rule, using the Agency's existing authority under the CAA. The rule, if adopted, will require mandatory reporting of greenhouse gases "above appropriate thresholds in all sectors of the economy." EPA is responsible for determining those thresholds, as well as the frequency of reporting. A final rule is due by June 2009. The proposed 2011 gulfwide emissions inventory includes greenhouse gases.

Lastly, the inventory will be used to enhance the BOEM NEPA process by providing an accurate inventory to compute emission trends and to perform necessary air quality impact assessments.

Objectives: The purpose of this study is to develop a year 2011 air emissions inventory of OCS sources (platform and non-platform), including estimates of carbon monoxide (CO), sulfur dioxide (SO_2), nitrogen oxides (NO_x), particulate matter (PM_{10} and $PM_{2.5}$), hydrocarbons (VOC), carbon dioxide (CO_2), methane (CH_4), and nitrous oxides (N_20) to support SIPs and to enhance the BOEM NEPA process.

Methods: A contractor will collect and compile emissions activity data from BOEM regulated OCS facilities and vessels. Facilities include all installations (e.g., production platforms) or devices having the potential to emit any air pollutant, as above. The platform activity data will be collected using the BOEM emissions activity software, Gulfwide Offshore Activity Data System (GOADS). In addition, emissions from vessels used to support facilities (non-platform sources) will be collected using surveys. The contractor will quality control and assure all data collected, including making sure the vessels data collected in BOEM federal waters is consistent with the vessels data in states waters. The Contractor will calculate a total emissions inventory, by pollutant, using the existing Database Management System, which multiplies the activity data contained in GOADS times the appropriate emissions factors.

Products: The contractor shall provide the BOEM with electronic files of the quality assured survey and activity data collected from OCS facilities in the GOADS software. In addition, the contractor shall provide the BOEM with a quality assured emissions inventory of platform and non-platform sources in an electronic format compatible with BOEM's database management software and EPA's most recent format. This data must be able compatible with the EPA's Emissions Inventory System (EIS), which stores all current and historical onshore emissions inventory data. All results will be documented according to BOEM report standards.

Importance to BOEM: First, the collection and compilation of an air emissions inventory is one of the tasks that BOEM conducts to assure coordination of air pollution control regulations between OCS offshore sources and state's sources onshore. Secondly, this

emissions inventory will likely useful for compliance with EPA's Greenhouse Gas Reporting Rule. Finally, BOEM will also use the 2011 emissions inventory to support the NEPA process when preparing Environmental Impact Statements and Assessments, and for emissions trends and impacts analysis.

Current Status: NTL No. 2010-G06 has been posted online to notify the operators that they must collect platform activity data for calendar year 2011 by using the GOADS-2011 software. Currently, operators should be gathering their activity data offshore using the GOADS software. Operators should submit all OCS activity data to BOEM by April 18, 2012 according to the NTL. Next steps include quality assurance/quality control the activity data, comparing GOADS flare and vent volumes against OGOR flare and vent volumes, and calculating the emissions for the platform and non-platform sources.

Final Report Due:	July 2013
Publications:	None
Affiliated WWW Sites:	http://www.boem.gov/Environmental-Stewardship/GOMR-GOADS.aspx
Revised date:	December 12, 2011
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