REQUEST FOR PROPOSALS
Special Call – 2018 – 2nd Call
Air Emission Study

**DEADLINE: Thursday, October 18, 2018 – 5:00 pm C.S.T.**

The Pork Checkoff Sustainability Committee solicits proposals in the following area. There is no funding limit for submitted proposals but the budget request should be appropriate and justified for the work proposed. Researchers are encouraged to find matching funds or in-kind contributions to the project.

This request seeks proposals to conduct an evaluation of the representativeness of air emissions monitoring data collected from swine operations under the National Air Emissions Monitoring Study (NAEMS) relative to emissions from the predominate swine production systems in use today. If emissions today are likely to be materially different than those monitored under NAEMS, the evaluation should also then estimate the nature and size of the change in emissions today relative to the NAEMS results.

The Pork Checkoff funded the pork portion of the National Air Emissions Monitoring Study (NAEMS) conducted under the direction of the U.S. Environmental Protection Agency. The National Air Emissions Monitoring Study (NAEMS) was conducted from 2007 to 2009 at pork production facilities located in North Carolina, Indiana, Iowa and Oklahoma, and consisting of six finishing sites and four sow farms. Separate efforts focused on barns (gestation, farrowing, finishing) and open sources (lagoons and basins); Emissions were measured at a total of seven (7) finishing barns, six (6) breeding/gestation barns, three (3) farrowing rooms, five (5) anaerobic manure treatment lagoons, and a manure basin. Measurements were taken at the barns of two finishing sites and three sow farms and the lagoons at two finishing sites and three sow sites, and a manure basin at a finishing site. Air emissions included ammonia (NH3) and hydrogen sulfide (H2S) from all sources and particulate matter (PM) and volatile organic compounds (VOC) from the barns. The emission data were submitted to the U.S. EPA between June 30 and July 30, 2010.

The locations, numbers and types of pork production facilities were selected for NAEMS to be generally representative of most US pork production and their operating conditions. It was recognized that this match was not perfect. The study design included nearly continuous monitoring of emissions each day over the course of the 12 month or more study period. It was thought this dataset would be able to reflect most operations’ temperature, wind and humidity conditions. This proposal is not seeking an evaluation of that original study design and its degree of representativeness of the industry at that time.

The industry needs to understand, though, whether the changes since 2009 in the technological and management practices employed at pork production facilities have a material effect on the suitability of the NAEMS data for modeling emissions today and over the next several years. For instance, feed formulations have changed over the past decade and nutrient use efficiencies have improved. Also, producers measure feed cost as a function of calorie conversion, not just the pounds of grain to produce a pound of gain. If changes over this period in pork production operations are expected to result in material changes in the air emissions from these facilities, the requested evaluation should attempt to estimate the potential size of that change in emissions relative to those monitored during the NAEMS study. This should be done for all NAEMS monitored emissions including ammonia (NH3) and hydrogen sulfide (H2S) from all sources and particulate matter (PM) and volatile organic compounds (VOC) from the barns.
The committee solicits proposals to complete such an evaluation, data review and estimation of any changes in emissions from today’s systems relative to those used in NAEMS through meta-analysis and modeling techniques. The committee does not envision funding new emissions monitoring efforts, but rather analysis of technical and management practice changes and projection of emission potential impacts through meta-analysis and modeling techniques. The committee expects completion of the effort and submission of a final report in as timely a manner as possible but no later than July 1, 2019 based on an anticipated November 1, 2018 contract date.

Proposals must be in the required format and submitted through the Application website no later than 5:00 p.m. central time on Thursday, October 18, 2018. The National Pork Board will make final decisions on funding proposals. Prior to making a final funding decision, the National Pork Board may be return proposals to the investigator with suggested/requested revisions. Direct questions regarding this solicitation to Dr. Dave Pyburn by email dpyburn@pork.org or phone: 515/223-2600.