

ONGOING MOVES-RELATED RESEARCH – FHWA January 2010

A. 2009 Transportation and Air Quality Emissions Analysis BAA

During FY2009, HEPN published a “Transportation and Air Quality Emissions Analysis” Broad Agency Announcement (BAA) to solicit research proposals in four research focus areas: (1) Testing, Evaluation and Validation of New Emission Models and Methodologies; (2) Research on Conducting Project Level Analysis; (3) Air Quality and Transportation Conformity Outreach and Communication; (4) Fleet Data for On-road Mobile Sources Emissions Inventory. Six BAA research projects are already under contract, four of which are MOVES related.

Research Focus Area: Testing, Evaluation and Validation of New Emissions Models and Methodologies

Research Project Title: Improving Vehicle Fleet, Activity, and Emissions Data for On-Road Mobile Sources Emissions Inventories

FHWA Project Contact: Karen Perritt

Summary: A contract for this research project was awarded to the University of California at Riverside on November 5, 2009. The research will evaluate data and develop tools for estimating better vehicle fleet data (i.e. fleet composition, age, and mileage accumulation), as well as heavy-duty truck operating activities (i.e. miles traveled and idling hours). Ultimately, the products of this research will help transportation practitioners implement the new regulatory emissions model, MOVES, used for transportation conformity analyses

Project Title: Modifying Link-Level Emissions Modeling Procedures for Applications within the MOVES Framework

FHWA Project Contact: Emily Biondi

Summary: As a result of a broad agency announcement, a contract was awarded to Eastern Research Group, Inc. to provide methods for converting data for use with the MOVES, provide general information regarding anticipated emission inventory changes related to the current model, and to identify additional data collection and research needs in order to fully utilize the modeling capabilities of MOVES.

Research Focus Area: Research on Conducting Project Level Analysis

Research Project Title: Advances in Project Level Analysis

FHWA Project Contact: Karen Perritt

Summary: A contract for this research was awarded to E.H. Pechan & Associates, Inc. on November 5, 2009. This research will develop and evaluate appropriate input data specific to the new regulatory emissions model, MOVES. Ultimately, the research products will provide transportation practitioners with alternatives to using default data which are expected to produce more accurate estimates of the localized air quality impacts of transportation projects.

Research Project Title: Evaluating Traffic, Emission, and Dispersion Characteristics Related to Categorical Hot-Spot Findings

FHWA Project Contact: Emily Biondi

Summary: A contract has been awarded to ICF to assess dispersion models with respects to MOVES, characterize traffic, emissions, and concentration impacts, and explore the potential for a categorical finding based on project parameters.

B. Experience in using Draft MOVES2009 in Regional and Project Level Analysis

FHWA Project Contact: Cecilia Ho

Summary: AECOM has been under contract with FHWA since 2005 to perform various tasks in preparing for the release of the MOVES model. AECOM started by providing technical support to FHWA and EPA on travel forecasting models during the development of the MOVES model, and to keep FHWA and EPA informed of issues related to interface between MOVES and travel forecasting models. AECOM also performed a series of test runs on Draft MOVES2009 including sensitivity testing of model inputs, testing the usability of various MOVES input variables from transportation models, evaluating the MOVES results based on different level of aggregation of travel demand model inputs; testing and comparing emissions from MOVES and MOBILE6.2. The results of these tests were presented to FHWA and EPA and at several conferences. A final report is being prepared and is expected in spring, 2010.