**3SAQS/WSAQS Methodology for Completing and Evaluating the Performance of the Photochemical Grid Model Platform**

**Date: February 25, 2015**

**Purpose:**

Generate a document that outlines a methodology/checklist to assist the 3SAQS/WSAQS Technical Workgroup in determining the adequacy of the photochemical grid model platform for use in NEPA and other air quality modeling studies by recommending:

1. analyses for characterizing and evaluating the model platform (initial and boundary conditions, meteorological, emissions, and air quality modeling), and
2. an approach for summarizing and interpreting the results of the model performance evaluation to determine the adequacy of the model platform.

This document will also assist the 3SAQS/WSAQS in planning resources (time and funding) to complete the recommended analyses in future model performance evaluations.

**Applicable Guidance to Consider:**

1. Modeling Guidance for Demonstrating Attainment of Air Quality Goals for Ozone, PM2.5, and Regional Haze
2. Emissions Inventory Guidance for Implementation of Ozone and Particulate Matter National Ambient Air Quality Standards (NAAQS) and Regional Haze Regulations
3. Compilations and Interpretation of Photochemical Model Performance Statistics Published between 2006 and 2012
4. Interagency Workgroup on Air Quality Modeling (IWAQM) Phase 2 Summary Report and Recommendations for Modeling Long Range Impacts
5. NEED TO SURVEY FLMs TO DETERMINE WHETHER THERE ARE ADDITIONAL GUIDANCE DOCUMENTS TO CONSIDER

**Components of Document:**

1. Sections include:
   * Assessment of boundary and background conditions
   * Characterization of emissions inventory and modeling results
   * Evaluation of meteorological modeling results
   * Evaluation of photochemical modeling results
   * Approach for summarizing/interpreting model results
   * Guidelines for determining adequacy of the model platform
2. Recommend set of standard analyses to be completed as part of upcoming MPEs, including:
   * Pollutants and Parameters to Analyze
   * Graphical Displays
   * Performance Statistics
3. Recommend set of additional analyses to complete when standard analyses indicate model performance issues and when resources are available, including:
   * Diagnostic Evaluations
   * Supplemental Graphical Displays and Performance Statistics

**Next Steps:**

1. Request volunteers to participate in finalizing document
2. EPA will complete initial draft document to share with workgroup to assist in expediting process
3. Hold two to three conference calls to finalize document for Technical/Steering Committees approval