

Model Clearinghouse Status & Updates

2013 Regional, State, and Local Modelers'
Workshop – Dallas, TX

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Model Clearinghouse Goals

- Provides national consistency in regulatory decisions.
- Timely interpretation of guidance (as issues arise).
- Minimizes bad precedents:
 - Proactive approach to issues.
 - Memoranda provide essential support to regions, states and locals.
 - Finalization of the guidance by the summer of 2013.
- Clarification memorandum and guidance development through consensus building.



Model Clearinghouse Operation

- Formal Clearinghouse Process:
 - Please reference 2011 & 2012 RSL Workshop Presentations.
 - The Clearinghouse and the AQMG are not specifically a model protocol reviewing authority.
- Technical issues:
 - Response provided by OAQPS/AQMG and other technical experts with review by policy staff.
- Policy issues (if submitted to MC):
 - Referred to New Source Review Group.
 - Response provided by OAQPS/Air Quality Policy Division with technical input as appropriate.
- As appropriate, Model Clearinghouse responses may be reviewed by OGC.



Model Clearinghouse Activities

- No Formal Clearinghouse Request / Responses in 2012 or 2013.
 - Region 5
 - ???
- Numerous Clearinghouse informal discussion and engagements along with monthly coordination call with all of the Regional Offices and the Federal partner agencies.
- Draft Guidance on PM2.5 Permit Modeling (3-4-2013).
- Clarification on the Use of ASOS Meteorological Data in AERMOD Dispersion Modeling (3-8-2013)
- Future clarification memorandums:
 - Consideration of downwash and GEP stack height / EPA formula height
 - Significant concentration gradients
 - Monitoring in lieu of modeling (Appendix W - Sect 10.2.2)



Model Clearinghouse Activities

- SCRAM RSS Feed & Archive.
- MCHISRS:
 - Continuing to add scanned copies of formal written Model Clearinghouse requests/responses and supporting material.
 - 1455 total records (formal & informal).
 - 267 formal records.
 - < 100 formal records still need original form of documentation.
 - Clarification Memos are now incorporated into MCHISRS.
- SCRAM FAQs (*under development and soon ready for primetime*).
- AERMOD Bug List (*under development and summertime release*):
 - Recognition of identified model bugs, situations to which these bugs are important, and potential workarounds.
 - Provide interim solutions rather than rapid frequency of model updates / revisions.



Model Clearinghouse

- http://www.epa.gov/ttn/scram/guidance_clearinghouse.htm
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“Monitoring in Lieu of Modeling”

- Approach or option set forth in Section 10.2.2 of Appendix W that would allow for extensive pre- and post-construction monitoring in lieu of a modeling demonstration to ensure NAAQS compliance.
- Not applicable in many, if not most, permitting situation based the following criteria:
 - Modeling remains the preferred method for determining emissions limitations for both new and existing sources.
 - Only in instances where there is not a refined modeling technique, i.e. there is only a screening technique available or there is no applicable model, should monitoring data be used. If monitoring data is used, it can be done inclusively with the screening model results or exclusively for the basis of emissions limits.
 - Only existing facilities seeking a permit revision / modification and/or SIP revision should use monitoring data alone for determining necessary emissions limits that will ensure compliance with the NAAQS. New facilities are not given this option through Section 10.2.2.



“Monitoring in Lieu of Modeling”

- An adequate and quality assured air quality monitoring network would already have to be in existence or a new network of air quality monitors would have to be closely coordinated with the appropriate reviewing authority and Regional Office.
 - The size of the air quality monitoring network and the placement of the monitors may still require a screening level air quality modeling analysis.
 - It is anticipated that no fewer than 3 or 4 air quality monitors would be required to adequately capture the potential maximum emissions impacts of a facility.
 - This monitoring network would include the need for on-site meteorological monitoring and possibly mobile sampling.
 - At least one year of valid ambient data from an adequate monitoring network would be required on the existing facility to establish the base line with which to consider any modifications to operations at the facility.



“Monitoring in Lieu of Modeling”

- Especially difficult to justify this option for SO₂ permitting given the extensive history and application of refined dispersion models such as AERMOD for SO₂.
- Only in a very few and rare cases is it envisioned that the EPA preferred dispersion model could be adequately justified as inappropriate for a SO₂ compliance demonstration application. These special cases might include:
 - Low wind speeds (Downwash and near field dispersion calculations)
 - Low, flat , elongated buildings (Projected length and related EBD concerns)
 - Complex terrain (Mountain / valley situations and sea / lake / shoreline interactions)
- Permits would have to contain enforceable contingency plans in the case that the post construction monitoring demonstrates that the NAAQS is threatened before a violation of the NAAQS could occur.