Pre-Modeling Meeting Checklist

The purpose of the pre-modeling meeting is to provide applicants the opportunity to present the proposed modeling approach to the Air Dispersion Modeling Team (ADMT). By addressing potential air quality analysis (AQA) issues early in the New Source Review (NSR) permit application review process, many difficulties that tend to delay the technical review can be minimized or avoided.

The ADMT strongly suggests applicants to request a pre-modeling meeting when the proposed modeling approach incorporates specialized modeling techniques, non-default modeling options, or differs from modeling guidance.

To assist modeling staff, the applicant should provide a summary of the proposed modeling approach at least **two business days** before the meeting. If the applicant cannot provide a summary before the requested date, the meeting should be rescheduled for a later time.

The following checklist contains the minimum items that should be included in the summary:

- Relevant project information - Include applicant name, Regulated Entity number, nearest city and county, and all contact information.
- Project overview - Describe the facilities and pollutants that need to be evaluated and review types (e.g. NAAQS, etc.).
- Existing air quality - Provide the proposed monitor identifiers and locations used to develop representative background concentrations. Justification for representativeness of the proposed monitors should be provided.
- Model(s) - Provide the proposed models and version numbers.
- Source types or characterizations being used - Provide a copy of the Table 1(a) that was submitted with the permit application. Include the stack parameters for any sources that will be included in the modeling. Identify special source types such as covered stacks, horizontal exhausts, fugitive sources, area sources, open pit sources, volume sources, roads, stockpiles, and flares and how they will be modeled. Provide all assumptions and calculations used to determine as appropriate the size, sides, rotation angles, height of release, initial dispersion coefficients, effective stack diameter, gross heat release and weighted (by volume) average molecular weight of the mixture being burned.
- Operating scenarios being used – Discuss any operating scenarios that would be represented in the modeling analyses such as planned MSS activities that do not operate at the same time as routine production emissions or a source load analysis.
- Scalars being used – Discuss how emission scalars will be developed and used in the modeling demonstration. In addition, identify those scalars that should be included in an enforceable permit provision, such as restricted hours of operation. Indicate if a tier 2 ambient ratio method for NO_x will be used.

- Plot plan - Provide a plot plan with emission point locations and building information to identify downwash structures.
- Downwash - State whether the EPA's Building Profile Input Program (BPIP) - PRIME or a software package that employs the BPIP - PRIME algorithms will be used. For structures not included in the downwash analysis or for air quality analyses conducted without consideration of downwash, please provide technical justification for supporting this approach.
- Dispersion options –The selection of urban or rural dispersion in ISCPRIME must be accompanied by technical justification supported by the surrounding land use. The use of the urban option (URBANOPT or URBANSRC) in AERMOD must be accompanied by technical justification supporting the use of this option, including sufficient documentation on the inputs required for use of the urban option.
- Receptor grid - Provide the proposed design of the receptor grid. The receptor grid modeled should capture an appropriate maximum ground level concentration and exceedances for all pollutants, operating scenarios, and review types.
- Meteorological data - Include the proposed meteorological data files and years. Provide the surface roughness, albedo, and Bowen ratio for use with AERMET. The ADMT recommends using AERSURFACE to determine the surface characteristics.
- Modeling approaches - Provide any proposed specialized modeling techniques and non-default modeling options.
- Results - Provide how the results will be displayed, including proposed GLCni locations, evaluation of predicted exceedances, and any other relevant items.
- Project files and report - Include how the files will be identified and transmitted.

If the project is a Prevention of Significant Deterioration (PSD) review, the applicant must submit a protocol to both the TCEQ and EPA Region 6. A protocol checklist can be found on the ADMT homepage. The applicant can request a pre-modeling meeting before submitting the modeling protocol.