

subsequent years, the SAB addressed a variety of modeling issues, such as the need to conduct sensitivity and uncertainty analyses to better characterize the degree of confidence in model outputs. The SAB further suggested that EPA should collaborate with internal and external model users to obtain feedback that will ultimately facilitate continuous improvement in the Agency's modeling efforts. The EPA's Council for Regulatory Environmental Modeling (CREM) now seeks input from the SAB on two efforts the Agency believes will ultimately strengthen the scientific basis for EPA's model-based decisions: (1) Development of an *Interim Guidance on Environmental Models*; and (2) development of a *Models Knowledge Base*.

Proposed Charge to the SAB CREM Advisory Panel

Charge Issues Related to the Interim guidance on Environmental Models: As noted above, the SAB recommended that EPA establish policies and procedures for the development, evaluation, and use of environmental regulatory models. The EPA's CREM is drafting interim Agency guidance on the development and use of environmental models. These guidelines will ultimately address both policy and science issues, and EPA now turns to the SAB for advice on the latter set of issues. With regard to the *Interim Guidance on Environmental Models*, EPA proposes the following charge to the SAB:

Charge Question 1: Has EPA sufficiently and appropriately identified the best practices, such that decisions based on models developed and used in accordance with these practices may be said to be based on the best available, practicable science?

Charge Question 2: Has EPA sufficiently and appropriately described the goals and methods, and in adequate detail, such that the guidance serves as a practical, relevant, and useful tool for model developers and users? If not, what else would you recommend to achieve these ends?

Charge Question 3: Has EPA sufficiently and appropriately proposed a graded approach, such that users of the guidance can determine the appropriate level of evaluation for a particular model use. If there are deficiencies in the proposed approach, what would you recommend to correct it, and why?

Charge Question 4: Has EPA sufficiently and appropriately provided practicable advice for decision-makers who must deal with the uncertainty

inherent in environmental models and their application? What additional advice should EPA consider in dealing with uncertainty, and why?

Charge Issues Related to a Models Knowledge Base: As noted above, the SAB recommended that the CREM coordinate EPA efforts to collaborate and seek input from model developers and users both inside and outside EPA. One mechanism to implement this collaboration is through a web-accessible knowledge base for environmental models. EPA is developing such a knowledge base to communicate more clearly the data, algorithms, assumptions, and uncertainties underlying each model; to facilitate the use of individual models or the combined use of multiple models; and to enable developers and analysts to more easily identify information needs. With regard to the *Models Knowledge Base*, EPA proposes the following charge to the SAB:

Charge Question 5: Has EPA identified, structured and developed the optimal set of information to request from model developers and users, *i.e.*, the amount of information that best minimizes the burden on information providers while maximizing the utility derived from the information?

Charge Question 6: Has EPA provided the appropriate nomenclature needed to elicit specific information from model developers that will allow broad intercomparisons of model performance and application without bias toward a particular field or discipline?

Charge Question 7: Through the development of this knowledge base, has EPA succeeded in providing: (7a) Easily accessible resource material for new model developers that will help to eliminate duplication in efforts among the offices/regions where there is overlap in the modeling efforts and sometimes communication is limited? (7b) Details of the temporal and spatial scales of data used to construct each model as well as endogenous assumptions made during model formulation such that users may evaluate their utility in combination with other models and propagation of error due to differences in data resolution can be addressed? (7c) Examples of "successful" models (*e.g.*, widely applied, have been tested, peer reviewed etc.)? (7d) A forum for feedback on model uses outside Agency applications and external suggestion for updating/improving model structure?

Document Availability: Readers who wish to be introduced to the substance of this review may find the review documents at: <http://www.epa.gov/crem/sab> when they are available.

Additional background information is also posted at the EPA's CREM site: <http://www.epa.gov/crem>.

Request for Nominations: Any interested person or organization may nominate qualified individuals for Membership on the Subcommittee. Individuals should have expertise and experience in modeling activities related to one or more of the following areas:

- (a) Hazardous waste,
- (b) Atmospheric Transport, Transformations and Removal,
- (c) Groundwater Hydrology,
- (d) Water Quality,
- (e) Indoor Air,
- (f) Multi-Media Environmental Fate and Transport,
- (g) Environmental Management,
- (h) Terrestrial and Aquatic Ecology,
- (i) Epidemiology,
- (j) Public Health,
- (k) Sensitivity Analysis,
- (l) Uncertainty Analysis,
- (m) Exposure and Risk Assessment,
- (n) Environmental Law,
- (o) Decision Analysis,
- (p) Economics,
- (q) Computer Sciences,
- (r) Spatial Modeling,
- (s) Model documentation,
- (t) Nomenclature for Environmental Models,
- (u) Statistics, and
- (v) Information Quality Guidelines, Data Quality and Quality Assurance Procedures.

Process and Deadline for Submitting Nominations: Any interested person or organization may nominate qualified individuals to add expertise in the above areas for the Panel. Nominations should be submitted in electronic format through the *Form for Nominating Individuals to Panels of the EPA Science Advisory Board* provided on the SAB Web site. The form can be accessed through a link on the blue navigational bar on the SAB Web site, www.epa.gov/sab. To be considered, all nominations must include the information required on that form.

The EPA Science Advisory Board Staff Office will acknowledge receipt of the nomination and inform nominators of the panel selected. From the nominees identified by respondents to this **Federal Register** notice (termed the "Widecast"), SAB Staff will develop a smaller subset (known as the "Short List") for more detailed consideration. Criteria used by the SAB Staff in developing this Short List are given at the end of the following paragraph. The Short List will be posted on the SAB Web site at: <http://www.epa.gov/sab>, and will include, for each candidate, the nominee's name and their biosketch.