

analysis, referred to as the "Fixed Current Conditions Analysis," is intended to gauge baseline aggregate uncertainty embedded in the benefits modeling system.

(b) Base emissions inventory selection. The Agency decided to wait for the availability of the upcoming 1999 National Emissions Inventory (NEI) rather than the currently available 1996 National Emissions Inventory because of shortcomings in the current emission inventories, including several deficiencies identified by the SAB Council. The 1999 NEI has now been further delayed, and is not expected to be available for use in the third analysis until Summer 2003.

The Agency therefore proposes to use the time between now and Summer 2003, when the 1999 NEI will be available, to configure and begin implementing key supplemental analyses, included in the original Analytical plan. These supplemental analyses include: (i) A Title VI re-analysis; (ii) a Hazardous Air Pollutant Case Study; and (iii) an Ecological Service Flow Case Study. Specific proposals for design and implementation of these supplemental analyses would be incorporated in the revised Analytical Plan and submitted for review by the SAB Council.

(c) Air quality model selection. The SAB Council strongly encouraged use of a comprehensive and integrated modeling system, such as the Community Multiscale Air Quality (CMAQ) model currently under development. The Agency also decided to defer initiation of emissions inventory development until air quality model evaluations for the key competing models [especially CMAQ versus the Regulatory Modeling System for Aerosols and Deposition (REMSAD) for modeling of particulate matter and CMAQ versus the Comprehensive Air Quality Model with Extensions (CAMx) for ozone modeling] were completed to ensure appropriate specification of the emission inventories used as inputs to the air quality models that will be selected for the study.

The Agency is seeking review by the Council Special Panel and its two subcommittees of three documents in the Spring 2003 that will assist the Agency in developing the third 812 analysis, which will be reviewed by the Council Special Panel and its two subcommittees in draft and final form in Fiscal Year 2004. The three documents to be reviewed in the Spring of 2003 include: (a) A revised Analytical Plan; (b) a new EPA meta-analysis for the Value of a Statistical Life (VSL), which has been developed in response, in part,

to SAB Council advice for an updated and refined VSL estimate for use in third analysis; and (c) a draft strategic plan for development and implementation of probabilistic uncertainty methods to be applied more generally in EPA benefit-cost analyses. This strategic plan is expected to include proposed processes for (i) probability-based uncertainty analysis and (ii) expert elicitation to configure probability distributions for key uncertain and/or variable factors where data are limited and/or function specification would likely be controversial.

4. *EPA Request for and Proposed Charge to the Council, HEES, and AQMS.* Specific and detailed charge questions are still under development, particularly since EPA is still developing methodological options for implementation of NAS advice, especially related to probabilistic uncertainty analysis. However, the particular analytical elements for which new or updated SAB Council advice is expected to be sought include the following:

- (a) Selection of upcoming 1999 National Emissions Inventory
- (b) Selection of REMSAD version 7.3 for PM and CAMx for ozone air quality modeling
- (c) Selection of specific Computable General Equilibrium model for estimation of general equilibrium effects (proposed model choice still pending)
- (d) Selection of exposure modeling methodology
- (e) Methods for quantification of compliance cost uncertainty
- (f) Methods for quantification of emission inventory uncertainty
- (g) Refinements to population characteristics for health effect estimation, including:
 - (i) Updated baseline incidence and prevalence rates for morbidity and mortality
 - (ii) Adjustments to account for differences in study and applied populations
 - (iii) Accounting for population exposure variability
 - (iv) Population subgroup differentiation in estimating incidence changes
 - (v) Development of regional-scale population projections based on Woods and Poole Economics, Incorporated, 2001 projections
- (h) Updated and expanded morbidity endpoint treatments, including:
 - (i) Revised asthma severity baseline using new National Health Interview Survey data
 - (ii) Expansion of asthma age range
 - (iii) Emergency room visits in children age 0 to 18

(iv) Non-fatal heart attacks in adults over 30

(v) Hospital admissions for all cardiovascular causes

(vi) Hospital admissions for all respiratory causes in children under age 2

(vii) Revisions to hospital admissions studies used to estimate changes in pneumonia, chronic obstructive pulmonary disease, and total cardiovascular

(viii) Asthma hospital admissions in children age 6 to 13

(ix) Ozone-related school loss days

(x) Additional calculations to extrapolate study population age ranges for application to all child age range for various concentration-response functions

(xi) Possible expert elicitation regarding methods to transfer non-U.S. data on doctor visits and medication usage

(xii) Possible expert elicitation regarding revision to the current triangular distribution for the chronic bronchitis severity adjustment factor

(i) Updated treatments for particulate matter mortality, including:

(i) A proposed probability-based structure for cessation lags

(ii) Alternative mortality concentration-response functions (including possible expert elicitation regarding appropriate weights for alternative particulate matter cohort studies for the purpose of pooling)

(iii) Alternative PM mortality threshold models (including possible expert elicitation regarding choice and refitting of alternative threshold concentration-response curves)

(iv) Alternative particulate matter causality assumptions

(v) Relative toxicity of particulate matter components

(j) Updated and new valuation coefficients (or coefficient distributions) for the full range of morbidity and for mortality endpoints, including:

(i) Development of methods to estimate Quality Adjusted Life Year values for air pollution-related outcomes

(ii) Review of EPA's pending meta-analysis for Value of a Statistical Life

(iii) Review of the welfare economics components of EPA's analyses including not only efficiency considerations, but distributional consequences of alternative scenarios

(k) Expanded uncertainty analysis, including:

(i) Development of preliminary covariance matrices followed by possible expert elicitation for assessment and refinement

(ii) Development of probability distributions for key uncertain and/or