Comments on the charge questions for reviewers of the IRIS document on
Polycyclic Aromatic Hydrocarbon Mixtures

The Environmental Protection Agency's (EPA) Integrated Risk Information System (IRIS) document on polycyclic aromatic hydrocarbon (PAH) mixtures uses benchmark dose modeling to estimate relative potency factors (RPF) for a number of PAH. EPA has asked for comments on the adequacy of the charge questions for external reviewers. The list of charge questions is extensive, and for the most part appears to be appropriate. However, a key question that is missing from the charge questions is how model fit criteria were assessed, and how that information was used in the derivation of RPF. Some suggested specific questions include: Was adequacy of model fit considered in the derivation of RPF, and if so, how was it assessed? Should models with statistically inadequate model fits be used in the derivation of RPF? If the multistage model provides a statistically inadequate model fit for a given set of data, should other model forms be considered? If other model forms are considered, how should a model form be chosen for RPF determination? If no available model form yields a statistically adequate model fit for a given set of data, should those data be used for RPF determination?