July 21, 2009

Dr. Sue Shallal
Designated Federal Officer
EPA Science Advisory Board (1400F)
U.S. Environmental Protection Agency
1200 Pennsylvania Ave., NW
Washington, DC 20460

Re: Methodologies for Conducting Risk and Technology Review Assessments

Dear Dr. Shallal:

The following are the comments of the Residual Risk Coalition on the Science Advisory Board's ("SAB") review of the Office of Air Quality Planning and Standards' methodologies for conducting Risk and Technology Review Assessments pursuant to a determination of residual risk under § 112(f) of the Clean Air Act ("CAA"). These comments are being submitted in anticipation of the SAB's July 28th and 29th meetings on this topic, which were announced at 74 Fed. Reg. 27538 (June 10, 2009).

The Residual Risk Coalition ("R2C") is an ad-hoc group comprised of the American Chemistry Council, the American Forest & Paper Association, the American Petroleum Institute, the National Oilseed Processors Association, the National Petrochemical and Refiners Association, the Pharmaceutical Research and Manufacturers of America, and the Portland Cement Association. Each R2C organization has members that are subject to maximum achievable control technology ("MACT") standards that will undergo "residual risk" review pursuant to CAA § 112(f). The R2C is dedicated to working constructively with the Environmental Protection Agency in developing a practical and environmentally responsible approach to satisfying the Agency's obligations under § 112(f).

The R2C is writing to offer comments on one key element of EPA's risk assessment methodology – the process for determining hazardous air pollutant ("HAP") emissions from the affected source category. In its "Peer Review Charge" to the SAB, EPA provides a concise explanation of its method:

> [T]he 2002 National Emissions Inventory (NEI) serves as the starting point for RTR risk assessments. EPA performs an engineering review of data from each source category to identify and correct readily-apparent limitations and issues with the emissions data. The dataset is then published through an Advanced Notice of Proposed Rulemaking (ANPRM), making it available for public comment. EPA evaluates comments and corrections for quality and engineering consistency, revises the dataset, and develops a draft risk assessment. The dataset and the risk assessment are provided with a Notice of Proposed Rulemaking (NPRM) for a second 60-day comment period, after which further

comments and corrections are evaluated and incorporated. The final rulemaking is then developed.[1]

In short, the Agency starts with emissions data from the NEI, but then employs a multi-step process for refining and correcting these data. As a result, the emissions data used for the § 112(f) risk assessments and corresponding regulatory determinations can, and usually do, differ significantly from the original NEI estimates. In the case of the residual risk determination for the petroleum refinery "MACT I" source category, EPA determined that this data vetting process resulted in a 12% reduction in overall toxicity-weighted HAP emissions. As a result, whereas five facilities were initially determined using NEI data to present a maximum individual risk ("MIR") of more than 100 in a million, no facilities exceeded this threshold using the refined emission data. Similarly, thirty-three facilities had an MIR between 10 and 100 in a million using NEI data, while only eighteen had an MIR in this range when the NPRM was issued.[2]

Notably, member companies from two R2C associations – the American Petroleum Institute and the National Petrochemical and Refiners Association – own or operate virtually all petroleum refineries in the United States. They have worked closely with EPA during the development of the residual risk rule for the petroleum refinery "MACT I" source category and provided much of the data and information used to refine the initial NEI emissions data. So, the R2C is particularly well-positioned to comment on EPA's RTR Case Study as it relates to petroleum refineries.[3]

In addition, the Portland Cement Association – whose members account for more than 95% of cement-making capacity in the United States – shares the concerns expressed here regarding the Agency's approach, particularly in light of the fact that cement manufacturing has been identified along with petroleum refineries as a case study category for risk assessment.

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[1] Memorandum from Lydia N. Wegman, Director, Health and Environmental Impacts Division, Office of Air Quality Planning and Standards (C504-02) to Sue Shallal, Ph.D., Designated Federal Officer, EPA Science Advisory Board Staff Office (1400F), Request for SAB Peer Review of the "Report on the EPA's Risk and Technology Review (RTR) Risk Assessment Methodologies," Attachment pp. 3-4.

[2] Risk and Technology Review (RTR) Risk Assessment Methodologies: For Review by the EPA's Science Advisory Board, Case Studies – MACT I Petroleum Refining Sources, Portland Cement Manufacturing, U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Health and Environmental Impacts Division, EPA-452/R-09-006 (June 2009)("RTR Case Study Report") at 4-1.

[3] Similarly, members of the Portland Cement Association own or operate most of the Portland cement manufacturing facilities that are subject to the Portland Cement MACT standard, which is the focus of the other case study presented to the SAB for review.

From the inception of the RTR risk assessments, one of our primary concerns with the Agency's RTR approach is that it begins with an effective presumption in favor of the emissions data included in the NEI. This is a potential problem because emissions data in the NEI are compiled from a wide variety of sources and are produced using an even wider variety of estimating techniques. This is especially true of the NEI HAP emissions estimates, which are based on five primary sources of information – including state and local HAP inventories, data EPA has gathered in establishing various HAP standards under CAA § 112, and data from the Toxics Release Inventory.[4] EPA cautions in the 2002 NEI report that, "Because the estimates originated from a variety of sources and estimation methods, as well as for differing purposes, they will in turn vary in quality, pollutants included, level of detail, and geographic coverage."[5]

As a result, while the NEI data may be useful for policy purposes (such as spotting emissions trends and identifying regulatory priorities), these data do not represent the robust, quality-assured information that is needed to support regulatory decision making. In the RTR report itself, the Agency admits to "questions and concerns by … EPA scientists … about the quality of the NEI emission data used in the initial ANPRM screening stage of RTR risk assessments…."[6]

Having said that, R2C members have found that the Agency's process of correcting and refining the NEI emissions data can succeed in producing revised emissions data that are suitable for use in § 112(f) residual risk determinations. More specifically, it is critical that industry review and/or provide the parameters associated with these emissions (e.g., stack height, exit velocity, point and area source latitudes and longitudes, etc.) for the Agency to accurately conduct risk modeling. The RTR review of the petroleum refinery "MACT I" source category is a good case in point. While that review has not yet concluded, the analysis to date (as summarized above) shows that NEI emissions data for petroleum refineries were generally biased on the high side and, when site-specific information was factored into the analysis, the revised estimates resulted in a much more realistic assessment of potential remaining risks associated with HAP emissions from the source category.

The key to success in such reviews is the Agency's willingness to faithfully implement the emissions refinement method that is presented and assessed in the RTR Case Study Report. This is the crux of our comments on the Report – *i.e.*, the process can work when EPA invests the time and resources needed to refine the base NEI data and commits to use the refined data in its "residual risk" determinations. Absent this investment of resources and institutional

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[4] *See* http://www.epa.gov/ttnchie1/net/neiwhatis.html.

[5] Documentation for the Final 2002 Point Source National Emissions Inventory, Emission Inventory and Analysis Group, Air Quality and Analysis Division, U.S. Environmental Protection Agency (Feb. 10, 2006).

[6] RTR Case Study Report at 4.1.

commitment to the process, reliance on unrefined NEI emissions data most certainly will leave EPA with fatally flawed data that are wholly unsuitable for regulatory decision making.

In addition, in some cases there will be data for a particular source category that are clearly either more accurate, or more appropriate for use, or both, than the data contained in the NEI. EPA should exercise its discretion, on a case-by-case basis, to use these data from the beginning of the work on a category, rather than starting with the NEI and asking industry and the states to review, correct and update NEI data that may still remain less appropriate for use in regulatory decision-making.

In conclusion, we urge the SAB to highlight and emphasize the need for EPA to faithfully adhere to its rigorous vetting process if the Agency intends to continue to rely on NEI emissions data as the starting point for "residual risk" assessments under § 112(f). Additionally, for cases where there are data for a particular source category that are clearly either more accurate, or more appropriate, or both, than the data contained in the NEI, the SAB should encourage EPA to exercise its discretion to utilize these data from the beginning of the work on a category.

Thank you for the opportunity to present these comments. Please feel free to contact me by phone at 202-682-8319 or email at toddm@api.org if you have any questions or need additional information.

Sincerely,

Matthew A. Todd
Chair, Residual Risk Coalition