



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
RESEARCH TRIANGLE PARK, NC 27711

OFFICE OF
AIR QUALITY PLANNING
AND STANDARDS

September 13, 2010

MEMORANDUM

SUBJECT: EPA's Actions in Response to the Key Recommendations of the Science Advisory Board Review of Risk and Technology Review (RTR) Risk Assessment Methodologies.

FROM: David Guinnup, Group Leader
Sector Based Assessment Group

TO: EPA-HQ-OAR-2010-0600 docket

On May 7, EPA's Science Advisory Board (SAB) issued its peer review report in response to a request from EPA's Office of Air Quality Planning and Standards (OAQPS) to convene an expert panel to review their draft document entitled, "Risk and Technology Review (RTR) Risk Assessment Methodologies: For Review by the EPA's Science Advisory Board with Case Studies – MACT I Petroleum Refining Sources and Portland Cement Manufacturing" (June 2009) ([http://yosemite.epa.gov/sab/sabproduct.nsf/4AB3966E263D943A8525771F00668381/\\$File/EPA-SAB-10-007-unsigned.pdf](http://yosemite.epa.gov/sab/sabproduct.nsf/4AB3966E263D943A8525771F00668381/$File/EPA-SAB-10-007-unsigned.pdf)). This memorandum provides a summary of the OAQPS actions in response to the key recommendations of that report. The five key technical recommendations from the SAB Review Panel and the ongoing and future efforts of OAQPS to address the SAB RTR review panel recommendations are summarized below:

1. The panel recommended that the EPA modify its RTR methodology to first assess residual risks associated with "allowable" emissions (which reflect current regulatory limits), as opposed to developing assessments based on "actual" emissions, which are often those reported to the National Emissions Inventory (NEI) as a starting point. To address this recommendation, current and future RTR assessments will be based on estimates of both "actual" and "allowable" facility-specific emissions, to the extent that we are able to estimate them, and these results will be identified clearly in the risk assessment reports.

2. The panel recommended that a better characterization of radionuclide emissions be developed before they can be included in any RTR assessment. They recognized this in the specific case of Portland cement facilities (one of the case studies used to showcase the RTR methodologies), as well as for the general case of other source categories which may emit radionuclides. However, the panel recognized that isotope-specific information, which is not currently available and for which

scientifically-accepted methods have not been fully developed, will need to be developed in order to be able to do this. The EPA plans to further characterize radionuclide emissions from the Portland cement facilities and other source categories as appropriate when better methods and data become available.

3. The panel concurred with the EPA on the use of the Integrated Risk Assessment (IRIS) database as the preferred database for chronic health data used in the RTR assessments. The SAB panel recognized that there are greater gaps and inconsistencies in the existing acute health data when compared to existing chronic health data, and encouraged EPA to carefully examine acute toxicity values to ensure that they are protective of sensitive subpopulations. The EPA will continue its preferred use of IRIS for RTR assessments, and will continue to carefully examine acute toxicity values for use in assessing the potential for acute impacts of concern from RTR sources and source categories.

4. The panel commended EPA on the ecological risk assessment case study presented and suggested further refinements including the use of more established risk assessment methods and to conduct a comparison of outcomes with TRIM.FaTE predictions. The EPA plans to conduct an ecological risk assessment case study for an RTR facility which has been well-characterized from the standpoint of environmental and ecological measurements when resources become available.

5. The panel recommended that the EPA's RTR process could present better characterization of risks from facilities that fall into more than one regulatory category such as petroleum refineries. The SAB panel also recommended presenting results in a broader context of cumulative risks including background concentrations and contributions of multiple sources in an area. In current and future RTR risk assessments, EPA will include assessments of facility-wide HAP risks (i.e., an assessment of the risks posed by HAP emissions from all emission points within a facility, not just the emissions from the source category being evaluated for residual risk).

If you have questions or need additional information please contact Dave Guinnup at (919) 541-5368.