



ENVIRONMENTAL PROTECTION AGENCY

[FRL-9920-00-ORD; Docket ID No. EPA-HQ-ORD-2014-0859]

Notice of Workshop and Call for Information on Integrated Science Assessment for Particulate Matter

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of Workshop; Call for Information.

SUMMARY: The U.S. Environmental Protection Agency (EPA) Office of Research and Development's National Center for Environmental Assessment (NCEA) is preparing an Integrated Science Assessment (ISA) as part of the review of the primary and secondary National Ambient Air Quality Standards (NAAQS) for particulate matter (PM). This ISA is intended to update the scientific assessment presented in the Integrated Science Assessment for Particulate Matter (EPA 600/R-08/139F), published in December 2009. Interested parties are invited to assist EPA in developing and refining the scientific information base for the review of the PM NAAQS by submitting research studies that have been published, accepted for publication, or presented at a public scientific meeting.

EPA is also announcing that a workshop, entitled “Workshop to Discuss Policy-Relevant Science to Inform EPA’s Review of the Primary and Secondary NAAQS for PM,” is being organized by NCEA and EPA Office of Air and Radiation’s Office of Air Quality Planning and Standards (OAQPS). The workshop will be held February 9 – February 11, 2015, in Research Triangle Park, North Carolina. The workshop will be open to attendance by interested public observers on a first-come, first-served basis up to the limits of available space.

DATES: The workshop will be held on February 9 – 11, 2015. All communications and information submitted in response to the call for information should be received by EPA by February 18, 2015.

ADDRESSES: The workshop will be held at U.S. EPA, 109 T.W. Alexander Drive, Research Triangle Park, North Carolina. An EPA contractor, ICF International, is providing logistical support for the workshop. To register, please visit the website: <https://sites.google.com/site/pmworkshop2015/>. Interested parties can participate in person or via webinar. The pre-registration deadline is February 4, 2015. Please direct questions regarding workshop registration or logistics to Whitney Kihlstrom at (919) 293-1646, or whitney.kihlstrom@icfi.com. For specific questions regarding technical aspects of the workshop see the section of this notice entitled *For Further Information Contact*.

Information in response to the call for information may be submitted electronically, by mail, by facsimile, or by hand delivery/courier. Please follow the detailed instructions as provided in the section of this notice entitled *Supplementary Information*.

FOR FURTHER INFORMATION CONTACT: For details on the period for submission of research information from the public, contact the Office of Research and Development (ORD) Docket at EPA's Headquarters Docket Center; telephone: 202-566-1752; facsimile: 202-566-9744; or e-mail: Docket_ORD@epa.gov. For technical information, contact Mr. Jason Sacks, NCEA; telephone: (919) 541-9729; facsimile: (919) 541-1818; or e-mail: sacks.jason@epa.gov or Dr. Scott Jenkins, OAQPS; telephone: (919) 541-1167; facsimile: (919) 541-0237; or e-mail: jenkins.scott@epa.gov.

SUPPLEMENTARY INFORMATION:

I. Information about the Project

Section 108(a) of the Clean Air Act (CAA) directs the Administrator to identify and to list certain air pollutants and then to issue "air quality criteria" for those pollutants. These air quality criteria are to "accurately reflect the latest scientific knowledge useful in indicating the kind and extent of all identifiable effects on public health or welfare which may be expected from the presence of such pollutant in the ambient air..." Under section 109 of the CAA, EPA is then to establish National Ambient Air Quality Standards (NAAQS) for each pollutant for which EPA has issued criteria. Section 109(d) of the CAA subsequently requires periodic review and, if appropriate, revision of existing air quality criteria to reflect advances in scientific knowledge on

the effects of the pollutant on public health and welfare. EPA is also to revise the NAAQS, if appropriate, based on the revised air quality criteria.

Particulate matter (PM) is one of six “criteria” pollutants for which EPA has established NAAQS. Periodically, EPA reviews the scientific basis for these standards by preparing an Integrated Science Assessment (ISA), formerly called an Air Quality Criteria Document (AQCD). The evidence and conclusions presented in the ISA directly inform the technical and policy assessments conducted by OAQPS. Collectively, these documents form the scientific and technical bases for EPA’s decisions on the adequacy of existing NAAQS and the appropriateness of new or revised standards.

At the start of a NAAQS review, EPA issues an announcement of the review and notes the initiation of the development of the ISA. At that time, EPA also issues a request that the public submit scientific literature that they want to bring to the attention of the Agency for consideration in the review process. The Clean Air Scientific Advisory Committee (CASAC), an independent scientific advisory committee mandated by section 109(d)(2) of the Clean Air Act and part of EPA's Science Advisory Board (SAB), is charged with independent expert scientific review of EPA's draft ISAs and other technical and policy assessments. As the process proceeds, the public will have opportunities to review and comment on draft PM ISAs and other technical and policy assessments. These opportunities will also be announced in the Federal Register.

For the review of the PM NAAQS being initiated by this notice, the Agency is interested in obtaining additional new information, particularly concerning: (a) toxicological studies of effects of controlled exposure to PM on laboratory animals and humans; (b)

epidemiologic (observational) studies of health effects associated with ambient exposures of human populations to PM; (c) the quantification of light extinction in urban and non-urban areas – for example, new studies regarding visibility preferences, including studies in additional urban and non-urban areas that disentangle visibility preferences from health preferences, the sensitivity of visibility preferences to survey methods and/or preferences regarding intensity versus frequency of visibility impairment; (d) climate impacts from PM-related aerosols, particularly regarding the quantification of anthropogenic aerosol effects on radiative forcing; and (e) ecological studies that examine the effects on agricultural crops and natural terrestrial and/or aquatic ecosystems from ambient exposures to PM, including information regarding interactions with other ecosystem stressors and co-occurring pollutants. EPA also seeks recent information in other areas of PM research such as chemistry and physics, sources and emissions, analytical methodology, transport and transformation in the environment, and ambient concentrations. This and other selected literature relevant to a review of the NAAQS for PM will be assessed in the forthcoming PM ISA. It is important to note that for the evaluation of PM and ecological effects, this does not include studies that examine effects due to the deposition of oxides of nitrogen (NO_x) or sulfur oxides (SO_x) in the particulate form (e.g., ammonium sulfate), which will be covered in the ongoing review of the NO_x/SO_x secondary standard. Other opportunities for submission of new peer-reviewed, published (or in-press) papers will be possible as part of public comment on the draft ISAs that will be reviewed by CASAC.

As part of this review of the PM NAAQS, EPA intends to sponsor a workshop on February 9 – February 11, 2015 to provide the opportunity for internal and external experts to

highlight significant new and emerging PM research, and to make recommendations to the Agency regarding the design and scope of the review for the primary (health-based) and secondary (welfare-based) PM standards to ensure that it addresses key policy-relevant issues and considers the new and emerging science that is relevant to informing EPA's understanding of these issues. EPA intends that workshop discussions will build upon three prior publications (available at:

http://www.epa.gov/ttn/naaqs/standards/pm/s_pm_index.html):

1. *National Ambient Air Quality Standards for Particulate Matter: Final Rule* (78 FR 2086, January 15, 2013). The preamble to the final rule included detailed discussions of policy-relevant issues central to the last review.

2. *Integrated Science Assessment for PM – Final Report*. (EPA/600/R-08/139F, December 2009). The ISA is a comprehensive review, synthesis, and evaluation of the most policy-relevant science, including key science judgments that are important to inform the development of the risk and exposure assessments, as well as other aspects of the NAAQS review. The 2009 PM ISA, completed by EPA's NCEA, included consideration of studies published through mid-2009.

3. *Provisional Assessment of Recent Studies on Health Effects of Particulate Matter Exposure* (EPA/600/R-12/056F, December 2012). This assessment, which was completed by EPA's NCEA, evaluated studies published too late for inclusion in the final PM ISA. The provisional science assessment focused on epidemiologic studies that used PM_{2.5} (i.e., fine PM) or PM_{10-2.5} (i.e., coarse PM) and were conducted in the U.S. or Canada, and toxicological or epidemiologic studies that compared effects of PM from different sources,

PM components, or size fractions published through August 2012. The document was not intended to critically review individual studies or integrate the scientific findings to draw causal conclusions as is done for an ISA, but rather to ensure that the Administrator was fully aware of the “new” science that had developed since 2009 before making final decisions on whether to retain or revise the then-existing PM standards.

Workshop participants are encouraged to review these documents thoroughly before the meeting, as they provide important background information on the scientific findings and analytical approaches considered in the previous review, as well as insights into the key policy-relevant questions from that review. In addition, participants may also want to review related documents (available at: http://www.epa.gov/ttn/naaqs/standards/pm/s_pm_index.html), including the *Policy Assessment for the Review of the Particulate Matter National Ambient Air Quality Standards* (Final Report, April 2011), *Quantitative Health Risk Assessment for Particulate Matter* (Final Report, June 2010), and *Particulate Matter Urban-Focused Visibility Assessment* (Final Document, July 2010).

Based in large part on the input received during this workshop, EPA will develop a draft Integrated Review Plan (IRP) for the PM NAAQS. This draft IRP will outline the schedule, process, and approaches for evaluating the relevant scientific information and addressing the key policy-relevant issues to be considered in this review. CASAC will be asked to review the draft IRP in the mid-2015 and the public will also have the opportunity to comment on the draft plan. The final IRP, prepared in consideration of CASAC and public comments, will outline the process and schedule for conducting the review and the planned

scope of the assessment documents (e.g., an ISA, a risk/exposure assessment, and a policy assessment) as well as the key policy-relevant issues/questions that will guide the review.

II. How to Submit Technical Comments to the Docket at www.regulations.gov

Submit your materials identified by Docket ID No. **EPA-HQ-ORD-2014-0859** by one of the following methods:

- www.regulations.gov: Follow the on-line instructions for submitting comments.
- E-mail: Docket_ORD@epa.gov.
- Fax: 202-566-9744.
- Mail: Office of Research and Development (ORD) Docket (Mail Code: 28221T),

U.S. Environmental Protection Agency, 1200 Pennsylvania Ave., N.W., Washington, DC 20460.

The phone number is 202-566-1752.

- Hand Delivery: The ORD Docket is located in EPA's Headquarters Docket Center, Room 3334 EPA West Building, 1301 Constitution Ave., N.W., Washington, DC. EPA's Docket Center Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding Federal holidays. The telephone number for the Public Reading Room is 202-566-1744. Such deliveries are only accepted during the docket's normal hours of

operation, and special arrangements should be made for deliveries of boxed information. If you provide materials by mail or hand delivery, please submit three copies of these materials. For attachments, provide an index, number pages consecutively with the materials, and submit an unbound original and three copies.

Instructions: Direct your comments to Docket ID No. **EPA-HQ-ORD-2014-0859**.

Please ensure that your comments are submitted within the specified comment period.

Comments received after the closing date will be marked “late,” and may only be considered if time permits. It is EPA's policy to include all materials it receives in the public docket without change and to make the materials available online at www.regulations.gov, including any personal information provided, unless materials includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through www.regulations.gov or e-mail. The www.regulations.gov website is an “anonymous access” system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an e-mail directly to EPA without going through www.regulations.gov, your e-mail address will be automatically captured and included as part of the materials that are placed in the public docket and made available on the Internet. If you submit electronic materials, EPA recommends that you include your name and other contact information in the body of your materials and with any disk or CD-ROM you submit. If EPA cannot read your materials due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider the materials you submit. Electronic files should avoid the use

of special characters, any form of encryption, and be free of any defects or viruses. For additional information about EPA's public docket visit EPA's Docket Center homepage at www.epa.gov/epahome/dockets.htm.

Docket: Documents in the docket are listed in the www.regulations.gov index. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other materials, such as copyrighted material, are publicly available only in hard copy. Publicly available docket materials are available either electronically in www.regulations.gov or in hard copy at the ORD Docket in EPA's Headquarters Docket Center.

Dated: November 24, 2014.

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[FR Doc. 2014-28278 Filed 12/02/2014 at 8:45 am; Publication Date: 12/03/2014]