ENVIRONMENTAL PROTECTION AGENCY

Final Integrated Science Assessment for Oxides of Nitrogen, Oxides of Sulfur, and Particulate Matter – Ecological Criteria

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of availability.

SUMMARY: The Environmental Protection Agency (EPA) is announcing the availability of a final document titled, “Final Integrated Science Assessment for Oxides of Nitrogen, Oxides of Sulfur, and Particulate Matter – Ecological Criteria” (EPA/600/R-20/278). The document was prepared by the Center for Public Health and Environmental Assessment (CPHEA) within EPA’s Office of Research and Development (ORD) as part of the review of the secondary (welfare-based) national ambient air quality standards (NAAQS) for oxides of nitrogen, oxides of sulfur, and particulate matter. This ISA represents an update of the 2008 Integrated Science Assessment for Oxides of Nitrogen and Sulfur – Ecological Criteria (EPA/600/R-08/082F) and the 2009 Integrated Science Assessment for Particulate Matter (EPA/600/AR-08/139F). The ISA, in conjunction with additional technical and policy assessments, provides the basis for EPA’s decisions on the adequacy of the current NAAQS and the appropriateness of possible alternative standards.

DATES: The document will be available on or about October 16, 2020.

ADDRESSES: The “Final Integrated Science Assessment for Oxides of Nitrogen, Oxides of Sulfur, and Particulate Matter – Ecological Criteria” will be available primarily via the internet on EPA’s Integrated Science Assessment for Oxides of Nitrogen, Oxides of Sulfur, and

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SUPPLEMENTARY INFORMATION:

I. Information About the Document

Section 108(a) of the Clean Air Act directs the Administrator to identify certain air pollutants, emissions of which, among other things, “cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare”; and to issue air quality criteria for them. The 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 [a] pollutant in the ambient air….”. Under section 109 of the Act, EPA is then to establish NAAQS for each pollutant for which EPA has issued criteria. Section 109(d)(1) of the Act 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 or welfare. EPA is also required to review and, if appropriate,
revise the NAAQS, based on the revised air quality criteria (for more information on the NAAQS review process, see https://www.epa.gov/naaqs).

EPA has established NAAQS for six criteria pollutants. Presently the EPA is reviewing the secondary air quality criteria and NAAQS for oxides of nitrogen, oxides of sulfur, and particulate matter. Periodically, EPA reviews the scientific basis for these standards by preparing an Integrated Science Assessment (ISA) (formerly called an Air Quality Criteria Document). The ISA provides the scientific basis for EPA’s decisions, in conjunction with additional technical and policy assessments, on the adequacy of the current NAAQS and the appropriateness of possible alternative standards. The Clean Air Scientific Advisory Committee (CASAC), an independent science advisory committee whose review and advisory functions are mandated by Section 109(d)(2) of the Clean Air Act, is charged (among other things) with independent scientific review of the EPA’s air quality criteria.

On August 21, 2013 (78 FR 53452), EPA formally initiated its current review of the air quality criteria for the ecological effects of oxides of nitrogen and oxides of sulfur, and the associated secondary (welfare-based) NAAQS, requesting the submission of recent scientific information on specified topics. Similarly, on December 3, 2014 (79 FR 71764), EPA formally initiated its current review of the air quality criteria for the particulate matter NAAQS. EPA conducted two workshops—the first on March 4-6, 2014, for oxides of nitrogen and oxides of sulfur (79 FR 8644, February 13, 2014), and the second on February 11, 2015 (79 FR 71764, December 3, 2014), for particulate matter—to gather input from invited scientific experts, both internal and external to EPA, as well as from the public, regarding key science and policy issues relevant to the review of the these secondary NAAQS. Teleconference workshops with invited scientific experts, both internal and external to EPA, were held on August 25-27, 2015 (80 FR
48316, August 12, 2015), and June 13, 2016 (81 FR 89262, May 11, 2016), to discuss initial
draft materials prepared in the development of the draft ISA.

These science and policy issues were incorporated into EPA’s “Draft Integrated Review
Plan for the Secondary National Ambient Air Quality Standard for Oxides of Nitrogen and
Oxides of Sulfur” as well as the “Integrated Review Plan for the National Ambient Air Quality
Standards for Particulate Matter.” The Draft Integrated Review Plan (IRP) for oxides of
nitrogen and oxides of sulfur was available for public comment (80 FR 69220, Monday,
November 9, 2015) and discussion by the CASAC via publicly accessible teleconference
consultation (80 FR 65223, February 10, 2016). The Draft IRP for particulate matter was
available for public comment (81 FR 2297, April 19, 2016) and discussion by the CASAC via
publicly accessible teleconference consultation (81 FR 13362, March 14, 2016) prior to release
Integrated Science Assessment for Oxides of Nitrogen, Oxides of Sulfur, and Particulate Matter
– Ecological Criteria” was available for public comment (82 FR 15703, March 30, 2017) and
discussed by CASAC and the public at meetings on May 24-25, 2017 (82 FR 15701, March 30,
2017).

The “Second External Review Draft Integrated Science Assessment for Oxides of
Nitrogen, Oxides of Sulfur, and Particulate Matter – Ecological Criteria” was available for
public comment (83 FR 29786, June 26, 2018) and discussed by CASAC and the public at
meetings on September 5-6, 2018 (83 FR 31755, July 9, 2018), and April 27, 2020 (85 FR
16093, March 20, 2020). Subsequently, CASAC provided a letter of their review on May 5,
2020, to the EPA Administrator, which can be viewed

at:https://yosemite.epa.gov/sab/sabproduct.nsf/LookupWebReportsLastMonthCASAC/66330096
471849EE85258561006CC856/$File/EPA-CASAC-20-004.pdf. The Administrator responded to the CASAC’s letter on the Second External Review Draft on June 15, 2020, and the letter is available at:

https://yosemite.epa.gov/sab/sabproduct.nsf/0/66330096471849EE85258561006CC856/$File/EPA-CASAC-20-004.Response.pdf. EPA has considered comments by the CASAC and by the public in preparing this final ISA.


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