

ENVIRONMENTAL PROTECTION AGENCY**40 CFR Part 63****[EPA-HQ-OAR-2002-0086, FRL-]****RIN 2060-AN80****National Emission Standards for Hazardous Air Pollutants for Semiconductor Manufacturing****AGENCY:** Environmental Protection Agency (EPA).**ACTION:** Proposed Rule.

SUMMARY: On October 19, 2006, EPA proposed amendments to the National Emission Standards for Hazardous Air Pollutants for Semiconductor Manufacturing, published on May 22, 2003. The purpose of the proposed amendments was to clarify the emission requirements for process vents by establishing a new maximum achievable control technology floor level of control for existing combined hazardous air pollutants process vent streams containing inorganic and organic hazardous air pollutants and adding requirements for new and reconstructed combined hazardous air pollutants process vents. For existing combined hazardous air pollutants process vents, EPA had proposed that the floor was no control. In light of Sierra Club v. EPA, we are re-proposing the requirements for existing and new combined hazardous air pollutants process in this supplemental proposal.

DATES: Comments must be received by EPA on or before [INSERT DATE 30 DAYS FROM DATE OF PUBLICATION], unless a public hearing is requested by [INSERT 10 DAYS FROM DATE OF PUBLICATION]. If a hearing is requested, EPA will hold a public hearing on [INSERT THE DATE 15 DAYS FROM DATE OF PUBLICATION]. If a hearing is requested, written comments must be received by [INSERT DATE 45 DAYS FROM DATE OF PUBLICATION]. If you are interested in attending the public hearing, contact Mr. John Schaefer at (919) 541-0296 to verify that a hearing will be held.

ADDRESSES: Comments. Submit your comments, identified by Docket ID No. EPA-HQ-OAR-2002-0086, by one of the following methods:

- www.regulations.gov: Follow the on-line instructions for submitting comments.
- E-mail: a-and-r-Docket@epa.gov, Attention Docket ID No. EPA-HQ-OAR-2002-0086.
- Fax: (202) 566-9744
- Mail: U.S. Postal Service, send comments to: EPA Docket Center (2822T), Attention Docket ID No. EPA-HQ-OAR-2002-0086, 1200 Pennsylvania Avenue, NW, Washington, DC 20460. Please include a total of two copies.
- Hand Delivery: In person or by courier, deliver comments to: EPA Docket Center (2822T), Attention

Docket ID No. EPA-HQ-OAR-2002-0086, EPA West Building, Room 3334, 1301 Constitution Avenue, NW, Washington, DC 20004. Such deliveries are only accepted during the Docket's normal hours of operation, and special arrangements should be made for deliveries of boxed information. Please include a total of two copies.

Instructions. Direct your comments to Docket ID No. EPA-HQ-OAR-2002-0086. EPA's policy is that all comments received will be included in the public docket without change and may be made available online at www.regulations.gov, including any personal information provided, unless the comment 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. Send or deliver information identified as CBI to only the following address: Mr. Roberto Morales, OAQPS Document Control Officer, EPA (C404-02), Attention Docket ID No. EPA-HQ-OAR-2002-0086, Research Triangle Park, NC 27711. Clearly mark the part or all of the information that you claim to be CBI. 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 comment directly to EPA without going through www.regulations.gov, your

e-mail address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD-ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. 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 the EPA Docket Center homepage at

<http://www.epa.gov/epahome/dockets.htm>.

Docket. All 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 material, such as copyrighted material, will be publicly available only in hard copy. Publicly available docket materials are available either electronically in www.regulations.gov or in hard copy at the EPA Docket Center, Docket ID No. EPA-HQ-OAR-2002-0086, EPA West Building, Room 3334, 1301 Constitution Ave., NW, Washington, DC. The EPA Docket Center Public Reading Room is open from 8:30 a.m. to 4:30

p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the EPA Docket Center is (202) 566-1742. A reasonable fee may be charged for copying docket materials.

FOR FURTHER INFORMATION CONTACT: Mr. John Schaefer, EPA, Office of Air Quality Planning and Standards, Sector Policies and Programs Division, Measurement Policy Group (D243-05), Research Triangle Park, NC 27711; telephone number (919) 541-0296; fax number (919) 541-1039; e-mail address schaefer.john@epa.gov.

SUPPLEMENTARY INFORMATION:

Regulated Entities. Entities potentially affected by the proposed amendments to the National Emission Standards for Hazardous Air Pollutants for Semiconductor Manufacturing include:

Table 1. Regulated Entities Table

Category	NAICS ¹	Examples of Regulated Entities
Industry	334413	Semiconductor crystal growing facilities, semiconductor wafer fabrication facilities, semiconductor test and assembly facilities.

¹ North American Industry Classification System

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. This table lists the types of entities that may potentially be affected by this action. To determine whether your facility is regulated by this action, you

should carefully examine the applicability criteria in 40 CFR 63.7181 of the rule. If you have questions regarding the applicability of the proposed amendments to a particular entity, consult the person listed in the preceding FOR FURTHER INFORMATION CONTACT section.

Submitting CBI. Do not submit this information to EPA through www.regulations.gov or e-mail. Send or deliver information identified as CBI only to the address listed in the ADDRESSES section of this document. Clearly mark the part or all of the information that you claim to be CBI. For CBI information submitted on a disk or CD ROM that you mail to EPA, mark the outside of the disk or CD ROM as CBI and then identify electronically within the disk or CD ROM the specific information that is claimed as CBI. In addition to one complete version of the comment that includes information claimed as CBI, a copy of the comment that does not contain the information claimed as CBI must be submitted for inclusion in the public docket. Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR part 2.

Worldwide Web (WWW). In addition to being available in the docket, an electronic copy of today's proposal will also be available through the WWW. Following the Administrator's signature, a copy of this action will be posted on EPA's Technology Transfer Network (TTN) policy and guidance page for

newly proposed or promulgated rules at

<http://www.epa.gov/ttn/oarpg/>. Information may also be obtained

from the webpage for the proposed rulemaking at:

<http://www.epa.gov/ttn/atw/pcem/pcempg.html>. The TTN at EPA's

web site provides information and technology exchange in various areas of air pollution control.

Public Hearing. If a public hearing is held, it will be held at

10:00 a.m. at the EPA's Environmental Research Center

Auditorium, Research Triangle Park, NC, or at an alternate site

nearby.

Outline. The information presented in this preamble is

organized as follows:

- I. Background
- II. Summary of the Proposed Amendments
- III. Rationale for the Proposed Amendments
- IV. Impacts of the Proposed Amendments
- V. Statutory and Executive Order Reviews
 - A. Executive Order 12866: Regulatory Planning and Review
 - B. Paperwork Reduction Act
 - C. Regulatory Flexibility Act
 - D. Unfunded Mandates Reform Act
 - E. Executive Order 13132: Federalism
 - F. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments
 - G. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks
 - H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use
 - I. National Technology Transfer and Advancement Act
 - J. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

I. Background

On May 22, 2003 (68 FR 27913), we issued the national emission standards for hazardous air pollutants (NESHAP) for semiconductor manufacturing (40 CFR part 63, subpart BBBBB). The NESHAP implement section 112(d) of the Clean Air Act (CAA) by requiring all major sources to meet emission standards for hazardous air pollutants (HAP) reflecting application of the maximum achievable control technology (MACT). The NESHAP establish emission limitations for emission sources at operations used to manufacture p-type and n-type semiconductors and active solid-state devices from a wafer substrate.

After promulgation of the NESHAP, it was brought to our attention that while the NESHAP established separate emission standards for organic and inorganic HAP from process vents, there was one plant that has a different process vent approach system. Specifically, this plant combines inorganic and organic vent streams into a single atmospheric process vent. At the time we developed the MACT standard, we were not aware of any sources that combined their inorganic and organic vent streams, and, therefore, we had no data on such sources. Rather, during the development phase of the rule, we determined that since 1980 industry practice has been to strictly separate process vent emissions into streams containing either organic or inorganic HAP (71 FR 61701, 61702-03, October 19, 2006). In order to

address the combined process vent stream segment of which we are now aware, on October 19, 2006, we proposed amending the final rule by establishing emission standards for existing and new combined process vent streams (71 FR 61701). For the limited number of existing combined process vents, we proposed no control. For new and reconstructed combined HAP process vents, we proposed the same requirements that currently apply to new inorganic HAP process vents and new organic HAP process vents (71 FR 61703).

In light of the D.C. Circuit's decision in Sierra Club v. EPA, 479 F.3d 875 (D.C. Circuit 2007), we are issuing this supplementary proposal to change the requirements for existing and new combined HAP process vents that we proposed in the October 2006 amendments. This supplementary proposal is limited to revising the emission standards for existing and new combined HAP process vents, and we are requesting comments only on these proposed changes.

II. Summary of the Proposed Amendments

The October 2006 proposed amendments proposed no control requirements for existing combined HAP process vents. In addition, for new and reconstructed combined HAP process vents, we proposed the requirement for inorganic HAP components to be the same as the current requirement for inorganic HAP process

vents and the requirement for organic HAP to be the same as the requirement for organic HAP process vents (71 FR 61703).

These proposed amendments establish the following emission limit for HAP emitted from new and existing combined HAP process vents: 14.22 parts per million by volume (ppmv).

III. Rationale for the Proposed Amendments

In the October 2006 proposed amendments, we proposed the requirements for existing combined HAP process vents would be no reductions in emissions or no control. Subsequently, the D.C. Circuit in Sierra Club v. EPA, 479 F.3d 875 (D.C. Circuit 2007) found that EPA's decision to set no control emission floors for source categories where the best performing sources did not use emission control technology was in direct contravention of CAA section 112(d)(3). In response to this decision, we are proposing revised standards for existing and new combined HAP process vents in this supplementary proposal.

Specifically, we are proposing that existing combined HAP process vents achieve a control level of 14.22 ppmv, which is the average level of emissions control achieved by the best performing four combined HAP process vents that we are aware of at maximum representative operating conditions. We are basing the MACT floor on four combined HAP process vents because we only identified four such vents in our recent assessment of the semiconductor industry. This level of control represents the

level actually achieved by the best performing sources, consistent with Sierra Club v. EPA 479 F.3d 875 (D.C. Circuit 2007) and CAA section 112(d)(3).

In addition, we are proposing that new combined HAP process vents also achieve a control level of 14.22 ppmv. This is because, for new and reconstructed sources, CAA section 112(d)(3) requires that we set emissions limitations that are no less stringent than the emissions control achieved in practice by the best performing similar source, which in this instance are the existing four combined HAP process vents. Our technical analysis of these four process vents, the information used to develop the 14.22 ppmv limitation, and the beyond the MACT floor analysis is available in the docket for this rulemaking.

We examined establishing limitations beyond the floor level of control for existing and new combined HAP process vents. Establishing a meaningful control level below the 14.22 ppmv limitation would require the segregation of organic and inorganic process vent streams and process heat into separate vent streams. The separate organic and inorganic process vents could then be controlled by add-on control devices. We looked at one option that segregated the process vents into organic and inorganic constituents and controlled the inorganic process streams with a wet scrubber as needed to meet the existing emission limit for inorganic process vent streams. We rejected

this control option because the associated costs were calculated to be in excess of \$7.5 million per ton of HAP controlled. We believe that this option is not a reasonable beyond the floor control option because the associated costs are prohibitive. Therefore, we are proposing the selected limitation or control level of 14.22 ppmv as the floor level of control for existing combined HAP process vents.

IV. Impacts of the Proposed Amendments

The proposed amendments do not affect the level of emissions control required by the existing NESHAP and therefore, there is no change to the analysis of nonair, health, environmental, and energy impacts from the final rule. This is because the proposed MACT level of control is achieved by three of the four process vents evaluated. We expect the fourth process vent will be able to meet the standard through operational changes rather than through the use of add on control devices. In addition, we do not expect new semiconductor manufacturing facilities will utilize combined HAP process vents, so we do not expect any new combined HAP process vents will be constructed in the future. Therefore, a re-evaluation of costs associated with the final rule was not necessary.

V. Statutory and Executive Order Reviews

A. Executive Order 12866: Regulatory Planning and Review

Under Executive Order 12866 (58 FR 51735, October 4, 1993), this action is a "significant regulatory action." Accordingly, EPA submitted this action to the Office of Management and Budget (OMB) for review under Executive Order 12866 and any changes made in response to OMB recommendations have been documented in the docket for this action.

B. Paperwork Reduction Act

This action does not impose any new information collection burden. The information collection requirements in the final rule have not been changed by these proposed amendments. However, OMB has previously approved the information collection requirements contained in the existing regulations (40 CFR part 63, subpart BBBBB) under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501, et seq., and has assigned OMB control number 2060-0591. The OMB control numbers for EPA's regulations in 40 CFR are listed in 40 CFR part 9.

C. Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA) generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities.

Small entities include small businesses, small organizations, and small governmental jurisdictions.

For purposes of assessing the impacts of this rule on small entities, small entity is defined as: (1) A small business as defined by the Small Business Administrations' regulations at 13 CFR 121.201; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

After considering the economic impacts of this proposed rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities. This proposed rule will not impose any requirements on small entities.

We continue to be interested in the potential impacts of the proposed rule on small entities and welcome comments on issues related to such impacts.

D. Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104-4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector.

Under section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with "Federal mandates" that may result in expenditures to State, local, and tribal governments, in the aggregate, or to the private sector, of \$100 million or more in any one year. Before promulgating an EPA rule for which a written statement is needed, section 205 of the UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective, or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows EPA to adopt an alternative other than the least costly, most cost-effective, or least burdensome alternative if the Administrator publishes with the final rule an explanation why that alternative was not adopted. Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates, and informing,

educating, and advising small governments on compliance with the regulatory requirements.

EPA has determined that this proposed rule does not contain a Federal mandate that may result in expenditures of \$100 million or more for State, local, and tribal governments, in the aggregate, or to the private sector in any one year. This rule affects only one facility in the nation. Total rule impacts were estimated to be approximately \$22,000. Thus, this proposed rule is not subject to the requirements of sections 202 and 205 of the UMRA. EPA has determined that this proposed rule contains no regulatory requirements that might significantly or uniquely affect small governments because it contains no requirements that apply to such governments or impose obligations upon them. Therefore, the proposed rule is not subject to section 203 of the UMRA.

E. Executive Order 13132: Federalism

Executive Order 13132 (64 FR 43255, August 10, 1999) requires EPA to develop an accountable process to ensure "meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications." "Policies that have federalism implications" is defined in the Executive Order to include regulations that have "substantial direct effects on the States, on the relationship between the national government and the States, or on the

distribution of power and responsibilities among the various levels of government."

This proposed rule does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. None of the affected semiconductor facilities are owned or operated by State or local governments. Thus, Executive Order 13132 does not apply to this proposed rule.

In the spirit of Executive Order 13132, and consistent with EPA policy to promote communications between EPA and State and local governments, EPA specifically solicits comment on this proposed rule from State and local officials.

F. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments

Executive Order 13175, entitled "Coordination with Indian Tribal Governments" (65 FR 67249, November 9, 2000) requires EPA to develop an accountable process to ensure "meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications." This proposed rule does not have tribal implications as specified in Executive Order 13175. It will not have substantial direct effects on tribal governments, on the relationship between the

Federal government and Indian tribes, or on the distribution of power and responsibilities between the Federal government and Indian tribes. No tribal governments own or operate semiconductor manufacturing facilities and are not subject to the proposed standards. Thus, Executive Order 13175 does not apply to this proposed rule. EPA specifically solicits additional comment on this proposed rule from tribal officials.

G. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks

EPA interprets Executive Order 13045 as applying only to those regulatory actions that are based on health or safety risks, such that the analysis required under section 5-501 of the Executive Order has the potential to influence the regulation. This proposed rule is not subject to Executive Order 13045 because it is based on technology performance and not on health or safety risks.

H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

This proposed rule is not a "significant energy action" as defined in Executive Order 13211, "Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use" (66 FR 28355, May 22, 2001) because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. This rule does not require the

use of add-on control devices and will therefore not have any adverse energy effects.

I. National Technology Transfer and Advancement Act

Section 112(d) of the National Technology Transfer and Advancement Act (NTTAA) of 1995 (Public Law No. 104-113, 12(d) (15 U.S.C. 272 note), directs EPA to use voluntary consensus standards (VCS) in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. VCS are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by VCS bodies. The NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable VCS.

This proposed rulemaking does not involve technical standards. Therefore, EPA is not considering the use of any VCS.

J. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

Executive Order (EO) 12898 (59 FR 7629 (Feb. 16, 1994)) establishes federal executive policy on environmental justice. Its main provision directs federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as

appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations in the United States.

EPA has determined that this proposed rule will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations because it increases the level of environmental protection for all affected populations without having any disproportionately high and adverse human health or environmental effects on any population, including any minority or low-income population. This proposed rule affects one facility in the nation. This facility emits approximately one ton per year of regulated HAP and does not significantly affect the local population.

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List of Subjects in 40 CFR Part 63

Environmental Protection, Air pollution control, Hazardous substances, Reporting and Recordkeeping requirements.

Dated:

Stephen L. Johnson
Administrator.

For the reasons stated in the preamble, title 40, chapter I, part 63, of the Code of the Federal Regulations is proposed to be amended as follows:

PART 63--[AMENDED]

1. The authority citation for part 63 continues to read as follows:

Authority: 42 U.S.C. 7401, et seq.

Subpart BBBBB--[AMENDED]

2. Section 63.7184 is amended by adding paragraph (f) to read as follows:

§63.7184 What emission limitations, operating limits, and work practice standards must I meet?

* * * * *

(f) Process vents - combined HAP emissions. For each combined HAP process vent, other than process vents from storage tanks, you must reduce or maintain the concentration of emitted HAP from the process vent to less than or equal to 14.22 ppmv. These limitations can be met by venting emissions from your process vent through a closed vent system to any combination of control devices meeting the requirements of §63.982(a)(2).