

**Comments of the
Semiconductor Industry Association (SIA)
On the Notice of Proposed Rulemaking:
“Revisions to the Air Emissions Reporting Requirements”
(88 FR 54118, August 9, 2023)
[EPA-HQ-OAR-2004-0489]
Submitted November 17, 2023**

The Semiconductor Industry Association (SIA) appreciates the opportunity to submit the following comments on the Notice of Proposed Rulemaking on “Revisions to the Air Emissions Reporting Requirements” (88 Fed. Reg. 54118, August 9, 2023).

SIA is the trade association representing leading U.S. companies engaged in the design and manufacture of semiconductors. The U.S. is the global leader in the semiconductor industry, and continued U.S. leadership in semiconductor technology is essential to America’s economic growth, technology leadership, and national security. More information about SIA and the semiconductor industry is available at www.semiconductors.org.

SIA supports efforts to improve the accuracy of reporting air emissions in the semiconductor industry. While we support the continuous improvement of reporting methods, SIA encourages EPA to:

- limit direct measurement reporting to only those test reports that are required to be submitted by regulation or air permit conditions by adding definitions for “performance evaluation” and “source test”,
- modify the exceptions for emission data provided by 40 CFR 2.301 paragraphs (a)(2)(ii) to allow highly sensitive intellectual property to be considered confidential business information,
- clarify the quality assurance process such that where EPA has delegated authority regarding stack testing requirements to another authority having jurisdiction (AHJ), EPA will not revisit decisions previously made by the AHJ and that the AHJ has the final decision-making authority, and
- incorporate an opportunity for companies and industry to comment on the validity and accuracy of their data during rulemaking and emission factor development processes

Proposed Direct Measurement Data Reporting Requirements

EPA has proposed to revise 40 C.F.R 51.25(b) to require direct reporting of source tests and performance evaluations that are (1) gathered to meet Federal or State requirements, (2) not otherwise reported to EPA, (3) supported by the electronic reporting system at the time of the test, and (4) not subject to confidential treatment. Furthermore, EPA is proposing to conduct quality assurance of the source tests and performance evaluations, including potentially requiring a source to revise reported results.

Additionally, EPA has proposed to require reporting information related to the source testing and performance evaluations, including the unit capacity, percent of capacity at the time of testing, activity level, operating conditions, and process data.

SIA and its member companies are concerned that imprecise language in the proposed rule could result in critical, competition-sensitive intellectual property becoming publicly available.

EPA uses the terms “source testing” and “performance evaluation” but provides no definition of these terms. As a result, the proposed rule will result in many sources having to submit information to an AHJ that could have profound negative effects on U.S. competitiveness. Although SIA believes EPA’s intent is to gather source test and performance evaluation data that is gathered for compliance demonstration purposes at emission release points, the proposal is not entirely clear. In proposed 51.25(b) EPA gives some hint as to what constitutes a “source test” or “performance evaluation” when it proposes to only require submittal of “results [] gathered to meet any other Federal or State requirement.” However, nowhere in the proposed rule is there language defining what constitutes a “performance evaluation.” The preamble states that performance evaluations “include linearity checks (which measure an instrument’s ability to provide consistent sensitivity throughout its operating range) and routine calibrations of continuous emissions monitoring system (CEMS) equipment, which provide emissions data much more frequently than testing.” Based on this preamble language, it can be inferred that “performance evaluation” is defined as the term is used in 40 CFR 60, Appendix B and F and only applies to assessments performed pursuant to these regulatory requirements in order to demonstrate that a CEMS is compliant with federal quality assurance procedures. However, the proposed rules fail to include a definition to provide clarity on this critical point. We request that EPA include a definition in the rule defining “performance evaluations” consistent with how the term is defined in 40 CFR 63.2, i.e., “the conduct of relative accuracy testing, calibration error testing, and other measurements used in validating the continuous monitoring system data.”

Similarly, the proposed rule is not clear as to what constitutes a source test. Absent any definition as to what constitutes a “source test,” sources are left guessing as to what is required. We request that EPA include a definition in the rule defining “source test” consistent with how the term “performance test” is defined in 40 CFR 63.2, i.e., the collection of data resulting from the execution of a test method (usually three emission test runs) used to demonstrate compliance with a relevant stack emission standard as specified in the performance test section of the relevant standard.

The need for clarity as to what constitutes a source test or a performance evaluation is not an idle concern for our industry. Semiconductor sources have long used internal assessments referred to as “performance evaluations” to explore process improvements, including potential emission reduction efforts. These efforts may ultimately feed into compliance efforts under State or Federal rules, but we would not consider this type of process development work to be a “source test” or “performance evaluation” under the rule. However, in the absence of clarity in the rule language, EPA or the AHJ may incorrectly assert that such information must be submitted. If sources are required to disclose the results of these type of process evaluations and the related operating conditions / process data, these sources would need to report recipe details such as tool identification, recipe step durations and temperatures, gas flow rates, chemical composition, etc. This type of information, such as

proprietary chemical input composition and associated proprietary process steps, includes some of the most closely-guarded trade secrets in the semiconductor industry,¹ and several courts have acknowledged that semiconductor chip manufacturing processes and design are protectable as trade secrets.² To remain globally competitive, a semiconductor company must innovate on a continuous basis and bring new and faster products to the market. Accordingly, semiconductor manufacturers invest considerable time and money in research and development to perfect the recipes used in the fabrication process. Each company's recipe portfolio has an inherent intellectual property value in the hundreds of millions to billions of dollars. For these reasons it is imperative that EPA clarify the rule to define narrowly the source tests and performance evaluations that must be submitted under the proposed 40 CFR 51.25(b) and specifically exclude from the reporting requirements operating conditions and process data unrelated to CEMS performance evaluations and not directly required to demonstrate compliance with point source emission limits or standards.

It is worth noting that absent such clarification that these terms are to be interpreted narrowly, EPA's proposal would adversely impact semiconductor manufacturing at a time when the U.S. government is making significant policy and financial investments to encourage domestic semiconductor manufacturing sector growth. Complementing these investments, it is critical that domestic intellectual property remains confidential so that domestic companies can compete internationally.

Motivated by the desire to protect key intellectual property, sources may be discouraged from conducting process assessments that might be within the scope of the undefined term "performance evaluations" due to the requirement to provide detailed and highly confidential process information, much of which is protected by non-disclosure agreements with suppliers.

For the reasons discussed above, SIA requests that EPA define the terms "performance evaluation" and source test" consistent with how the terms "performance evaluation" and "performance test" are used in Part 63. If EPA insists on requiring inclusion of detailed process information, in order to protect the competitiveness of the US semiconductor industry, there must be a revision to exceptions for emission data provided by 40 CFR 2.301 paragraphs (a)(2)(ii) that would allow trade secret intellectual property to be classified and treated as confidential business information.

¹ See Comments by the Semiconductor Industry Association on U.S. EPA's Proposed Rule: Mandatory Reporting of Greenhouse Gases, EPA Docket ID No. EPA-HQ-OAR-2008-0508-0498.1 (June 9, 2009); see also Comments of the Semiconductor Industry Association on U.S. EPA's Proposed Rule: Mandatory Reporting of Greenhouse Gases; Additional Sources of Fluorinated GHGs, EPA Docket No. EPA-HQ-OAR-2009-0927-0131.1 (June 11, 2010).

² See e.g., *Taiwan Semiconductor Mfg. Co. v. Semiconductor Mfg. Int'l Corp.*, 2004 U.S. Dist. LEXIS 29717 (N.D. Cal. Apr. 21, 2004)(court acknowledged that semiconductor manufacturing process could be trade secret, but determined it had no jurisdiction over non-U.S. plaintiff's claim of misappropriation); *Uniram Tech., Inc. v. Taiwan Semiconductor Mfg. Co.*, 2007 U.S. Dist. LEXIS 67862 (N.D. Cal. Sept. 5, 2007) (court ruled on motion and allowed plaintiff to proceed with claim that defendant misappropriated trade secrets by divulging semiconductor manufacturing process details to third parties); *Silicon Image, Inc. v. Analogix Semiconductor, Inc.*, 2007 U.S. Dist. LEXIS 96073 (N.D. Cal. Dec. 20, 2007) (court recognized silicon chip register design as potentially subject to trade secret protection); *Silicon Image, Inc. v. Analogix Semiconductor, Inc.*, 2007 U.S. Dist. LEXIS 96073 (N.D. Cal. Dec. 20, 2007) (court recognized silicon chip register design as potentially subject to trade secret protection); *Metron Tech. Distrib. Corp. v. Discreet Indus. Corp.*, 189 Fed. Appx. 3 (2d Cir. N.Y. 2006) (court granted injunction preventing defendant from producing replacement parts for semiconductor manufacturing tool because tool design was a trade secret that defendant had misappropriated).

SIA also requests that EPA not proceed with the proposal to consider all point source data elements associated with performance evaluations and source tests to be unprotected emissions data. Emissions data are just that: data identifying the quantity of a specific pollutant emitted. Congress did not anticipate in passing the Clean Air Act that the term “emissions data” would be interpreted expansively by EPA in such a manner that would compromise the competitiveness of U.S. industry. EPA should recognize the damage it could do to the U.S. economy by adopting such an expansive and unprecedented interpretation of “emissions data” and offer trade secret protection to point source data elements other than the actual emission rates.

SIA and its member companies are concerned about the addition of EPA oversight for source testing and performance evaluations.

§ 51.25(c), as proposed, would authorize EPA to require a source that has submitted a source test or performance evaluation report in compliance with an underlying state or federal requirement to have to revise and supplement that report. The proposed language undermines the state, local, or tribal authority for performance testing oversight. Stack testing for compliance demonstration purposes typically begins with an existing regulation or air permit condition that identifies the required testing. It also typically involves submitting a test protocol to the AHJ, discussions regarding the protocol and adjustments that may be needed, an opportunity for the AHJ to observe testing, and submittal of the results to the AHJ. In some cases, AHJs have previously approved or required variations from EPA reference methods or even required a non-EPA test method. SIA is concerned that EPA will be conducting quality assurance on reported results without the benefit of familiarity with the permit condition, requirements, protocol, and test event. Any issue EPA raises is likely to be raised well after the test has been completed. It will be impractical or impossible to amend the test results after the fact. Additionally, it is unclear how conflicting quality assurance feedback between EPA and primary AHJs will be resolved. For example, it is possible that EPA and primary AHJs would request revisions to reports that would result in different reported numeric values. Sources should not be required to redo costly stack testing due to EPA review after the conclusion of a test event / report submittal based on EPA quality assurance or EPA’s desire for supplemental data not needed or required by the AHJ to assure compliance. Additionally, in the event EPA quality assurance would substantively revise the reported stack test values due to quality assurance reviews that conflict with the primary AHJ, sources could potentially be subject to compliance status determination risk. SIA urges EPA to clarify that where EPA has delegated authority to specify stack testing requirements to the primary AHJ, EPA will not revisit decisions previously made by that AHJ or supplant the AHJ’s primacy in approving the test report.

SIA and its member companies are concerned about representativeness of data and that data usage.

To the extent that individual companies provide data for rulemaking or emission factor development, SIA believe it would be appropriate for EPA to inform the companies and/or an industry association that can help coordinate reviews and allow them to comment on the validity and accuracy for use as emissions data going forward. For example, over time if semiconductor process technologies are no longer being used, associated emissions data from those obsolete technologies may no longer be representative of current or future emissions. Additionally, if discrepancies in emissions data (including stack test reports) have been identified subsequent to the data submission, that data may not be appropriate for incorporation into rulemaking and

emission factor development. It would also be beneficial for companies and/or industry associations to provide input on source categorization. While we recognize that EPA will generally share data with the public in the process of developing emission factors and standards, it would benefit EPA and companies to complete the data review prior to its publication in an EPA docket.

EPA’s proposed revisions regarding how to report source testing and performance evaluations conflicts with the revisions regarding which source testing and performance evaluations are to be reported.

§ 51.25(b)(3), as proposed, indicates that sources must report source test and performance evaluation results if such results are supported by an EPA electronic reporting system at the time the test is conducted. However, the requirements listed in § 51.35(a)(3) note that if test methods or performance evaluations that are not supported by the electronic reporting tool (ERT) as listed on EPA’s ERT website at the time of the test or evaluation is conducted, the results of the test or evaluation must be included as an attachment in the ERT. This language causes a direct conflict between the two proposed rule revisions. SIA recommends deletion of the language proposed in § 51.35(a)(3).

Conclusion

SIA and its member companies appreciate the opportunity to provide comments on the proposed revisions to the Air Emissions Reporting Requirements. We would be willing to meet and further discuss these concerns and possible alternative approaches to satisfy EPA’s desires to develop a database of emissions data in support of emission factor development.

Recommended Changes to EPA’s Proposed Regulatory Text

| | Proposed Rule Text | Recommended Action or Rule Text |
|---------------|---|--|
| § 51.25(b)(2) | Such results are gathered to meet any other Federal or State requirement; | Such results are <u>required to be gathered and reported by to</u> meet any other Federal or State requirement; |
| § 51.25(c) | Quality assurance and supporting information. The EPA may require an owner/operator of a point source to review and/or revise data that do not meet quality assurance criteria. The EPA may require an owner/operator of a point source to provide other data or documentation to support their submissions when information provided does not fully explain the source or quality of the data provided. | Quality assurance and supporting information. The EPA may require an owner/operator of a point source to review and/or revise data that do not meet quality assurance criteria. The EPA may require an owner/operator of a point source to provide other data or documentation to support their submissions when information provided does not fully explain the source or quality of the data provided. <u>Where EPA has delegated authority to specify stack testing requirements to another AHJ, EPA will not revisit decisions previously made by that AHJ. Where EPA and another AHJ provide conflicting quality assurance feedback, the AHJ will have the final decision-making authority.</u> |
| § 51.35(a)(3) | Performance Test Methods or Performance Evaluations that are not supported by the ERT as listed on EPA’s ERT website at the time of the test or evaluation is conducted. The results of the performance test method or performance evaluation must be included as an attachment (such as a Portable Document Format (PDF) file) in the ERT or an alternate electronic file consistent with the XML schema listed on EPA’s ERT website. Submit the ERT generated package or alternate file to the EPA via CEDRI. | Remove completely as this directly conflicts with § 51.25(b)(3) |
| § 51.25(b)(4) | The tests are not subject to confidential treatment in accordance with exceptions for emission data provided by 40 CFR 2.301 paragraphs (a)(2)(ii)(A) and (a)(2)(ii)(B). | The tests are not subject to confidential treatment in accordance with exceptions for emission data provided by 40 CFR 2.301 paragraphs (a)(2)(ii)(A) <u>through</u> (a)(2)(ii)(BC). |
| § 51.50 | New addition | Add the following definitions: <u>Performance evaluation means the conduct of relative accuracy</u> |

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| | | <p><u>testing, calibration error testing, and other measurements used in validating the continuous monitoring system data.</u></p> <p><u>Source test means the collection of data resulting from the execution of a test method (usually three emission test runs) used to demonstrate compliance with a relevant stack emission standard as specified in the performance test section of the relevant standard or permit.</u></p> |
| § 2.301(a)(2)(ii)(C) | New addition | <p><u>(ii) Notwithstanding paragraph (a)(2)(i) of this section, the following information shall be considered to be emission data only to the extent necessary to allow EPA to disclose publicly that a source is (or is not) in compliance with an applicable standard or limitation, or to allow EPA to demonstrate the feasibility, practicability, or attainability (or lack thereof) of an existing or proposed standard or limitation:</u></p> <p><u>(A) Information concerning research, or the results of research, on any project, method, device or installation (or any component thereof) which was produced, developed, installed, and used only for research purposes; and</u></p> <p><u>(B) Information concerning any product, method, device, or installation (or any component thereof) designed and intended to be marketed or used commercially but not yet so marketed or used.</u></p> <p><u>(C) Information concerning key intellectual property or that is considered trade secret.</u></p> |
| § 51.25(d) | New addition | <p><u>(d) In the process of using of this data for rulemaking or emission factor development, EPA will communicate this intent to the provider and allow the provider to comment on the validity and accuracy of the data for that purpose.</u></p> |