ADEQ
Arizona Department of Environmental Quality

SIP Revision: Rules Incorporating Hayden Smelter Permit Conditions to Supplement Arizona's 2023 SO_2 SIP

Air Quality Division
December 10, 2025 Final

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Table of Contents

List of Tables

List of Appendices

Completeness Criteria
(40 C.F.R. Part 51, Appendix V, § 2.0)

Appendix V § 2.1 - Administrative Materials

(a) A formal signed, stamped, and dated letter of submittal from the Governor or his designee, requesting EPA approval of the plan or revision thereof (hereafter "the plan"). If electing to submit a paper submission with a copy in electronic version, the submittal letter must verify that the electronic copy provided is an exact duplicate of the paper submission.

A letter of submittal will be included with the final State Implementation Plan (SIP) revision. Also included with the cover letter is a delegation of authority from Karen Peters, Director of the Arizona Department of Environmental Quality (ADEQ), to Daniel Czecholinski. This delegation gives Mr. Czecholinski the authority to perform any act the ADEQ Director is authorized to perform under the state air quality statutes, including the submission of SIPs to the U.S. Environmental Protection Agency (EPA).

(b) Evidence that the State has adopted the plan in the State code or body of regulations; or issued the permit, order, consent agreement (hereafter "document") in final form. That evidence shall include the date of adoption or final issuance as well as the effective date of the plan, if different from the adoption/issuance date.

Evidence that the State has adopted the SIP revision will be included in the letter of submittal for the final SIP revision. Evidence that the State has adopted the proposed rules incorporating the Hayden Smelter permit conditions in the State code will be included in Appendix A, Exhibit A-II upon completion of the rulemaking process.

(c) Evidence that the State has the necessary legal authority under State law to adopt and implement the plan.

The Arizona Department of Environmental Quality has primary responsibility for air pollution control and abatement, and as such, is required to adopt and "maintain a state implementation plan that provides for implementation, maintenance and enforcement of national ambient air quality standards and protection of visibility as required by the clean air act." A.R.S. § 49-404(A). ADEQ also maintains authority to issue and administer rules, adopt county rules, and to submit such rules for approval into the SIP. Copies of Arizona Revised Statutes, Sections 49-104, 49-106, 49-404, 49-425, 48-458, and 49-458.01 will be included in the final SIP revision in Appendix B, Exhibit B-II.

(d) A copy of the actual regulation, or document submitted for approval and incorporation by reference into the plan, including indication of the changes made (such as redline/strikethrough) to the existing approved plan, where applicable. The submission shall include a copy of the official State regulation/document, signed, stamped, and dated by the appropriate State official indicating that it is fully enforceable by the State. The effective date of any regulation/document contained in the submission shall, whenever possible, be indicated in the regulation/document itself; otherwise the State should include a letter signed, stamped, and dated by the appropriate State official indicating the effective date. If the regulation/document provided by the State for approval and incorporation by reference into the plan is a copy of an existing publication, the State submission should, whenever possible, include a copy of the publication cover page and table of contents.

See this SIP revision (*SIP Revision: Rules Incorporating Hayden Smelter Permit Conditions to Supplement Arizona's 2023 SO_2 SIP*), the document proposed for approval.

A copy of the Notice of Proposed Rulemaking (NPRM) is included in Appendix A, Exhibit A-I. The Notice of Final Rulemaking will be included in the final SIP revision in Appendix A, Exhibit A-II upon completion of the rulemaking process.

(e) Evidence that the State followed all of the procedural requirements of the State's laws and constitution in conducting and completing the adoption/issuance of the plan.

Evidence that ADEQ followed the procedural requirements of Arizona state laws and constitution in adopting this plan will be included in Appendix B upon completion of the public comment process.

(f) Evidence that public notice was given of the proposed change consistent with procedures approved by EPA, including the date of publication of such notice.

Evidence that ADEQ gave notice of the proposed SIP revision will be included in Appendix B upon completion of the public comment process.

(g) Certification that public hearing(s) were held in accordance with the information provided in the public notice and the State's laws and constitution, if applicable and consistent with the public hearing requirements in 40 CFR 51.102.

Certification and other documents related to the public hearing for this SIP revision will be included in Appendix B upon completion of the public comment process.

(h) Compilation of public comments and the State's response thereto.

A public comment responsiveness summary for this SIP revision (*SIP Revision: Rules Incorporating Hayden Smelter Permit Conditions to Supplement Arizona's 2023 SO_2 SIP*) will be included in Appendix B, Exhibit B-VIII upon completion of the public comment process.

Appendix V § 2.2 - Technical Support

(a) Identification of all regulated pollutants affected by the plan.

Sulfur dioxide emissions from the Hayden Smelter in Hayden, Arizona. See also the *Completeness Criteria* in the *Final SIP Revision: 2023 Hayden Sulfur Dioxide Nonattainment Area for the 1971 and 2010 SO_2 NAAQS*.

(b) Identification of the locations of affected sources including the EPA attainment/nonattainment designation of the locations and the status of the attainment plan for the affected area(s).

See Section 1 and 2 of this SIP revision (*SIP Revision: Rules Incorporating Hayden Smelter Permit Conditions to Supplement Arizona's 2023 SO_2 SIP*). See also Section 3 of the *Final SIP Revision: 2023 Hayden Sulfur Dioxide Nonattainment Area for the 1971 and 2010 SO_2 NAAQS*.

(c) Quantification of the changes in plan allowable emissions from the affected sources; estimates of changes in current actual emissions from affected sources or, where appropriate, quantification of changes in actual emissions from affected sources through calculations of the differences between certain baseline levels and allowable emissions anticipated as a result of the revision.

The Hayden SO_2 Emissions Inventory TSD, located in Appendix B of the *Final SIP Revision: 2023 Hayden Sulfur Dioxide Nonattainment Area for the 1971 and 2010 SO_2 NAAQS*, contains the technical documentation and a detailed emissions inventory.

(d) The State's demonstration that the national ambient air quality standards, prevention of significant deterioration increments, reasonable further progress demonstration, and visibility, as applicable, are protected if the plan is approved and implemented. For all requests to redesignate an area to attainment for a national primary ambient air quality standard, under section 107 of the Act, a revision must be submitted to provide for the maintenance of the national primary ambient air quality standards for at least 10 years as required by section 175A of the Act.

See the Hayden SO_2 Modeling TSD in Appendix C of the *Final SIP Revision: 2023 Hayden Sulfur Dioxide Nonattainment Area for the 1971 and 2010 SO_2 NAAQS*, which contains the attainment demonstration for the 1971 and 2010 SO_2 NAAQS.

(e) Modeling information required to support the proposed revision, including input data, output data, models used, justification of model selections, ambient monitoring data used, meteorological data used, justification for use of offsite data (where used), modes of models used, assumptions, and other information relevant to the determination of adequacy of the modeling analysis.

See the Hayden SO_2 Modeling TSD in Appendix C of the *Final SIP Revision: 2023 Hayden Sulfur Dioxide Nonattainment Area for the 1971 and 2010 SO_2 NAAQS*.

(f) Evidence, where necessary, that emission limitations are based on continuous emission reduction technology.

See Section 4 of the *Final SIP Revision: 2023 Hayden Sulfur Dioxide Nonattainment Area for the 1971 and 2010 SO_2 NAAQS*. See also Appendix A, Exhibit A-II of this SIP revision (*SIP Revision: Rules Incorporating Hayden Smelter Permit Conditions to Supplement Arizona's 2023 SO_2 SIP*) for the final revised rule. The rule includes numerical fugitive emissions limits for the copper smelter in the nonattainment area and contains particular work practice standards and recordkeeping/reporting requirements to ensure compliance with the emission limits and to ensure attainment of the 1971 and 2010 SO_2 NAAQS.

(g) Evidence that the plan contains emission limitations, work practice standards and recordkeeping/reporting requirements, where necessary, to ensure emission levels.

See Section 4 of the *Final SIP Revision: 2023 Hayden Sulfur Dioxide Nonattainment Area for the 1971 and 2010 SO_2 NAAQS*. See also Appendix A, Exhibit A-II of this SIP revision (*SIP Revision: Rules Incorporating Hayden Smelter Permit Conditions to Supplement Arizona's 2023 SO_2 SIP*) for the final revised rule. The rule includes numerical fugitive emissions limits for the copper smelter in the nonattainment area and contains particular work practice standards and recordkeeping/reporting requirements to ensure compliance with the emission limit and to ensure attainment of the 1971 and 2010 SO_2 NAAQS.

(h) Compliance/enforcement strategies, including how compliance will be determined in practice.

See the NPRM in Appendix A, Exhibit A-I. See also Section 4 of the *Final SIP Revision: 2023 Hayden Sulfur Dioxide Nonattainment Area for the 1971 and 2010 SO_2 NAAQS.*

(i) Special economic and technological justifications required by any applicable EPA policies, or an explanation of why such justifications are not necessary.

No known deviations from EPA policy.

1 Introduction

1.1 Background

The Arizona Department of Environmental Quality (ADEQ) has amended Arizona Administrative Code (A.A.C.) Title 18, Chapter 2, Article 13 to incorporate relevant Hayden Smelter permit conditions into state rule. This action is necessary to secure EPA's approval of the *Final SIP Revision: 2023 Hayden SO_2 Nonattainment Area for the 1971 and 2010 SO_2 NAAQS, October 3, 2023* (2023 SIP Revision). ADEQ is now submitting the amended rules to the U.S. Environmental Protection Agency (EPA) with a request to approve them as a revision to the Arizona State Implementation Plan (SIP). ADEQ will withdraw Appendix A (Significant Permit Revision No. 96410, Attachment "I": Hayden Smelter Site-Specific Requirements) from the 2023 SIP Revision and replace it with the revised rules.

1.2 Statement of Introduction and Purpose

The SO_2 standards were first codified in 1971.[1] On May 22, 1996, EPA promulgated several minor technical changes to the SO_2 NAAQS, but did not revise the level of the standard.[2] EPA retained the block averaging convention and adopted clarifying language in 40 CFR §§ 50.4 and 50.5. The second technical change was to state the level of the standard in parts per million (ppm) rather than micrograms per cubic meter ($\mu g/m_3$) (40 CFR §§ 50.4 and 50.5). This change made the SO_2 NAAQS consistent with the standards for other pollutants.

On June 22, 2010, the U.S. Environmental Protection Agency revised the primary SO_2 NAAQS.[3] This revision established a new one-hour SO_2 standard at a level of 75 parts per billion (ppb), based on the three-year average of the annual 99th percentile of one hour daily maximum concentrations.[4]

On August 5, 2013, EPA designated 29 areas of the country as nonattainment for the 2010 SO_2 NAAQS.[5] Under the Clean Air Act (CAA), states must submit SIPS to meet the requirements of Section 172 and Sections 191 – 192 and show attainment of the NAAQS. EPA designated two areas in Arizona as nonattainment for the 2010 SO_2 standard, the Miami and Hayden Planning Areas.[6]

This revision updates A.A.C. Title 18, Chapter 2, Article 13 to incorporate requirements previously established as Hayden Smelter permitting conditions outlined in Permit No. 39948 (As Amended by Significant Permit Revision No. 96410). Chapter 1 provides the necessary factual and legal background for these revisions. Chapter 2 examines the ADEQ rule amendments. Chapter 3 demonstrates that these SIP revisions do not violate the anti-backsliding requirements of the CAA.

[1] 36 FR 8,186 (Apr. 30, 1971); *see also* 36 FR 22,384 (Nov. 25, 1971).
[2] 61 FR 25,566 (May 22, 1996).
[3] 75 FR 35,519 (June 22, 2010).
[4] *Id.*
[5] 78 FR 47,191 (Aug. 5, 2013).
[6] *Id.*

1.3 SIP Revision: 2023 Hayden SO_2 Nonattainment Area for the 1971 and 2010 SO_2 NAAQS

ADEQ's final 2023 SIP Revision was submitted to EPA for approval on October 3, 2023.[7] EPA has not yet acted on the 2023 SIP Revision; however, under CAA §110(k)(1)(B), the 2023 SIP Revision was deemed administratively complete by operation of law on April 3, 2024. Further, on May 2, 2024, ADEQ received a completeness letter from EPA.

A separate rulemaking codifying Hayden Smelter permit conditions into state rule commenced in May 2024. The permit conditions from Hayden Smelter Permit No. 39948 (As Amended by Significant Permit Revision No. 96410) are the subject of this rulemaking and SIP revision (*SIP Revision: Rules Incorporating Hayden Smelter Permit Conditions to Supplement Arizona's 2023 SO_2 SIP).*

[7] *See* Arizona Department of Environmental Quality, Final SIP Revision: 2023 Hayden Sulfur Dioxide Nonattainment Area for the 1971 and 2010 SO_2 NAAQS (Oct. 3, 2023).

2 Rules to Be Added to the SIP

2.1 Rules Incorporating Hayden Smelter Permit Conditions

Table 1-1 documents the rules to be submitted for approval as a supplemental component of the 2023 SIP Revision. ADEQ is currently in the process of adopting new rules into the Arizona Administrative Code to provide permanence and enforceability for the control measures implemented at the Hayden Smelter under Significant Permit Revision No. 96410.

A Notice of Proposed Rulemaking (NPRM) was published in the Arizona Administrative Register (A.A.R.) on September 12, 2025, opening a public comment period for the new rules. The rules are expected to be considered for approval by the Governor's Regulatory Review Council in fall 2025. The proposed rules are included in Appendix A, Exhibit A-I. A codified version of the final rules will be submitted to EPA for approval into the Arizona SIP upon completion of the rulemaking process.

Table 1-1 Rules to Be Added to the SIP

Rule Added to the Arizona SIP	SIP Rule Replaced	Amended (proposed) by NPRM
A.A.C. R18-2-B1302 (Limits on SO_2 Emissions from the Hayden Smelter)	23 A.A.R. 767, April 7, 2017	31 A.A.R. 2871, September 12, 2025
Appendix 14	23 A.A.R. 767, April 7, 2017.	31 A.A.R. 2871, September 12, 2025

2.2 Summary of Proposed Rules

2.2.1 A.A.C. R18-2-B1302 – Limits on SO_2 Emissions from the Hayden Smelter

The current rule R18-2-B1302 establishes limits on sulfur dioxide emissions from the Hayden Smelter and monitoring, recordkeeping, and reporting requirements for these limits. The proposed revisions to the rule change the main stack limit from a dual 14-day and one-hour limit to a single 1069.1 lb/hr, 14-operating day average limit and set forth additional compliance demonstration requirements at the main stack. The proposed revisions also establish fugitive emissions limits and monitoring requirements for those limits. Similarly, the proposed rule has been updated to reflect additional compliance demonstration requirements for fugitive emissions.

ADEQ modeled the fifteen scenarios included in the proposed rule, R18-2B1302, using AERMOD modeling as described in the Appendix C of the *Final SIP Revision: 2023 Hayden Sulfur Dioxide Nonattainment Area for the 1971 and 2010 SO2 NAAQS* ("Attainment Demonstration Modeling"). The only modification made to this modeling was hourly emissions for the anode furnaces, flash furnace,

matte tapping, slag skimming and converter aisle area emissions. The pound per hour emissions rates were divided by the number of volume sources that make up a given roofline, consistent with the Attainment Demonstration Modeling, p. 8-52. The scenarios and resulting AERMOD predicted concentrations are listed in Table 1-2 below.

Table 1-2 Alternative Fugitive Emissions Limit Scenarios

Rebalanced Fugitive Emissions Limits	Fugitive emissions of SO_2 from the flash furnace, matte tapping, and slag skimming areas (pounds/hour)	Fugitive emissions of SO_2 from the converter aisle area (pounds/hour)	Fugitive emissions of SO_2 from the anode furnace (pounds/hour)	Resulting AERMOD Concentrations
Scenario 1	37	10	10	195.76918
Scenario 2	35.5	10	11	195.28684
Scenario 3	34	10	12	194.80451
Scenario 4	36.5	11	9	195.30717
Scenario 5	35	11	10	194.82484
Scenario 6	34	11	11	195.7745
Scenario 7	32.5	11	12	195.31926
Scenario 8	35	12	9	195.79483
Scenario 9	33.5	12	10	195.3125
Scenario 10	32	12	11	194.89166
Scenario 11	30.5	12	12	194.71967
Scenario 12	33	13	9	194.85049
Scenario 13	32	13	10	195.84505
Scenario 14	30.5	13	11	195.67306
Scenario 15	29.1	13	12	195.77727

For clarity, the proposed rule has been updated to include additional definitions. The proposed rule also incorporates three new control measures into state rule: flash furnace area capture improvements, converter aisle area and material transfer area capture improvements, and the installation of the anode furnace secondary hood capture control system.

2.2.2 Appendix 14 – Procedures for Sulfur Dioxide and Lead Emissions Studies for the Hayden Smelter.

The current Appendix 14 establishes the methods, protocols, and duration, frequency, and submission schedule for emissions studies to be completed at the Hayden Smelter. The proposed revisions to Appendix 14 update methods and study protocols for both sulfur dioxide and lead fugitive emissions studies. Further, the revisions clarify differences between sulfur dioxide fugitive emissions study requirements and lead fugitive emissions study requirements. Lastly, the proposed revisions update references to the applicable 2023 SIP Revision.

3 Demonstrating Noninterference with Other CAA Requirements

Section 110(l) of the CAA provides that EPA shall not approve a SIP revision if it interferes with attainment, reasonable further progress, or other CAA requirements:

> *"Each revision to an implementation plan submitted by a State under this Act shall be adopted by such State after reasonable notice and public hearing. The Administrator shall not approve a revision of a plan if the revision would interfere with any applicable requirement concerning attainment and reasonable further progress (as defined in section 171), or any other applicable requirement of this Act."*

This proposed SIP revision incorporates a rule designed to codify Hayden Smelter permit conditions into the Arizona Administrative Code. The proposal does not remove any measures from the Arizona SIP, nor does it lessen the stringency of any SIP-approved measures.

As discussed in the prior section, ADEQ modeled fifteen potential fugitive emissions scenarios included in the proposed rule, using AERMOD modeling as described in the Appendix C of the *Final SIP Revision: 2023 Hayden Sulfur Dioxide Nonattainment Area for the 1971 and 2010 SO2 NAAQS* ("Attainment Demonstration Modeling"). The only modification made to this modeling was hourly emissions for the anode furnaces, flash furnace, matte tapping, slag skimming and converter aisle area emissions. The pound per hour emissions rates were divided by the number of volume sources that make up a given roofline, consistent with the Attainment Demonstration Modeling. The scenarios and resulting AERMOD predicted concentrations all model attainment.

Accordingly, this SIP revision is not anticipated to interfere with reasonable further progress or attainment of the NAAQS or any other requirement of the CAA.

4 Public Process

ADEQ held its official comment period for the 2023 SIP Revision between July 14, 2023 and August 14, 2023. ADEQ held a public hearing on August 14, 2023. The *Final SIP Revision: 2023 Hayden Sulfur Dioxide Nonattainment Area for the 1971 and 2010 SO_2 NAAQS, October 3, 2023*, was submitted to EPA for approval on October 3, 2023.

ADEQ also held a comment period and public hearing for the rulemaking to adopt this proposed SIP revision, including the proposed rule revision. The comment period for the rulemaking began on September 12, 2025 with the publication of the NPRM in the Arizona Administrative Register. Notice was also provided by posting on ADEQ's website and publication in *The Arizona Republic*. The NPRM and newspaper publication also provided public notice of the date of the official public hearing for this SIP revision and rulemaking.

Documentation of the public process for this rulemaking and supplemental SIP revision will be included in Appendix B of the final SIP revision.

Appendix A: Rules for Approval

Exhibit A-I: Notice of Proposed Rulemaking

Exhibit A-II: Notice of Final Rulemaking

Exhibit A-I: Notice of Proposed Rulemaking

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NOTICES OF PROPOSED RULEMAKING

This section of the *Arizona Administrative Register* contains Notices of Proposed Rulemaking.

A proposed rulemaking is filed by an agency upon completion and submittal of a Notice of Rulemaking Docket Opening. Often these two documents are filed at the same time and published in the same *Register* issue.

When an agency files a Notice of Proposed Rulemaking under the Administrative Procedure Act (APA), the notice is published in the *Register* within three weeks of filing. See the publication schedule in the back of each issue of the *Register* for more information.

Under the APA, an agency must allow at least 30 days to elapse after the publication of the Notice of Proposed Rulemaking in the *Register* before beginning any proceedings for making, amending, or repealing any rule (A.R.S. §§ 41-1013 and 41-1022).

The Office of the Secretary of State is the filing office and publisher of these rules. Questions about the interpretation of the proposed rules should be addressed to the agency that promulgated the rules. Refer to item #4 below to contact the person charged with the rulemaking and item #10 for the close of record and information related to public hearings and oral comments.

NOTICE OF PROPOSED RULEMAKING

TITLE 18. ENVIRONMENTAL QUALITY

CHAPTER 2. DEPARTMENT OF ENVIRONMENTAL QUALITY AIR POLLUTION CONTROL

[R25-208]

PREAMBLE

1. Permission to proceed with this proposed rulemaking was granted under A.R.S. § 41-1039 by the governor on:

May 1, 2024

2. Article, Part, or Section Affected (as applicable)	**Rulemaking Action**
R18-2-B1301	Amend
R18-2-B1301.01	Amend
R18-2-B1302	Amend
A14. Appendix 14	Amend

3. Citations to the agency's statutory rulemaking authority to include the authorizing statute (general) and the implementing statute (specific):

Authorizing statute: A.R.S. §§ 49-104(A)(1) and (A)(10), 49-404(A), and 49-406.

Implementing statute: A.R.S. § 49-425(A).

4. Citations to all related notices published in the *Register* that pertain to the current record of the proposed rule:

Notice of Rulemaking Docket Opening: 31 A.A.R. 2256; Issue Date: July 4, 2025; Issue Number: 27; File Number: R25-146.

5. The agency's contact person who can answer questions about the rulemaking:

Name:	Lexi Ahmad
Title:	Environmental Legal Specialist II
Division:	Air Quality Division
Address:	Arizona Department of Environmental Quality 1110 W. Washington St. Phoenix, AZ 85007
Telephone:	(602) 771-4149
Email:	airplanning@azdeq.gov
Website:	https://azdeq.gov/

6. An agency's justification and reason why a rule should be made, amended, repealed or renumbered, to include an explanation about the rulemaking:

Summary.

This Arizona Department of Environmental Quality (ADEQ) is proposing to amend Arizona Administrative Code (A.A.C.) Title 18, Chapter 2, Article 13, R18-2-B1301, R18-2-B1301.01, and R18-2-B1302 to incorporate the Title V permit terms for the Hayden Smelter that forms the basis for the controls at the facility for the lead (Pb) and sulfur dioxide (SO_2) National Ambient Air

Quality Standards (NAAQS). The current site-specific rules establishing limits on Pb and SO_2 emissions from the Hayden Smelter do not include key permit terms set forth in the revised permits. Codifying these permit conditions into state rule will facilitate EPA approval of both of the Pb and SO_2 state implementation plan (SIP) revisions.

Background.

In September 2014, EPA redesignated the Hayden Pb area from "unclassifiable" to "nonattainment" for the 2008 primary NAAQS (79 FR 52205 (Sept. 3, 2014)). On March 3, 2017 ADEQ submitted a SIP revision to demonstrate attainment of the 2008 Lead NAAQS by the statutory attainment date of October 3, 2019. EPA approved the plan and associated control measures in 2018. On January 31, 2022, EPA published a finding of failure to attain the 2008 Pb NAAQS by the October 3, 2019 attainment date (83 FR 7614 (February 22, 2018), 83 FR 56734 (November 14, 2018), and 83 FR 56736 (November 14, 2018)). ADEQ subsequently submitted a Pb nonattainment SIP revision in September, 2024.

In 2017, ADEQ submitted the Final SIP Revision: 2017 Hayden Sulfur Dioxide Nonattainment Area for the 2010 SO_2 NAAQS.

In 2020, EPA issued both a limited approval/limited disapproval (85 FR 70483 (Nov. 5, 2020)) and a partial approval/partial disapproval (85 FR 71547 (Nov. 10, 2020)) of the 2017 SIP revision. These actions triggered an 18-month sanctions clock for the area for the imposition of 2:1 emissions offset sanction for SO_2 (imposed May 2022); 6 months later (November 2022), EPA imposed highway funding sanctions that apply to the approval by the Secretary of Transportation of any projects or the awarding by the Secretary of any grants, under Title 23, U.S. Code. *See* CAA § 179. In January 2022, EPA found that the Hayden SO_2 nonattainment area failed to attain the 2010 1-hour SO_2 primary NAAQS by the applicable attainment date of October 4, 2018 (87 FR 4805 (Jan. 31, 2022)). ADEQ subsequently submitted the Final SIP Revision: 2023 Hayden Sulfur Dioxide Nonattainment Area for the 1971 and 2010 SO_2 NAAQS in October, 2023.

ADEQ is committed to securing EPA's approval of both the Pb and SO_2 SIP revisions in order to protect human health and the environment, and to also lift sanctions on the Hayden SO_2 nonattainment area. Previously, ADEQ relied on interpretation of A.A.C. R18-2-306.01 to allow permitted facilities to adopt voluntary limits in order to ensure compliance with a NAAQS, regional haze program, or other purpose under the Clean Air Act (CAA). Subsequently, ADEQ incorporated these voluntary limits as enforceable permit conditions for Pb and SO_2 and submitted the permits to the EPA for inclusion into the Arizona SIP. However, based on the specific language of A.A.C. R18-2-306.01, EPA recently informed ADEQ that it would no longer be accepting ADEQ's interpretation of the rule. Therefore, ADEQ commenced a rulemaking (30 A.A.R. 3365 (Nov. 15, 2024)) to address EPA's concern with the voluntary limits. ADEQ does not anticipate this rulemaking will be complete, and approved by EPA, within the timeframe necessary to obtain approval of both the Hayden Pb and SO_2 SIP revisions. Therefore, ADEQ is incorporating ASARCO's current permit conditions into the A.A.C. to bolster the approvability of the subsequent Pb and SO_2 SIP revisions.

The Hayden Smelter, located in Hayden, AZ, which is owned and operated by ASARCO, is the only facility impacted by the permitting conditions being codified into state rule. ASARCO was involved throughout the development of such permit conditions and is already required to comply with them. Through discussions with both ADEQ and EPA, ASARCO became aware that codification of the permitting conditions would likely become necessary. Codification is only intended to address the EPA's concerns about ADEQ's current authority to issue voluntary permit conditions outside of the plain language of A.A.C. R18-2-306.01 so that the relevant SIP revisions will be approved. This rulemaking will not place any additional burden on ASARCO or the regulated community in general, as it incorporates already binding permit conditions.

7. A reference to any study relevant to the rule that the agency reviewed and proposes either to rely on or not to rely on in its evaluation of or justification for the rule, where the public may obtain or review each study, all data underlying each study, and any analysis of each study and other supporting material:

Not Applicable.

8. A showing of good cause why the rulemaking is necessary to promote a statewide interest if the rulemaking will diminish a previous grant of authority of a political subdivision of this state:

Not Applicable.

9. The preliminary summary of the economic, small business, and consumer impact:

The following discussion addresses each of the elements required for an Economic, Small Business, and Consumer Impact Statement (EIS) under A.R.S. § 41-1055.

An identification of the rulemaking: 18 A.A.C. 2, Article 13, R18-2-B1301, R18-2-1301.01, and R18-2-B1302

ADEQ is proposing to amend Arizona Administrative Code (A.A.C.) Title 18, Chapter 2, Article 13, R18-2-B1301, R18-2-B1301.01, R18-2-B1302 to incorporate the Title V permit terms for the Hayden Smelter that forms the basis for the controls at the facility for the lead (Pb) and sulfur dioxide (SO_2) National Ambient Air Quality Standards (NAAQS) into state rule. The current

site-specific rules establishing limits on Pb and SO2 emissions from the Hayden Smelter do not include key permit terms set forth in the revised permits. Codifying these permit conditions into state rule will facilitate EPA approval of both of the Pb and SO_2 SIP revisions.

Further, the Hayden Smelter, located in Hayden, AZ, and owned/operated by ASARCO, is the only facility impacted by the relevant permitting conditions. ASARCO was involved in the development of the permit conditions and is required to comply with them. Through discussions with both ADEQ and EPA, ASARCO became aware that codification of the permitting conditions would likely become necessary. Codification is only intended to address the EPA's concerns about ADEQ's current authority to issue voluntary permit conditions outside of the plain language of A.A.C. R18-2-306.01 so that the relevant SIP revision will be approved. This rulemaking will not place any additional burden on ASARCO or the regulated community in general, as it incorporates already binding permit conditions.

An identification of the persons who will be directly affected by, bear the cost of or directly benefit from the rulemaking:

a) ADEQ/State of Arizona;
b) ASARCO;
c) Hayden Pb Nonattainment Area; and
d) Hayden SO_2 Nonattainment Area.

A cost benefit analysis:

(a) Cost/benefit stakeholder matrix

The purpose of this rulemaking is to codify already existing permit conditions into state rule. These requirements are being codified into state rule to bolster the approvability of the Hayden Pb and Hayden SO_2 SIP revisions. Accordingly, ADEQ anticipates only minimal economic impacts as explained in the table below.

Description of Affected Groups	Description of Effect	Increased Cost/Decreased Revenue or Benefit	Decreased Cost/ Increased Revenue or Benefit
A. State and Local Government Agencies			
ADEQ/State of Arizona	The administrative burden of the rulemaking on ADEQ/State of Arizona is minimal. These permit conditions have already been agreed upon by all relevant parties and memorialized in two Title V permits. There is no associated increase in staff.	Minimal.	Minimal.
B. Private Businesses			
ASARCO	The economic effect of this rulemaking on ASARCO is minimal. The permit conditions codified into rule were already agreed upon during the permit revision process and have been memorialized in two Title V permits.	Minimal.	Minimal.
C. Public			
Hayden Pb Nonattainment Area	These rules codify permit conditions that apply only to the Hayden Smelter. The Hayden Smelter is already operating under these conditions. Further, incorporation of permit conditions into state rule will facilitate the approval of the Hayden Pb SIP. There are no sanctions in place for this area, so there are no economic benefits of this rulemaking on Hayden Pb Nonattainment Area.	Minimal.	Minimal.

Hayden SO_2 Nonattainment Area	These rules codify permit conditions that apply only to the Hayden Smelter. The Hayden Smelter is already operating under these conditions. However, the incorporation of permit conditions into state rule will facilitate the approval of the Hayden SO_2 SIP. This area is currently under sanctions, and EPA's approval of the Hayden SO_2 SIP Revision will lift them. Accordingly, there is a significant benefit of this rulemaking on the Hayden SO_2 Nonattainment Area.	Minimal.	Significant (approval of Hayden SO_2 nonattainment SIP revision lifts sanctions on the area).

Minimal	Moderate	Substantial	Significant	Marginal
$5,000 or less	$5,001 to $25,000	Greater than $25,000	Cost or benefit cannot be easily quantified, but ADEQ expects it to be significant.	Cost or benefit cannot be easily quantified, but ADEQ expects it to be marginal.

(b) Individual stakeholder summaries/calculations

ADEQ/State of Arizona

Amending the current state rule will address EPA's concerns about ADEQ's current authority to issue voluntary permit conditions outside of the plain language of A.A.C. R18-2-306.01 so that the relevant Hayden Pb and SO_2 SIP revisions can be approved.

ADEQ expects to incur minimal additional staffing costs related to implementing these control measures due to the fact that they are already included in Permits No. 39948 (As Amended by Significant Permit Revision No. 97168) and No. 39948 (As amended by Significant Permit Revision No. 96410). Accordingly, ADEQ will not require any new staff or any substantial contractor expenditures to implement the proposed amendments.

ADEQ will benefit from amending this rule because doing so will facilitate the approval of the Hayden Pb and SO_2 SIP revisions. The approval of these SIP revisions will protect public health and the environment, in alignment with ADEQ's mission statement.

ASARCO

The current implementation of Permits No. 39948 (As Amended by Significant Permit Revision No. 97168) and 39948 (As amended by Significant Permit Revision No. 96410) already required close coordination between ADEQ and ASARCO. Further, the draft rule language is pulled directly from the Title V permits that was agreed upon by ADEQ, EPA, and ASARCO. The terms included in the relevant permits were discussed and agreed upon by all parties. Accordingly, ASARCO is already bound by the Title V permits and must implement the control measures listed in the relevant Title V permits and proposed state rule. Codification is only intended to address the EPA's concerns about ADEQ's current authority to issue voluntary permit conditions outside of the plain language of A.A.C. R18-2-306.01 so that the relevant SIP revisions will be approved

Hayden SO_2 Nonattainment Area

Currently, the Hayden SO_2 Nonattainment Area is under sanctions because ADEQ didn't cure the deficiencies from, EPA's limited approval/limited disapproval and a partial approval/partial disapproval of the Final SIP Revision: 2017 Hayden Sulfur Dioxide Nonattainment Area for the 2010 SO_2 NAAQS. As mentioned above, ADEQ has since submitted the Final SIP Revision: 2023 Hayden Sulfur Dioxide Nonattainment Area for the 1971 and 2010 SO_2 NAAQS, which will cure the deficiencies and allow the sanctions to be lifed. The codification of permit conditions into state rule will facilitate the approval of the 2023 SIP Revision.

There are two types of sanctions under the Clean Air Act. Currently, the Hayden SO_2 Nonattainment Area is under both. The first sanction clock that starts on the effective date of a triggering action relates to the emission offset requirement under the nonattainment new source review program. This sanction applies 18 months after the effective date of the triggering action if the SIP deficiency has not been resolved. Specifically, a ratio of at least 2-to-1 is required for emissions reductions must be achieved within the nonattainment area to offset emissions from new or modified major facilities.

Accordingly, based on ADEQ not addressing the deficiencies in the limited approval/limited disapproval and partial approval/par-

tial disapproval of the 2017 SIP Revision, the Hayden SO_2 Nonattainment Area has been under this specific sanction since May 2022.

The second sanction clock begins on the effective date of a triggering action and relates to the imposition of certain restrictions on federal highway funding. This sanction applies 24 months after the effective date of the triggering action if the SIP deficiency has not been resolved.

Accordingly, based on ADEQ not addressing the deficiencies the limited approval/limited disapproval and partial approval/partial disapproval of the 2017 SIP Revision, the Hayden SO_2 Nonattainment Area has been under this specific sanction since November 2022.

Relieving this area of these sanctions is imperative to the area's economic growth and well-being.

Hayden Pb Nonattainment Area

Currently, the Hayden Pb Nonattainment area does not have an approved SIP in place. In September, 2024, ADEQ submitted a SIP revision to EPA. The codification of permit conditions into state rule will facilitate the approval of the SIP revision.

A general description of the probable impact on private and public employment in businesses, agencies, and political subdivisions of this state directly affected by the rulemaking.

Since the rule updates proposed for Article 13 are only to codify existing control measures for the Hayden Smelter, the rule does not substantially change state or department operations or processes. As such there is no expected impact on public employment. Similarly, ADEQ anticipates no employment impact codifying these control measures into state rule as these control measures have already been included in the relevant Title V permits.

A statement of the probable impact of the rulemaking on small businesses.

(a) An identification of the small businesses subject to the rulemaking

Under A.R.S. § 41-1001(23) "Small business" means a concern, including its affiliates, which is independently owned and operated, which is not dominant in its field and which employs fewer than one hundred full-time employees or which had gross annual receipts of less than four million dollars in its last fiscal year. For purposes of a specific rule, an agency may define small business to include more persons if it finds that such a definition is necessary to adapt the rule to the needs and problems of small businesses and organizations.

ADEQ does not believe that there are any small businesses that would be subject to this rulemaking.

(b) The administrative and other costs required for compliance with the rulemaking.

N/A.

(c) A description of the methods that the agency may use to reduce the impact on small businesses.

N/A.

(d) The probable costs and benefit to private persons and consumers who are directly affected by the rulemaking.

N/A.

A statement of the probable effect on state revenues

Since the proposed rule does not substantially affect commercial activity from which the state of Arizona would receive tax revenue, ADEQ projects no effect on state revenues resulting from the rulemaking.

A description of any less intrusive or less costly alternative methods of achieving the purpose of the rulemaking.

Since this rulemaking aligns with federal law (the Clean Air Act) and reflects permit conditions already agreed upon by all relevant parties, there is not a less intrusive or less costly alternative available at this time.

A description of any data on which a rule is based with a detailed explanation of how the data was obtained and why the data is acceptable data. An agency advocating that any data is acceptable data has the burden of proving that data is acceptable. For the purposes of this paragraph "acceptable data" means empirical, replicable, and testable data as evidenced in supporting documentation, statistics, reports, studies or research.

N/A.

10. The agency's contact person who can answer questions about the economic, small business and consumer impact statement:

Name:	Lexi Ahmad
Title:	Environmental Legal Specialist II
Division:	Air Quality Division
Address:	Arizona Department of Environmental Quality 1110 W. Washington St. Phoenix, AZ 85007
Telephone:	(602) 771-4149
Email:	airplanning@azdeq.gov
Website:	https://azdeq.gov/

11. The time, place, and nature of the proceedings to make, amend, repeal, or renumber the rule, or if no proceeding is scheduled, where, when, and how persons may request an oral proceeding on the proposed rule:

A formal comment period will take place from the publication of this rule in the *Arizona Administrative Register* until 5 p.m., October 14, 2025.

Please email or submit written comments related to this rulemaking at any time during the public comment period to the contact in item 5 of the Preamble of this Notice.

ADEQ has scheduled an oral proceeding to receive oral comments on the rules, in accordance with A.R.S § 41-1023; the time, place, and location of the hearing are listed below:

Date:	October 14, 2025
Time:	10:30 a.m.
Location:	ONLINE – GoToWebinar hosted by ADEQ at https://attendee.gotowebinar.com/register/4027323525405662554.

After you register, you will receive a confirmation email with information on how to join the oral proceeding at the scheduled time. You can also dial in using your phone. Dialing in using your phone will NOT provide the opportunity for making public comments.

United States:	+1 (213) 929-4212
Webinar ID:	700-144-787

ADEQ will take reasonable measures to provide access to department services to individuals with limited ability to speak, write or understand English and/or to those with disabilities. Requests for language translation, ASL interpretation, CART captioning services or disability accommodations must be made at least 48 hours in advance by contacting the Title VI Nondiscrimination Coordinator, Joaquin Marruffo Ruiz, at 520-628-6744 or Marruffo.Joaquin@azdeq.gov. For a TTY or other device, Telecommunications Relay Services are available by calling 711.

ADEQ tomará las medidas razonables para proveer acceso a los servicios del departamento a personas con capacidad limitada para hablar, escribir o entender inglés y/o para personas con discapacidades. Las solicitudes de servicios de traducción de idiomas, interpretación ASL (lengua de signos americano), subtitulado de CART, o adaptaciones por discapacidad deben realizarse con al menos 48 horas de anticipación comunicándose con el Coordinador de Anti-Discriminación del Título VI, Joaquin Marruffo Ruiz, al 520-628-6744 o Marruffo.Joaquin@azdeq.gov. Para un TTY u otro dispositivo, los servicios de retransmisión de telecomunicaciones están disponible llamando al 711.

Nature: Oral Proceeding on the proposed rules, with opportunity for formal comments on the record.

Public comment period ends: October 14, 2025, 5 p.m.

Close of record: October 14, 2025, 5 p.m.

12. All agencies shall list other matters prescribed by statute applicable to the specific agency or to any specific rule or class of rules. Additionally, an agency subject to Council review under A.R.S. §§ 41-1052 and 41-1055 shall respond to the following questions:

There are no other matters prescribed by statutes applicable specifically to ADEQ or this specific rulemaking.

a. Whether the rule requires a permit, whether a general permit is used and if not, the reasons why a general permit is not used:

This rulemaking does not require a permit.

b. Whether a federal law is applicable to the subject of the rule, whether the rule is more stringent than federal law and if so, citation to the statutory authority to exceed the requirements of federal law:

This proposed rulemaking will help Arizona comply with the federal Clean Air Act. This rulemaking is no more stringent than required by federal law.

c. Whether a person submitted an analysis to the agency that compares the rule's impact of the competitiveness of business in this state to the impact on business in other states:

Not Applicable.

13. A list of any incorporated by reference material as specified in A.R.S. § 41-1028 and its location in the rules:

Not Applicable.

14. The full text of the rules follows:

TITLE 18. ENVIRONMENTAL QUALITY

CHAPTER 2. DEPARTMENT OF ENVIRONMENTAL QUALITY AIR POLLUTION CONTROL

ARTICLE 13. STATE IMPLEMENTATION PLAN RULES FOR SPECIFIC LOCATIONS

PART B. HAYDEN, ARIZONA, PLANNING AREA

Section
R18-2-B1301. Limits on Lead Emissions from the Hayden Smelter
R18-2-B1301.01. Limits on Lead-Bearing Fugitive Dust from the Hayden Smelter
R18-2-B1302. Limits on SO_2 Emissions from the Hayden Smelter
A14. Appendix 14. Procedures for Sulfur Dioxide and Lead Fugitive Emissions Studies for the Hayden Smelter

ARTICLE 13. STATE IMPLEMENTATION PLAN RULES FOR SPECIFIC LOCATIONS

PART B. HAYDEN, ARIZONA, PLANNING AREA

R18-2-B1301. Limits on Lead Emissions from the Hayden Smelter

A. Applicability.

1. This Section applies to the owner or operator of the Hayden Smelter. It establishes limits on lead emissions from the Hayden Smelter and monitoring, recordkeeping and reporting requirements for those limits.
2. Effective date. ~~Except as otherwise provided, the requirements of this Section shall become applicable on the earlier of July 1, 2018 or 180 days after completion of all project improvements authorized by Significant Permit Revision No. 60647.~~With the exception of the following requirements, this rule is in effect. Additional requirements in subsections (C)(1), (C)(2), (D)(3), (D)(4), (D)(5), (E)(1), (E)(7), (F)(1), (F)(2), (F)(3), (F)(4) (F)(5), (F)(6), (G)(1), (G)(2), (G)(4), (G)(5), (H)(4), (H)(9), (H)(10), (I)(7), (1)(8), and (I)(9) take effect 60 days after the Hayden Smelter achieves maximum production after Smelter restart or 180 days after Smelter restart, whichever occurs first.

B. Definitions. In addition to general definitions contained in R18-2-101, the following definitions apply to this Section:

1. "ACFM" means actual cubic feet per minute.
2. "Anode furnace baghouse stack" means the dedicated stack that vents controlled off-gases from the anode furnaces to the Main Stack.
3. "Blowing" shall mean the introduction of air or oxygen-enriched air into the converter furnace molten bath through tuyeres that are submerged below the level of the molten bath. The flow of air through the tuyeres above the level of the molten bath or into an empty converter shall not constitute blowing.
4. "Capture system" means the collection of components used to capture gases and fumes released from one or more emission units, and to convey the captured gases and fumes to one or more control devices or a stack. A capture system may include, but is not limited to, the following components as applicable to a given capture system design: duct intake devices, hoods, enclosures, ductwork, dampers, manifolds, plenums, and fans.
5. "Control device" means a piece of equipment used to clean and remove pollutants from gases and fumes released from one or more emission units that would otherwise be released to the atmosphere. Control devices may include, but are not limited to, baghouses, Electrostatic Precipitators (ESPs), and sulfuric acid plants.
6. "Fuming ladle" means a ladle emitting an abnormal amount of fume after discharge of material.
~~6~~7. "Hayden Smelter" means the primary copper smelter located in Hayden, Gila County, Arizona at latitude 33º0'15"N and longitude 110º46'31"W.
8. "Ladle" means a piece of equipment used to move/pour molten material.
~~7~~9. "Main Stack" means the center and annular portions of the 1,000-foot stack, which vents controlled off-gases from the INCO flash furnace, the converters, and anode furnaces and also vents exhaust from the tertiary hoods.
10. "Maintenance downturn" means a scheduled maintenance period lasting at least eight working hours.
~~8~~11. "SCFM" means standard cubic feet per minute.
~~9~~12. "SLAMS monitor" means an ambient air monitor part of the State and Local Air Monitoring Stations network operated by State or local agencies for the purpose of demonstrating compliance with the National Ambient Air Quality Standards.
13. "Smelter restart" means the first day after the issuance of Significant Permit Revision No. 97168 that concentrate is processed through the INCO flash furnace to produce matte.
~~10~~14."Smelting process-related fugitive lead emissions" means uncaptured and/or uncontrolled lead emissions that are released into the atmosphere from smelting copper in the INCO flash furnace, converters, and anode furnaces.
15. "Table 1" means the table labeled "Uptake Improvement System Flow Conditions and Damper Positions," in the attachment labeled "Hayden Smelter Site-Specific SIP Requirements," to the current Class I permit.
16. "Table 2" means the table labeled "Uptake Improvement System Interlock Timing," in the attachment labeled "Hayden Smelter Site-Specific SIP Requirements," to the current Class I permit.
17. "Table 3" means the table labeled "Anode Secondary Hood System Flow Conditions and Damper Positions," in the attachment labeled "Hayden Smelter Site-Specific SIP Requirements," to the current Class I permit.
18. "Table 4" means the table labeled "Emergency Shutdown Ventilation Flue Emissions," in the attachment labeled "Hayden Smelter Site-Specific SIP Requirements," to the current Class I permit.

C. Lead ~~Emission Limit~~ Emissions Limitations. ~~Main Stack lead emissions shall not exceed 0.683 pound of lead per hour.~~

1. Notwithstanding the addition of emissions from the anode secondary hood baghouse, total lead emissions from the main stack shall not exceed 0.683 pounds of lead per hour.

2. Total process fugitive lead emissions from the Hayden Smelter furnaces and converters shall not exceed 0.326 pounds of lead per hour calculated as a 3-month rolling average in accordance with subsection (F).

D. Operational Standards.

1. Process equipment and control device operations. At all times, including periods of startup, shutdown, and malfunction, the owner or operator shall, to the extent practicable, maintain and operate smelter processes and associated emission capture and/or control equipment in a manner consistent with good air pollution control practices for minimizing lead emissions to the level required by subsection (C). Determination of whether acceptable operating and maintenance procedures are being used shall be based on all information available to the Department and EPA Region IX, which may include, but is not limited to, monitoring results, review of operating and maintenance procedures and records, and inspection of the relevant equipment.
2. Capture system and control device operations and maintenance plan. The owner or operator shall develop and implement an operations and maintenance plan for each capture system and/or control device used to ventilate or control process gas or emissions from the flash furnace, including matte tapping, slag skimming and slag return operations; converter primary hoods, converter secondary hoods, tertiary ventilation system; and anode refining operations. The operations and maintenance plan must address the following requirements as applicable to each capture system and/or control device.
    a. Monitoring devices. The plan shall provide for installation, operation, calibration, and maintenance of appropriate monitoring devices to measure and record operating limit values or settings at all times the required capture and control system is operating, except during periods of monitor calibration, repair, and malfunction. The initial plan shall provide for volumetric flow monitoring on the vent gas baghouse (inlet or outlet), each converter primary hood, each converter secondary hood, the tertiary ventilation system, and the anode furnace baghouse (inlet or outlet). All monitoring devices shall be accurate within +/- 10% and calibrated according to manufacturer's instructions. If direct measurement of the exhaust flow is infeasible due to physical limitations or exhaust characteristics, the owner or operator may propose a reliable equivalent method for approval. Initial monitoring may be adjusted as provided in subsection (D)(2)(e). Dampers that are manually set and remain in the same position while the capture system is operating are exempt from these monitoring requirements. Capture system damper position ~~setting(s)~~ setting or settings shall be specified in the plan.
    b. Operational limits. The owner or operator shall establish operating limits in the operations and maintenance plan for the capture systems and/or control devices that are representative and reliable indicators of the performance of the capture system and control device operations. Initial operating limits may be adjusted as provided in subsection (D)(2)(e). Initial operating limits shall include the following:
        i. A minimum air flow for the furnace ventilation system and associated damper positions for each matte tapping hood or slag skimming hood when operating to ensure that the ~~operation(s)~~ operation or operations are within the confines or influence of the capture system.
        ii. A minimum air flow for the secondary hood baghouse and associated damper positions for each slag return hood to ensure that the operation is within the confines or influence of the capture system's ventilation draft during times when the associated process is operating.
        iii. A minimum air infiltration ratio for the converter primary hoods of 1:1 averaged over 24 converter Blowing hours, rolled hourly measured as volumetric flow in primary hood less the volumetric flow of tuyere Blowing compared to the volumetric flow of tuyere Blowing.
        iv. A minimum secondary hood exhaust rate of 35,000 SCFM during converter Blowing, averaged over 24 converter Blowing hours, rolled hourly.
        v. A minimum secondary hood exhaust rate of 133,000 SCFM during all non-Blowing operating hours, averaged over 24 non-Blowing hours, rolled hourly.
        vi. A minimum negative pressure drop across the secondary hood when the doors are closed equivalent to 0.007 inches of water.
        vii. A minimum exhaust rate on the tertiary hooding of 400,000 ACFM during all times material is processed in the converter aisle, averaged over 24 hours and rolled hourly.
        viii. Fan amperes or minimum air flow for the anode furnace baghouse and associated damper positions for each anode furnace hood to ensure that the anode furnace off-gas port is within the confines or influence of the capture system's ventilation draft during times when the associated furnace is operating.
        ix. The anode furnace charge mouth shall be kept covered when the tuyeres are submerged in the metal bath except when copper is being charged to or transferred from the furnace.
    c. Preventative maintenance. The owner or operator shall perform preventative maintenance on each capture system and control device according to written procedures specified in the operations and maintenance plan. The procedures must include a preventative maintenance schedule that is consistent with the manufacturer's or engineer's instructions, or operator's experience working with the equipment, and frequency for routine and long-term maintenance. This provision does not prohibit additional maintenance beyond that required by the plan.
    d. Inspections. The owner or operator shall perform inspections in accordance with written procedures in the operations and maintenance plan for each capture system and control device that are consistent with the manufacturer's, engineer's, or operator's instructions for each system and device.
    e. Plan development and revisions.
        i. The owner or operator shall develop and keep current the plan required by this Section. Any plan or plan revision shall be consistent with this Section, shall be designed to ensure that the capture and control system performance conforms to the attainment demonstration in the ~~Hayden 2008 Lead National Ambient Air Quality Standards Nonattainment Area State Implementation Plan (SIP)~~ State Implementation Plan Revision: 2024 Hayden Lead (Pb) Nonattainment Area for 2008 Pb NAAQS, and shall be submitted to the Department for review. Any plan or plan revision submitted shall include the associated manufacturer's, engineer's or operator's recommendations and/or instructions used for capture system and control device operations and maintenance.

ii. The owner or operator shall submit the initial plan to the Department no later than May 1, 2018 and shall include the initial volumetric flow monitoring provisions in subsection (D)(2)(a), the initial operational limits in subsection (D)(2)(b), the preventative maintenance procedures in subsection (D)(2)(c), and the inspection procedures in subsection (D)(2)(d).

iii. The owner or operator shall submit to the Department for approval a plan revision with changes, if any, to the initial volumetric flow monitoring provisions in subsection (D)(2)(a) and initial operational limits in subsection (D)(2)(b) not later than six months after completing a fugitive emissions study conducted in accordance with Appendix 14. The Department shall submit the approved changes to the volumetric flow monitoring provisions and operational limits pursuant to this subsection to EPA Region IX as a SIP revision not later than 12 months after completion of a fugitive emissions study.

iv. Other plan revisions may be submitted at any time when necessary. All plans and plan revisions shall be designed to achieve operation of the capture system and/or control device consistent with the attainment demonstration in the ~~Hayden 2008 Lead National Ambient Air Quality Standards Nonattainment Area SIP~~ State Implementation Plan Revision: 2024 Hayden Lead (Pb) Nonattainment Area for 2008 Pb NAAQS. Except for changes to the volumetric flow monitoring provisions in subsection (D)(2)(a) and operational limits in subsection (D)(2)(b), which shall require prior approval, plans and plan revisions may be implemented upon submittal and shall remain in effect until superseded or until disapproved by the Department. Disapprovals are appealable Department actions.

3. Flash Furnace Area Capture Improvements

a. The owner or operator shall install additional hooding and interceptor walls (the "Uptake Improvement System") to improve the capture of fugitive emissions from the flash furnace area, matte tapping and slag skimming areas, route them to the existing converter secondary hood baghouse for fabric filter and high surface area lime injection control, and then to the annulus of the main stack.

b. The Uptake Improvement System shall have a design evacuation rate of 50,000 to 60,000 ACFM hourly average and shall operate when the flash furnace is in operation except for brief periods when slag is being returned to the flash furnace using the slag launder return. At those times, the ventilation for this system shall be switched to the slag return capture system and then switched back automatically to the Uptake Improvement System at the conclusion of the slag return cycle.

c. Establishment of Operational Ranges

i. The owner or operator shall establish a range of damper positions based upon the secondary hood baghouse flow monitor that provides reasonable assurance that the Uptake Improvement System exhaust flow is within the design range specified in (D)(3)(b). The ranges shall be established and verified by a stack test no later than 180 days after smelter restart and may be revised thereafter in the same fashion. The proposed ranges, stack test verifying evacuation rates compliant with (D)(3)(b) and proposed revision to Table 1 shall be submitted to the department within 45 days of the stack test. If the Director concurs that the proposed damper position ranges assure an exhaust flow compliant with (D)(3)(b), the Director shall issue a revised Table 1 reflecting the new damper position range. Thereafter, the owner or operator shall comply with the approved Table 1 range. Until the first submittal is approved, the owner or operator shall use ranges specified by the air pollution control designer. The current ranges can be found in Table 1 of the attachment labeled "Hayden Smelter Site-Specific SIP Requirements," to the current Class I permit.

ii. The owner or operator shall establish a timed interlock on the slag return launder such that when slag is returned to the flash furnace the ventilation air from the Uptake Improvement System is switched to the slag return capture system for a defined period of not less than 5 minutes nor more than 10 minutes and then returns to the Uptake Improvement System automatically. The owner or operator shall optimize the period within the five to 10-minute range during the initial 60-day optimization period by observation and analysis and thereafter as necessary. The first analysis, proposed time period, and proposed revisions to Table 2 shall be submitted no later than 75 days after smelter restart. The Director shall approve any period that falls within both the five to 10-minute range and a range between the mean and mean plus one standard deviation of observed slag return durations. If the Director concurs that the proposed range meets these requirements, the Director shall issue a revised Table 2. All analyses shall be submitted and approved by the Director. Until the first report is approved, the owner or operator shall use ranges specified by the air pollution control designer. The current ranges are specified in Table 2 of the attachment labeled "Hayden Smelter Site-Specific SIP Requirements" to the current Class I permit.

d. Operational requirements

i. The owner or operator shall operate the Uptake Improvement/Launder Return combined damper in accordance with the approved Table 1 range or ranges at all times the flash furnace is operating and at all times matte tapping, slag skimming or slag returning is occurring.

ii. The owner or operator shall operate the timed interlock in accordance with the approved Table 2 value. Operators shall trigger the interlock prior to starting slag return and may trigger the timed interlock again if slag is still returning at the end of the interlock cycle to minimize emissions.

iii. The owner or operator shall inspect the Uptake Improvement System during each scheduled maintenance downturn to ensure that the hooding and walls are in proper position and that there are no visible accretions of material in the mouth of the hooding that would preclude efficient operation. The owner or operator shall quarterly, evaluate the damper controlling air between the Uptake Improvement System and the slag return capture system to ensure it is operating properly. Records of these inspections shall be maintained for five years.

4. Converter and Material Transfer Area Capture Improvements

a. The owner or operator shall install a hood and interceptor walls (the "Fuming Ladle Capture System") to provide a system for the capture of fugitive emissions from fuming ladles in the converter aisle and material transfer areas, route them to the existing converter secondary hood baghouse for fabric filter and high surface area lime injection control, and then to the annulus of the main stack.

b. The Fuming Ladle Capture System shall have a design evacuation rate of 40,000 to 50,000 ACFM when a ladle is present within the hooded area. The capture system shall run until the ladle is removed or for at least 20 minutes after the ladle is placed in the containment. Fuming ladles shall not be removed from the fuming Ladle Capture System containment unless transported directly to the tunnel or within the capture area of a secondary hood.

c. The owner or operator shall, whenever a fuming ladle is detected, promptly move the fuming ladle into the Fuming Ladle Capture System, the tunnel or within the capture area of a secondary hood.

i. The owner or operator shall develop training for its employees responsible for ladle movement on identification of fuming ladles. The training shall be developed within 60 days of smelter restart. Existing employees shall be trained within 90 days of smelter restart and any new employees shall be trained before working ladle operations unsupervised by a trained operator. Employees shall be retrained once every five years. Training records for the operators shall be kept for five years. The training and records shall be available for inspections.

ii. The training program curriculum required for (D)(4)(b)(i) above shall include:

(1) Identification of fuming ladles, including oral description from experienced operators, written descriptions and, after smelter restart, photographs and video of fuming and nonfuming ladles;

(2) Procedures on observing ladles to determine when they are fuming;

(3) Instruction on when marginal ladles may be moved to the matte tunnels or a secondary hood for control and when they should be moved to the Fuming Ladle Capture System (FLCS);

(4) Prompt movement of ladles to, placement in, and operation of the FLCS;

(5) When and how ladles may be removed from the FLCS;

(6) Steps to take if a ladle remains fuming after initial time out of the FLCS; and

(7) Procedures for additional scrutiny of first slag and shell out ladles.

iii. The owner or operator shall submit the curriculum required under (D)(4)(b)(ii) above and any written and photographic/video training materials to the Department within 10 days of development of the curriculum and thereafter shall provide the curriculum and materials to inspectors upon request.

iv. The owner or operator shall keep a log of the occurrences of fuming ladle events. The log shall include the date of the event, duration of the event, severity of the fuming ladle, and the time elapsed between identification of the fuming ladle and the operator moving the fuming ladle into the Fuming Ladle Capture System, within a secondary hood or into the matte tunnel.

v. Training records for the operators shall be kept for five years. The training and records shall be available for inspection.

d. The owner or operator shall conduct an initial flow test within 180 days of smelter restart to verify that the system achieves the design flow. The results of this flow test shall be reported to the Department within 45 days of completion of the test.

e. The owner or operator shall inspect the Fuming Ladle Capture System during each scheduled maintenance downturn to ensure that it is actuating properly, that the hoods and walls are in proper position, and there are no visible accretions of material in the mouth of the hood that would preclude efficient operation. Records of these inspections shall be maintained for five years.

5. Anode Furnace Secondary Hood Capture Control System

a. The owner or operator shall install secondary hoods around each of the anode furnaces to improve the capture of fugitive emissions from the anode furnaces during charging, holding and processing, route the emissions to a new anode secondary hood baghouse for fabric filter control, and then to the annulus of the main stack. This is the Anode Secondary Hood system.

b. The Anode Secondary Hood System

i. The Anode Secondary Hood System shall have an overall design evacuation rate for the total system of 150,000 ACFM hourly average.

ii. The anode secondary hood baghouse shall have a maximum design particulate matter emission rate of 0.002 gr/scf.

iii. Each secondary hood shall be equipped with dampers that can close completely and operate with a range from 20 to 100% to modulate flows to the individual anode furnace.

iv. The Anode Secondary Hood System shall be operated to achieve balanced flows (± 15%) on the two operating anode furnaces when neither are charging. When one anode furnace is charging, the Anode Secondary Hood System shall be balanced so that the charging furnace achieves a minimum of 100,000 ACFM and the other operating furnace gets the balance.

c. The owner or operator shall establish a range of damper positions and total flow conditions based upon the anode secondary hood baghouse flow monitor that provides reasonable assurance that the Anode Secondary Hood system exhaust flow is within the design range. These ranges and flow conditions shall be verified during a performance test within 180 days of smelter restart and may be revised thereafter in the same fashion. The proposed ranges and flow conditions, stack test verifying evacuation rates compliant with (D)(5)(b)(iii) and (D)(5)(b)(iv) and proposed revision to Table 3 shall be submitted to the Department within 45 days of the stack test. If the Director concurs that the proposed damper position and flow ranges assure an exhaust flow compliant with (D)(5)(b)(iii) and (D)(5)(b)(iv), the Director shall issue a revised Table 3 reflecting the new approved Table 3 ranges. Until the first performance test, the owner or operator shall use ranges specified by the air pollution control designer. The current flows shall be specified in Table 3. Damper positions shall be logged and the logs kept for five years.

d. Operational requirements.

i. The owner or operator shall operate the Anode Secondary Hoods in accordance with the approved Table 3 range or ranges at all times the anode furnaces are operating.

ii. The owner or operator shall inspect the Anode Secondary Hood System during which scheduled maintenance down turn to ensure that the dampers are working properly, the hoods and walls are in proper position and that there are no

visible accretions of material in the mouth of the hoods that would preclude efficient operation. Records of these inspections shall be maintained for five years.

~~3~~6. Emissions from the anode furnace baghouse stack shall be routed to the Main Stack.

E. Performance Test Requirements.

1. Main stack performance tests. No later than 180 calendar days after ~~completion of all Converter Retrofit Project improvements authorized by Significant Permit Revision No. 60647~~Smelter restart, the owner or operator shall conduct initial performance tests on the following:
   a. The gas stream exiting the anode furnaces baghouse prior to mixing with other gas streams routed to the Main Stack.
   b. The gas stream exiting the acid plant at a location prior to mixing with other gas streams routed to the Main Stack.
   c. The gas stream exiting the converter secondary baghouse at a location prior to mixing with other gas streams routed to the Main Stack.
   d. The gas stream collected by the tertiary hooding at a location prior to mixing with other gas streams routed to the Main Stack.
   e. The gas stream exiting the vent gas baghouse at a location prior to mixing with other gas streams routed to the Main Stack.
   f. The gas stream exiting the anode secondary hood baghouse at a location prior to mixing with the other gas streams routed to the Main Stack.
2. Subsequent performance tests on the gas streams specified in subsection (E)(1) shall be conducted at least annually.
3. Performance tests shall be conducted under such conditions as the Department specifies to the owner or operator based on representative performance of the affected sources and in accordance with 40 CFR 60, Appendix A, Reference Method 29.
4. At least 30 calendar days prior to conducting a performance test pursuant to ~~subsection~~ subsections (E)(1) and (E)(2), the owner or operator shall submit a test plan, in accordance with R18-2-312(B) and the Arizona Testing Manual, to the Department for approval. The test plan must include the following:
   a. Test duration;
   b. Test ~~location(s)~~ location or locations;
   c. Test ~~method(s)~~ method or methods, including those for test method performance audits conducted in accordance with subsection (E)(6); and
   d. Source operation and other parameters that may affect the test result.
5. The owner or operator may use alternative or equivalent performance test methods as defined in 40 CFR § 60.2 when approved by the Department and EPA Region IX, as applicable, prior to the test.
6. The owner or operator shall include a test method performance audit during every performance test in accordance with 40 CFR § 60.8(g).
7. The owner or operator shall evaluate opacity at the time of each performance test. The opacity evaluation shall evaluate both the opacity at the roofline monitor and note the opacity exiting from the walls or other openings but shall not include dust entrained from vehicles passing through an entryway. The opacity evaluation of the flash furnace building and anode aisle shall be conducted in accordance with 40 CFR 60.13 and the opacity evaluation of the converter aisle shall be conducted in accordance with 40 CFR 63.1450(c). If complying with 40 CFR Part 63, Subpart QQQ, then testing to demonstrate compliance with that standard shall satisfy this requirement for the converter aisle.

F. Monitoring Requirements.

1. The owner or operator shall install, calibrate, maintain and operate a monitoring device that continuously records the volumetric flow rate, or alternative parameter that has a direct relationship to volumetric flow rate such as pressure drop (delta P), if approved by the Department, at a representative point in the anode secondary hood system, fuming ladle control system and uptake improvement hood system.
2. If the owner or operator seeks an alternative to a volumetric flow monitor, the owner or operator shall submit a proposal to the Department for review and approval. The proposal shall include the following:
   a. Identification of the parameter or parameters to be monitored in lieu of volumetric flow rate;
   b. Identification of the location in the hooding system where such monitors would be placed and how such location will give appropriate and representative measurements in accordance with good engineering practices;
   c. A detailed explanation, including sample calculations, of how such parameters or a parameter has a direct relationship to volumetric flow rate in the hooding system and how such parameter or parameters will ensure proper operation in accordance with design at all times, including detecting any degraded performance over time; and
   d. Proposed limit or limits including sample calculations, for the selected parameters that would be an enforceable demonstration of acceptable performance. Upon the Department's approval within 180 days of the effective date of this Section under (A)(2), this limit shall take effect and be enforceable thereafter until changed in accordance with this paragraph.
3. The owner or operator shall monitor the pressure drop across the anode secondary hood baghouse.
4. The owner or operator shall monitor the damper positions for the Uptake Improvement System and Fuming Ladle Control System at all times.
5. The owner or operator shall install, certify, calibrate, maintain and operate PM continuous emission monitoring systems (CEMS) at the locations specified in (F)(1) according to EPA Performance Specification 11 in 40 CFR Part 60, Appendix B (PS-11) and the quality assurance requirements of Procedure 2 in 40 CFR Part 60, Appendix F and in accordance with the requirements of the following subsections.
   a. No later than 180 days after the effective date of this rule, the owner or operator shall submit to the Department for review and approval a proposed Installation, Certification, and Quality Assurance/Quality Control (Installation, Certification, and QA/QC) Protocol, developed in consultation with the PM CEMS vendor or vendors, for the PM CEMS required on the anode secondary hood baghouse in (F)(4) of this subsection.
   b. The Installation, Certification, and QA/QC Protocol shall include a schedule and specifically describe a proposed testing plan that is designed to maximize the likelihood of successful certification of the PM CEMS. If certification is not

approved, then the owner or operator shall consult with the PM CEMS vendor and the Department. Within 60 days of completion of the PS-11 testing (including receipt of the results) that was conducted pursuant to the original Installation, Certification, and QA/QC Protocol for that PM CEMS, the owner or operator shall submit a revised Installation, Certification, and QA/QC Protocol for that PM CEMS to the Department and the EPA for review and approval.

c. Each PM CEMS shall include a continuous particle mass monitor to measure and record PM concentration, directly or indirectly, and gas stream flow rates on an hourly average basis.

d. The owner or operator shall maintain, in an electronic database, the hourly average emission values of all PM CEMS in milligrams per dry standard cubic meter (mg/dscm) and pounds per hour (lbs/hr).

e. In the event that no PM CEMS is successfully certified after the first round of testing, the owner or operator shall, within 90 days of certification failure, submit an updated Installation, Certification and QA/QC Protocol to EPA and the Department for review and approval. Upon completion of the second round of PS-11 testing (including receipt of the results), if the PM CEMS fails to certify, the owner or operator shall submit an alternative PM monitoring plan for such gas streams or stream for review and approval by the EPA and the Department. The alternative monitoring plan shall propose a methodology for using data from the PM CEMS as a continuous parametric monitoring system (CPMS) and stack performance test to ensure continuous compliance with operational limits in (D)(5). Upon approval by the EPA and Department, the owner or operator shall continuously operate the PM CEMS as a CPMS.

f. The owner or operator shall use reasonable efforts to keep each PM CEMS running and producing data whenever any gas at that location is being exhausted to the atmosphere. If operation of the PM CEMS cannot be maintained for a minimum of 12 months, the owner or operator may submit a demonstration to the Department and EPA that identifies the cause or causes of and explanation or explanations why the PM CEMS is infeasible to operate. The demonstration shall include an alternative PM monitoring plan for review and approval by the Department and the EPA. Operation of the PM CEMS shall be considered infeasible if:

i. The PM CEMS cannot be kept in working condition for sufficient periods of time to produce reliable, adequate, or useful data consistent with the Quality Assurance/Quality Control protocol (including, without limitation, PS-11 and Procedure 2); or

ii. Recurring, chronic, or unusual equipment adjustment, servicing, or replacement needs in relation to other types of continuous emission monitors cannot be resolved through reasonable expenditures of resources. If the Department and the EPA approve the owner or operator's demonstration that it is infeasible to continue operating a PM CEMS, the owner or operator shall be entitled to discontinue operation of and remove the PM CEMS. At that point, the owner or operator shall comply with the approved alternative PM monitoring plan. The Department's and the EPA's disapproval of the owner or operator's demonstration or alternative monitoring plan shall constitute and appealable agency action.

6. The owner or operator shall complete two fugitive emissions studies as required by Appendix 14.

a. The studies shall be completed according to the updated Fugitive Emissions Study Protocol submitted to the EPA on January 20, 2017 and approved by the EPA on May 31, 2017. The owner or operator may submit modifications to the protocol six months prior to each study for EPA approval and Department comment. Upon EPA approval, the modified protocol shall take effect.

b. The first fugitive study shall commence no later than six months after smelter restart or three months after EPA approval of a modified protocol. The owner or operator shall complete 12 months of monitoring and submit a report to the Department and EPA no later than three months after the conclusion of the study. The study shall evaluate the effectiveness of MiniVol samplers in providing high quality, replicable data; compare the MiniVol sampler data to estimates derived from lb/ton emission factors or other process parameters or surrogates; evaluate the accuracy and cost effectiveness of various monitoring approaches; and recommend either a new lb/ton concentrate emission factor or a SIP revision to incorporate an improved monitoring methodology. If the study concludes that the lb/ton concentrate emission factor should be retained, the owner or operator shall submit a justification for why an improved monitoring methodology (e.g., MiniVols) is not feasible and a justification for the selected lb/ton concentrate factor and how it may be revised to maintain accuracy representativeness. If the study concludes that a new methodology should be proposed, the owner or operator shall submit a petition to the Department to revise the SIP within 90 days after submitting the report unless either EPA or the Department provides comments upon the report, in which case the deadline is 60 days after the receipt of the final comments but no earlier than 90 days after the report submittal.

c. The second fugitive study shall be commenced within the same calendar quarter, but five years after, the date of commencement of the first study or three months after EPA approval of the protocol, if later, and shall run for 12 months. The second fugitive study shall evaluate whether the monitoring methodology remains appropriate. The owner or operator shall submit a report to EPA and the Department on the adequacy of the monitoring methodology within 90 days after completion of the fugitive monitoring. Based upon the study results, the owner or operator may petition the Department for a SIP revision. The Department or EPA may require the owner or operator to submit a revised monitoring methodology if, based upon the second fugitive study or other credible evidence, the then-current methodology underestimates emissions by 15 percent or more or overestimates emissions by 20 percent or more.

~~F~~**G.** Compliance Demonstration Requirements.

1. For purposes of determining compliance with the Main Stack emission limit in subsection ~~(C)~~ (C)(1), the owner or operator shall calculate the combined lead emissions in pounds per hour from the gas streams identified in subsection (E)(1) based on the most recent performance tests conducted in accordance with subsection (E). Continuous compliance with the emission limit in subsection (C)(1) is demonstrated if the most recent performance test under (E)(1) was 0.683 lbs/hr or less.
2. The owner or operator shall determine compliance with the requirements in subsection (D)(2) as follows:
   a. By ~~Maintaining~~ maintaining and operating the emissions capture and control equipment in accordance with the capture system and control device operations and maintenance plan required in subsection (D)(2) and recording operating parameters for capture and control equipment as required in subsection (D)(2)(b); and

b. By ~~Conducting~~ conducting a fugitive emissions study in accordance with Appendix 14 starting not later than six months after ~~completion of the Converter Retrofit Project authorized by Significant Permit Revision No. 60647~~smelter restart or three months after EPA approval of a modified protocol. The fugitive emissions study shall demonstrate, as set forth in Appendix 14, that fugitive emissions from the smelter are consistent with estimates used in the attainment demonstration in the ~~Hayden 2008 Lead National Ambient Air Quality Standards Nonattainment Area SIP~~ State Implementation Plan Revision: 2024 Hayden Lead (Pb) Nonattainment Area for 2008 Pb NAAQS.

3. The owner or operator shall include periods of startup, shutdown, malfunction, or other upset conditions when determining compliance with the emission limit in subsection (C).
4. Proper operation of the control and capture system shall be verified as follows:
   a. For each outlet identified in (E)(1) that is equipped with a certified PM CEMS, a 30-day average of PM CEMS mg/dscm shall be calculated based on the average of all valid hour data during the prior 30 operating days for each outlet and then across all outlets on a flow-weighted basis using the following equation:

$$E = \frac{\left(\sum_{i=1}^{n} C_i \times VF_i\right)}{\sum_{i=1}^{n} VF_i}$$

   Where:
   E = Main stack concentration PM, mg/dscm.
   i = ith certified PM CEMS identified in (G)(1).
   n = number of certified PM CEMS covered by (G)(1).
   C = 30-day average of PM CEMS i, mg/dcsm.
   VF1 = 30-day average of volumetric flow measured at PM CEMS i, dscm.
   b. For each outlet identified in (E)(1) that is not equipped with a certified PM CEMS, a 30-day average of the continuous parametric data shall be calculated based on the approved alternative monitoring rate.
   c. Proper operation of the control and capture system is verified if "E" in (G)(4)(a) is 23 mg/dscm or less, and any outlet subject to an approved alternative monitoring plan is in compliance.
5. The owner or operator shall demonstrate compliance with the process fugitive limit in (D)(5)(f):
   a. By demonstrating that all work practice standards set forth in (D)(5), (F)(1), (F)(2), and (F)(3) are being met with no more than a three-hour consecutive period out of manufacturer's specification before the underlying process unit was shut down or idled; and
   b. Until the fugitive study required under (F)(5) is completed, by the fifth working day of each month, the owner or operator shall calculate rates of process fugitive lead emissions by multiplying the tons of concentrate processed through the flash furnaces during the three prior calendar months by 0.0018 lb lead/ton of concentrate and then dividing that value by the number of operating hours during the same three calendar months, where an operating is defined as 24 hours for each operating day as defined in R18-2-B1302(B)(2) less any maintenance downturn hours during an operating day in that month, with compliance demonstrated if the calculated value is 0.326 lb/hr or less. The lb/ton concentrate factor provisions in (G)(5) shall remain in effect until a SIP revision replacing them is approved, as modified by (G)(5)(c).
   c. After the fugitive emissions studies described in (F)(5) are completed, by the fifth working day of each month, the owner or operator shall calculate rates of process fugitive lead emissions by multiplying the tons of concentrate processed during the three prior calendar month by the factor for lead that is developed in the most recent fugitive study and then dividing that value by the number of operating hours, as defined in (F)(5), in the same three calendar months to calculate an average pound/hour with compliance demonstrated if the calculated value is 0.326 lb/hr or less.

~~G~~**H.** Recordkeeping. The owner or operator shall maintain the following records for at least five years and keep on-site for at least two years:

1. All records as specified in the operations and maintenance plan required under subsection ~~(D)(2)~~(D).
2. All records of major maintenance activities and inspections conducted on emission units, capture systems, monitoring devices, and air pollution control equipment, including those set forth in the operations and maintenance plan required by subsection ~~(D)(2)~~(D).
3. All records of performance tests, test plans, and audits required by subsection (E).
4. The output of the PM CEMS and 30-day flow weighted average value required in (D)(3).
~~4~~5. All records of compliance calculations required by subsection ~~(F)~~(G).
~~5~~6. All records of fugitive emission studies and study protocols conducted in accordance with Appendix 14.
~~6~~7. All records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of concentrate drying, smelting, converting, anode refining, and casting emission units; and any malfunction of the associated air pollution control equipment that is inoperative or not operating correctly.
~~7~~8. All records of reports and notifications required by subsection ~~(H)~~(I).
9. Records of the fugitive studies and their supporting data required by (F)(5), in accordance with Appendix 14.
10. Records of daily concentrate processed and operating hours and the corresponding calculation of 90-day average fugitive lead emissions required by (G)(5).

~~H~~**I.** Reporting. The owner or operator shall provide the following to the Department:

1. Notification of commencement of construction of any equipment necessary to comply with the operational or emission limits.
2. Semiannual progress reports on construction of any such equipment postmarked by July 30 for the preceding January-June period and January 30 for the preceding July-December period.
3. Notification of initial startup of any such equipment within 15 business days of such startup.

4. Whenever the owner or operator becomes aware of any exceedance of the emission limit set forth in subsection (C), the owner or operator shall notify the Department orally or by electronic or facsimile transmission as soon as practicable, but no later than two business days after the owner or operator first knew of the exceedance.
5. Within 30 days after the end of each calendar-year quarter, the owner or operator shall submit a quarterly report to the Department for the preceding quarter that shall include dates, times, and descriptions of deviations when the owner or operator operated smelting processes and related control equipment in a manner inconsistent with the operations and maintenance plan required by subsection (D)(2).
6. Reports from performance testing conducted pursuant to subsection (E) shall be submitted to the Department within 60 calendar days of completion of the performance test. The reports shall be submitted in accordance with the Arizona Testing Manual and A.A.C. R18-2-312(A).
7. The owner or operator shall submit reports to the Department providing the results of the fugitive studies required in (F)(5) within six months of completion of each study.
8. The owner or operator shall submit quarterly, by 30 days after the end of each calendar quarter, a summary report showing the date, time and magnitude of any exceedance of the PM CEMS (or approved alternative monitoring system) calculated in accordance with (G)(4) and any exceedance of the fugitive parameters calculation in accordance with (G)(5).
9. The owner or operator shall submit a report to the Department showing that contingency measures required in (J) were implemented within 90 days of receipt of notice from the Department or EPA Region 9 that the requirement for implementing the contingency measures is triggered.

R18-2-B1301.01. Limits on Lead-Bearing Fugitive Dust from the Hayden Smelter

A. Applicability.
1. This Section applies to the owner or operator of the Hayden Smelter.
2. Effective Date. Except as otherwise provided, the requirements of this Section shall become applicable on December 1, 2018.

B. Definitions. In addition to definitions contained in R18-2-101 and R18-2-B1301, the following definitions apply to this Section:
1. "Acid plant scrubber blowdown drying system" means the process in which Venturi scrubber blowdown solids are dried and packaged via a thickener, filter press, electric dryer, and supersack filling stations.
2. "Control measure" means a piece of equipment used, or actions taken, to minimize lead-bearing fugitive dust emissions that would otherwise be released to the atmosphere. Control equipment may include, but are not limited to, wind fences, chemical dust suppressants, and water sprayers. Actions may include, but are not limited to, relocating sources, curtailing operations, or ceasing operations.
3. "Hayden Lead Nonattainment Area" means the townships in Gila and Pinal Counties, as identified and codified in 40 CFR § 81.303, that are designated nonattainment for the 2008 Lead National Ambient Air Quality Standards.
4. "High wind event" means any period of time beginning when the average wind speed, as measured at a meteorological station maintained by the owner or operator that is approved by the Department, is greater than or equal to 15 mph over a 15 minute period, and ending when the average wind speed, as measured at the approved meteorological station maintained by the owner or operator, falls below 15 mph over a 15 minute period.
5. "Lead-bearing fugitive dust" means uncaptured and/or uncontrolled particulate matter containing lead that is entrained in the ambient air and is caused by activities, including, but not limited to, the movement of soil, vehicles, equipment, and wind.
6. "Material pile" means material, including concentrate, uncrushed reverts, crushed reverts, and bedding material, that is stored in a pile outside a building or warehouse and is capable of producing lead-bearing fugitive dust.
7. "Non-smelting process sources" means sources of lead-bearing fugitive dust that are not part of the hot metal process, which includes smelting in the INCO flash furnace, converting, and anode refining and casting. Non-smelting process sources include storage, handling, and unloading of concentrate, uncrushed reverts, crushed reverts, and bedding material; acid plant scrubber blowdown solids; and paved and unpaved roads.
8. "Ongoing visible emissions" means observed emissions to the outside air that are not brief in duration.
9. "Road" means any surface on which vehicles pass for the purpose of carrying people or materials from one place to another in the normal course of business at the Hayden Smelter.
10. "Slag" means the inorganic molten material that is formed during the smelting process and has a lower specific gravity than copper-bearing matte.
11. "Slag hauler" means any vehicle used to transport molten slag.
12. "Storage and handling" means all activities associated with the handling and storage of materials that take place at the Hayden Smelter, including, but not limited to, stockpiling, transport on conveyor belts, transport or storage in rail cars, crushing and milling, arrival and handling of offsite concentrate, bedding, and handling of reverts.
13. "Trackout/carry-out" means any materials that adhere to and agglomerate on the surfaces of motor vehicles, haul trucks, and/or equipment (including tires) and that may then fall onto the road.

C. Operational Standards.
1. Equipment operations. At all times, the owner or operator shall operate and maintain all non-smelting process sources, including all associated air pollution control equipment, control measures, and monitoring equipment, in a manner consistent with good air pollution control practices for minimizing lead-bearing fugitive dust, and in accordance with the fugitive dust plan required by subsection (C)(2) and performance and housekeeping requirements in subsection (D). A determination of whether acceptable operating and maintenance procedures are being used shall be based on all available information to the Department and EPA Region IX, which may include, but is not limited to, monitoring results, review of operating and maintenance procedures and records, review of fugitive dust plans, and inspection of the relevant equipment.
2. Fugitive dust plan. The owner or operator shall develop, implement, and follow a fugitive dust plan that is designed to minimize lead-bearing fugitive dust from non-smelting process sources. At minimum, the fugitive dust plan shall contain the following:
   a. Performance and housekeeping requirements in subsection (D).

b. Design plans and specifications for each wind fence to be installed to control lead-bearing fugitive dust from non-smelting process sources identified in subsections (D)(11) through (D)(14). The dust plan shall contain height limits for the materials being stored in each wind fence, consistent with the design plans and specifications for that particular wind fence. Wind fence design and specifications shall:
   i. Require full encircling of the source to be controlled, with reasonable and sufficient openings for ingress and egress;
   ii. Consider the orientation of the wind fence to the prevailing winds;
   iii. Consider the strength of the winds in the area where the fence will be located;
   iv. Consider the porosity of the material to be used, which shall not exceed 50%; and
   v. Consider the height of the fence relative to the height of the material being stored. At minimum, wind fence height shall be greater than or equal to the material pile height.

c. Design plans and specifications for each new or modified water sprayer system used to control lead-bearing fugitive dust from non-smelting process sources specified in subsections (D)(11) through (D)(14). The number, type, location, watering intensity, flow rates, and other operational parameters of the water sprayers must meet moisture content objectives for sources specified in subsections (D)(11) through (D)(14). The owner or operator may include in the dust plan an exemption to the water requirements at times when the materials are sufficiently moist or it is raining and thus there is no need for additional wetting until the next scheduled watering to meet moisture content objectives. The dust plan shall include the following for each water sprayer:
   i. Watering schedule;
   ii. Watering intensity;
   iii. Minimum flow rate or pressure drop;
   iv. Appropriate and/or continuous monitoring;
   v. Schedule for calibration based on the manufacturer's recommended calibration schedule;
   vi. Preventative maintenance schedule; and
   vii. Other applicable operational parameters.

d. Necessary improvements and/or modifications to material conveyor systems, along with a schedule for implementing improvements or modifications, targeted to minimize lead-bearing fugitive dust from non-smelting process sources specified in subsections (D)(11) through (D)(14), as applicable, to the greatest extent practicable. The improvements or modifications may include, but is not limited to, hooding of transfer points, utilizing water sprayers, and employing scrapers, brushes, or cleaning systems at all points where belts loop around themselves to catch and contain material before it falls to the ground.

e. Design plans for the concrete pads for the non-smelting process sources specified in subsections (D)(11) and (D)(13). The concrete pads shall be designed to capture, store, and control stormwater or sprayed water to minimize emissions to the greatest extent practicable, including curbing around the outer edges of the concrete pad where feasible.

f. Additional controls and measures for sources specified in subsections (D)(11) through (D)(14) to be implemented during high wind events. These additional controls or measures, which must include curtailment or other alteration of activity when appropriate, must be implemented at these sources during all periods of high wind.

g. Sample inspection sheets, checklists, or logsheets for each of the inspections identified in subsection (D)(6), and in accordance with the following:
   i. The inspection sheets or checklists shall include:
      (1) Specific descriptions of the equipment being inspected and the specific functions being evaluated;
      (2) The findings of the inspection;
      (3) The date, time, and location of inspections; and
      (4) An identification of who performed the inspection or logged the results.
   ii. The logsheets for high wind events shall include:
      (1) High wind event start time;
      (2) High wind event end time;
      (3) Description of area or activity inspected; and
      (4) Description of corrective action taken if necessary.

h. Design plans of the new acid plant scrubber blowdown drying system specified in subsection (D)(15).

i. The name and location of the meteorological station, which must be approved by the Department, that is to be used by the owner or operator for determining high wind events pursuant to subsection (B)(4) and for implementing control requirements pursuant to subsection (D)(5).

3. Plan development and revisions. The owner or operator shall develop and keep current the fugitive dust plan required by subsection (C)(2). Any plan or plan revision shall be consistent with this Section and shall be submitted to the Department for review. The initial plan shall be submitted to the Department for review no later than May 1, 2017. Plans and plan revisions shall be consistent with good air pollution control practice for fugitive dust. Except for the meteorological station to be used for high wind events pursuant to subsection (D)(5), which shall require prior approval, plans and plan revisions may be implemented upon submittal and shall remain in effect until superseded or until disapproved by the Department. Disapprovals are appealable Department actions.

D. Performance and Housekeeping Requirements. The owner or operator shall comply with these requirements at all times regardless of a fugitive dust plan.

1. Water sprayers. The owner or operator shall implement a recordkeeping system to capture sprayer operations, including identification of the particular operation, lead-bearing fugitive dust source, timing and intensity of watering, and data regarding the quantity of water used at each water sprayer.
2. Wind fences. The owner or operator shall ensure that wind fences used to control lead-bearing fugitive dust from the non-smelting process sources specified in subsections (D)(11) through (D)(14) meet the following requirements:

a. Wind fence height shall be greater than or equal to the material pile height. The allowed material pile height shall be posted in a readily visible location at each wind fence.
b. Wind fence porosity shall not exceed 50%.

3. Material conveyor systems. For sources specified in subsections (D)(11) through (D)(14), as applicable, the owner or operator shall:
   a. Minimize conveyor drop heights to the greatest extent practicable.
   b. Clean any spills from conveyors within 30 minutes of discovery. The material collected must be handled in such a way so as to minimize lead-bearing fugitive dust to the maximum extent practicable.
4. Vehicle transport of materials. The owner or operator shall maintain vehicle cargo compartments used to transport materials capable of producing lead-bearing fugitive dust so that the cargo compartment is free of holes or other openings and is covered by a tarp.
5. High wind event requirements.
   a. During high wind events, the owner or operator shall evaluate the non-smelting process sources specified in subsections (D)(11) through (D)(14) for ongoing visible emissions using the appropriate logsheet for each source.
   b. If ongoing visible emissions are observed, the owner or operator shall promptly wet the source of emissions with the objective of mitigating further emissions.
   c. If wetting does not appear to mitigate the ongoing visible emissions to 20% opacity or less, the owner or operator shall postpone associated handling of the source until the high wind event has ceased.
6. Physical inspections. The owner or operator shall conduct physical inspections as follows:
   a. Daily inspections of all water sprayers to make sure they are functioning and are in accordance with the dust plan;
   b. Daily visual inspections of all material piles to make sure they are maintained within areas protected by a wind fence, that they are not higher than allowed for the wind fence, and to verify that moisture content requirements are met;
   c. Daily inspections of all material handling areas to identify and clean up track out or spills of materials;
   d. Daily inspections of conveyor systems to identify and clean up material spills;
   e. Daily inspections of rumble grates sump levels;
   f. Daily spot inspections of vehicles carrying lead-bearing fugitive dust-producing materials when vehicles are in use to ensure that material is not overloaded, is properly covered, and cargo compartments are intact;
   g. Weekly inspections of wind fences for material integrity and structural stability;
   h. Daily inspections of all paved roads to identify and clean up track out or spills of materials;
   i. Daily inspections of unpaved roads in subsection (D)(10)(a) to identify areas where chemical dust suppressant coverage has broken down; and
   j. Bi-weekly inspections of the acid plant scrubber blowdown drying system enclosure.
7. Opacity limit and Method 9 readings.
   a. Opacity from lead-bearing fugitive dust emissions shall not exceed 20% from any part of the facility at any time. Opacity shall be determined by using 40 CFR 60, Appendix A, Reference Method 9, except for unpaved roads, in which opacity shall be determined pursuant to subsection (D)(10)(c).
   b. In the event that an employee observes ongoing visible emissions at a non-smelting process source covered by this Section, that employee shall promptly contact a Reference Method 9-certified observer, who shall promptly evaluate the emissions and conduct a Reference Method 9 reading, if possible.
   c. A Reference Method 9-certified observer shall conduct a weekly visible emissions survey of all non-smelting process sources covered by this Section and perform a Reference Method 9 reading for any plumes that on an instantaneous basis appear to exceed 15% opacity.
8. Corrective actions.
   a. At any time that visible emissions from the non-smelting process sources covered by this Section appear to exceed 15% opacity, the owner or operator shall take prompt corrective action to identify the source of the emissions and abate such emissions, with the corrective action starting within 30 minutes after discovery. For any non-smelting process source that produces visible emissions that appear to exceed 15% opacity, the owner or operator shall perform an analysis of the root cause, and implement a strategy designed to prevent, to the extent feasible, the ongoing recurrence of the source of visible emissions. Within 14 days of completion of its analysis, if appropriate, the owner or operator shall modify the fugitive dust plan in subsection (C)(2) for any changes identified from the analysis differing from the current provisions of the fugitive dust plan.
   b. At any time that the owner or operator becomes aware that provisions of the fugitive dust plan and/or performance and housekeeping provisions required by this Section are not being met, the owner or operator shall take prompt action to return to compliance, which may include modifications to monitoring, recordkeeping, and reporting requirements in the fugitive dust plan. This includes, but is not limited to, the following actions:
      i. Return water sprayers to full operational status;
      ii. Repair damaged conveyor hoodings or other enclosures;
      iii. Apply additional water to ensure that sources are meeting moisture content requirements;
      iv. Clean any trackout or spillage of dust-producing material, including dropoff of dust producing material from conveyors, using a street sweeper, vacuum, or wet broom with sufficient water and at the speed recommended by the manufacturer;
      v. Reapplication of chemical dust suppressants in areas where the coating has broken down on unpaved roads; and
      vi. Revisions to the fugitive dust plan to undertake improved monitoring, recordkeeping, and reporting requirements necessary to ensure that the controls contained in the fugitive dust plan are being implemented as contemplated by the fugitive dust plan.

9. Paved Roads. These requirements apply to all roads at the facility currently paved and roads to be paved in the future. The owner or operator shall:
   a. Clean roads at least ~~once~~ twice daily with a sweeper, vacuum, or wet broom in accordance with applicable manufacturer recommendations.
   b. Maintain the integrity of the road surface.
   c. Clean up trackout and carry-out of material on the following schedule:
      i. As expeditiously as practicable, when trackout and carry-out extends a cumulative distance of 50 linear feet or more; and
      ii. At the end of the workday, for all other trackout and carry-out.
   d. Comply with a speed limit not to exceed 15 mph for all vehicular traffic. At minimum, speed limit signs shall be posted at all entrances and truck loading and unloading areas and/or at conspicuous areas along the roadway.
10. Unpaved Roads. These requirements apply to the unpaved roads identified in subsections (D)(10)(a)(i) through (D)(10)(a)(iii) below, including any access points where the unpaved roads adjoin paved roads and any areas of vehicular handling of material. The owner or operator shall:
   a. Implement a chemical dust suppressant application intensity and schedule, which at minimum shall be:
      i. For the slag hauler road and all other unpaved roads used or to be used by the slag hauler, chemical dust suppressant shall be applied at least once per week during the summer, and once per every two weeks during the winter.
      ii. For the main road to the secondary crusher, chemical dust suppressant shall be applied at least once every six weeks, year-round.
      iii. For unpaved roads near reverts and silica flux crushing operations, chemical dust suppressant shall be applied at least once per two weeks during the summer, and once per month in the winter.
   b. Increase the frequency of chemical dust suppressant application if necessary to reduce fugitive dust emissions from unpaved roads.
   c. Not allow visible emissions to exceed 20% opacity and shall not allow silt loading equal to or greater than 0.33 oz/ft2. However, if silt loading is equal to or greater than 0.33 oz/ft2, then the owner or operator shall not allow the average percent silt content to exceed 6%. Compliance with these requirements shall be determined by the test methods described in Appendix 15.
   d. Maintain sufficient watering trucks and personnel to operate such trucks to be employed as an interim measure whenever visible emissions or a breakdown in dust suppressant covering are observed at any point along the treated unpaved road system.
   e. Immediately, but no later than 30 minutes after initial observation of any visible emissions, apply water or chemical dust suppressant to the portion of the unpaved road where the visible emissions were observed.
   f. Reapply chemical dust suppressant within 24 hours of discovery of any area where the surface chemical dust suppressant coverage has broken down.
   g. Collect and prevent from becoming airborne any runoff or material from rinsing or sweeping as soon as practicable.
   h. Comply with a speed limit not to exceed 15 mph for all vehicular traffic. At minimum, speed limit signs shall be posted at all entrances and truck loading and unloading areas and/or at conspicuous areas along the roadway.
11. Concentrate Storage, Handling, and Unloading. The owner or operator shall:
   a. Consolidate and manage all concentrate storage piles in one or more concrete storage pads.
   b. Store concentrate in an area with a wind fence in accordance with requirements set forth in the fugitive dust plan and pursuant to subsection (D)(2).
   c. Maintain water sprayers in accordance with requirements set forth in the fugitive dust plan and to ensure the surfaces of concentrate piles are wetted to maintain a nominal 10% surface moisture content as determined from representative samples using ASTM Method D2216-10 or other equivalent methods approved by the Department and EPA Region IX.
   d. Minimize the footprint of the concentrate storage piles by pushing into the stockpile with a front end loader and sweeping open areas of the pads with a self-powered vacuum sweeper at least daily during use.
12. Uncrushed Reverts Handling and Storage. The owner or operator shall:
   a. Manage uncrushed revert material only in areas protected by a wind fence in accordance with requirements set forth in the fugitive dust plan and pursuant to subsection (D)(2).
   b. Maintain water sprayers in accordance with requirements set forth in the fugitive dust plan and to ensure the surface of uncrushed revert material is wetted with the objective to minimize lead-bearing fugitive dust emissions to the greatest extent practicable.
13. Reverts Crushing Operations and Crushed Reverts Storage. The owner or operator shall:
   a. Crush revert and store crushed revert only on one or more concrete pads.
   b. Crush revert and store crushed revert only within an area protected by a wind fence in accordance with requirements set forth in the fugitive dust plan and pursuant to subsection (D)(2).
   c. Maintain water sprayers in accordance with requirements set forth in the fugitive dust plan and to ensure the surfaces of all crushed revert material, including revert managed after it is crushed, is wetted to maintain a nominal 10% surface moisture content as determined from representative samples using ASTM Method D2216-10 or other equivalent methods approved by the Department and EPA Region IX.
   d. By October 2017, relocate all revert crushing operations to 33º 00’ 25.84” N, 110º 46’ 26.55” W and shall crush revert only at this new location.
14. Bedding Operations, Including Handling, Storage, and Unloading. The owner or operator shall:
   a. Perform all bedding activities, including loading and unloading of materials to be blended, only within an area protected by a wind fence in accordance with requirements set forth in the fugitive dust plan and pursuant to subsection (D)(2). These

activities include the storage and handling areas for potentially lead-bearing fugitive dust-producing material within the bedding plant area.

b. Maintain water sprayers in accordance with requirements set forth in the fugitive dust plan and to ensure the surfaces of material in the bedding area is wetted to maintain a nominal 10% surface moisture content as determined from representative samples using ASTM Method D2216-10 or other equivalent methods approved by the Department and EPA Region IX.

c. Maintain rumble grates at all of the bedding plant's entrances and exits to shake off material on the loader tires as they enter and exit the area. Material that is tracked out of the bedding area must be cleaned up at the end of the workday.

d. Operate its bedding activities in a manner designed to avoid any trackout outside an area protected by a wind fence. Areas of material spillage or trackout, whether inside or outside of an area protected by a wind fence, shall be rinsed or cleaned daily.

15. Acid Plant Scrubber Blowdown Drying System.

a. The owner or operator shall dry acid plant scrubber blowdown solids only in an enclosed system that uses a venturi scrubber, thickener, filter press, and electric dryer that is maintained under negative pressure at all times that materials are being dried.

b. The owner or operator shall maintain the negative pressure of the electric dryer using a 2,500 ACFM dryer ventilation fan that must run at all times the electric dryer is operational. Monitoring of the negative pressure shall be demonstrated through the run and stop states of the ventilation fan and electric dryer.

c. The acid plant scrubber blowdown drying system shall include the following elements:

i. Venturi scrubber slurry that reports to a new thickener.

ii. Underflow from the thickener that goes to a filter press for further liquid removal, with the resulting filter cake sent to two electric dryers operating in parallel to provide final drying of the dust cake.

iii. Exhaust from the dryers sent to the packed gas cooling tower inlet duct.

iv. Dried cake discharged directly into bags.

d. The owner or operator shall clean all areas previously used for scrubber blowdown drying and no longer use previous areas for scrubber blowdown drying.

E. Contingency Requirements.

1. ~~If the owner or operator does not meet the compliance schedule below in subsection (E)(3), or if the Hayden Lead Nonattainment Area does not attain the 2008 Lead National Ambient Air Quality Standards by the attainment date established in the Act, whichever occurs first, then the owner or operator shall increase the paved road cleaning frequency specified in subsection (D)(9) to twice per day.~~Contingency measures

a. The owner or operator shall install wind fencing starting west of the filter plant and proceeding around its northern perimeter for an approximate length of 790 feet. The fence shall be at least 20 feet high or greater than or equal to the material pile height at the filter plant, whichever is greater. The allowed material pile height shall be posted in a readily visible location at the wind fence. Wind fence porosity shall not exceed 50 percent.

b. The owner or operator shall install a wind fence along the south perimeter road starting at the east end of the former SmithCo processing area and extending for an approximate length of 655 feet. The fence shall be at least 20 feet high or greater than or equal to the material pile height, whichever is greater. The allowed material pile height shall be posted in a readily visible location at the wind fence. Wind fence porosity shall not exceed 50 percent.

c. The owner or operator shall install a new perimeter fence on the southwest corner of the property extending from the south entry gateway area toward the chlorinator area and then reconnecting to the existing perimeter at the former SmithCo area. The fence shall be at least six feet high and shall be posted for no trespassing.

d. The fencing shall approximate that shown in Figure 4-3 of the State Implementation Plan Revision: 2024 Hayden Lead (Pb) Nonattainment Area for 2008 Pb NAAQS.

2. ~~The owner or operator shall implement the contingency measure in subsection (E)(1) within 60 days of notification by EPA Region IX of either a failure to meet the compliance schedule in subsection (E)(3) or a failure to attain by the attainment date established in the Act, whichever occurs first.~~Triggers. The owner or operator shall implement the contingency measures set forth in subsection (H)(1) no later than 60 days after receiving notice from the Department or EPA Region 9 that any of the following have occurred:

a. Failure to attain the 2008 Pb NAAQS by the January 31, 2027, attainment date.

b. Failure to make reasonable further progress (RFP).

3. ~~The compliance schedule is as follows. The Fugitive Dust Plan referred to in the compliance schedule shall mean the Fugitive Dust Plan submitted to the Administrator by the owner or operator to comply with requirements set forth in Consent Decree No. CV-15-02206-PHX-DLR, which became effective on December 30, 2015 in the United States District Court for the District of Arizona, as that plan may be later revised pursuant to subsection (C)(3):~~The owner or operator shall complete construction of the contingency measures as expeditiously as possible, but no later than 120 to 180 days after initiation.

~~Control Measure~~	~~Date of Implementation~~
~~Implementation of chemical dust suppression for unpaved roads.~~	~~Within 30 days of Administrator approval of application intensity and schedules in Fugitive Dust Plan.~~

~~Implementation of wind fences for materials piles (unerushed reverts, reverts crushing and crushed reverts, bedding materials, and concentrate).~~	~~Within 120 days of Administrator approval of the Fugitive Dust Plan or the date of completion in the approved Fugitive Dust Plan, whichever is later.~~
~~Implementation of water sprays for materials piles (unerushed reverts, reverts crushing and crushed reverts, bedding materials, and concentrate).~~	~~Within 120 days of Administrator approval of the Fugitive Dust Plan or the date of completion in the approved Fugitive Dust Plan, whichever is later.~~
~~Implementation of new acid plant scrubber blowdown drying system.~~	~~November 30, 2016~~
~~Implementation of new primary, secondary, and tertiary hooding systems for converter aisle for purposes of complying with requirements in R18-2-B1301.~~	~~July 1, 2018~~
~~Implementation of new ventilation system for matte tapping and slag skimming for flash furnace for purposes of complying with requirements in R18-2-B1301.~~	~~July 1, 2018~~

F. Ambient Air and Meteorological Monitoring Requirements.

1. The owner or operator shall conduct ambient air monitoring and sampling for lead as follows:
   a. At minimum, the owner or operator shall continue to maintain and operate the ambient lead monitors located at ST-14 (the smelter parking lot), ST-23 (Hillcrest area), ST-26 (post office), and ST-18 (next to the concentrate handling area).
   b. Samples must be collected continuously at all monitor sites specified in subsection (F)(1)(a). For the purposes of this requirement, "continuously" means that 24-hour filters are placed and collected at minimum, every six calendar days at all sites consistent with 40 CFR § 58.12.
   c. The owner or operator shall follow the Hayden Smelter's Quality Assurance Project Plan (QAPP) applicable to these monitors.
   d. The monitors must be operated and maintained in accordance with 40 CFR 58, Appendix A.
   e. The owner or operator shall submit each filter removed from each monitor to a certified laboratory for analysis no later than 18 calendar days after the filter's removal. The owner or operator shall ensure that the laboratory performs its analysis and submits the results to the owner or operator no later than 21 calendar days from the lab's receipt of the filter.
   f. The owner or operator shall calculate, update, and maintain as a record the following data within 14 calendar days of receipt of any results pertaining to the monitor filters received from a certified lab:
      i. The total pollutants on the filters collected and analyzed; and
      ii. Calculations of 30-day rolling average ambient air levels of lead for the ST-23, ST-26, and ST-18 monitors, and 60-day rolling average ambient air levels of lead for the ST-14 monitor, expressed as µg/m3.
   g. The owner or operator shall retain lead samples collected pursuant to this Section for at least three years. The samples shall be stored in individually sealed containers and labeled with the applicable monitor and date. Upon request, the samples shall be provided to the Department within five business days.
2. The owner or operator shall conduct meteorological monitoring as follows:
   a. Continuously monitor and record wind speed and direction data using equipment and a meteorological station approved by the Department.
   b. The owner or operator shall calculate and record average wind speed in miles per hour over 15 minutes, rolled each minute.
   c. Conduct wind speed and direction measurements using methods in accordance with EPA's Quality Assurance Handbook for Air Pollution Measurement Systems, Volume IV, Meteorological Measurements, Version 2.0.
3. The ambient air and meteorological monitoring stations required by this Section may be discontinued at the end of three full calendar years after the Hayden Lead Nonattainment Area is redesignated attainment for the 2008 Lead National Ambient Air Quality Standards.

G. Compliance Demonstration Requirements. The owner or operator shall demonstrate compliance with this Section by complying with all requirements in the fugitive dust plan pursuant to subsection (C)(2) and implementing all housekeeping and performance requirements pursuant to subsection (D).

H. Recordkeeping.
1. The owner or operator shall maintain the following records for at least five years and keep on-site for at least two years:
   a. Current and past fugitive dust plans required by subsection (C)(2).
   b. Physical inspection sheets, checklists, and logsheets for inspections conducted in accordance with subsection (D)(6).
   c. All records of opacity and stabilization tests, if any, conducted in accordance with subsection (D)(10)(c).
   d. All records of surface moisture content tests, if any, conducted in accordance with subsection (D)(11), subsection (D)(13), and subsection (D)(14).
   e. All records of major maintenance activities and inspections conducted on monitors required by subsection (F).
   f. All records of quality assurance and quality control activities for the monitors required by subsection (F).
   g. All air quality monitoring samples, rolling averages of ambient lead concentrations and necessary calculations, and data required by subsection (F).
   h. All records of wind data from the meteorological station required by subsection (F).
   i. All records of any periods during which a monitoring device required by subsection (F) is inoperative or not operating correctly.
   j. All records of reports and notifications required by subsection (I).
2. All of the following records maintained for the purposes of the fugitive dust plan required by subsection (C)(2) must be maintained in a recordkeeping log or recordkeeping system. As part of the records, the owner or operator shall include the dates and times for each of the following observations or activities, the name of the employee documenting each activity or observation, and the nature and location of each observation activity:
   a. Each instance of observed visible emissions of 15% opacity or greater, along with a description of any corrective action undertaken and its success.
   b. Water sprayer operations, including timing and intensity of watering to be captured in the water sprayer recordkeeping system.
   c. Timing, location, type, and amount of chemical suppressant and water applied to unpaved roads, and a description of the nature and timing of any additional corrective action taken, as necessary, to minimize emissions to the greatest extent practicable.
   d. Timing and location of all sweeping and cleaning of trackout or spillage material.
   e. Timing and location of all washdown of concrete areas.
   f. Timing and location of sump cleanouts.
   g. Results of all visible emissions surveys and Reference Method 9 readings.
   h. Appropriate records for operating conditions, including electric dryer ventilation fan start and stop times for the newly designed acid plant scrubber blowdown drying system.
   i. Calibration records for all measurement devices, including maintenance of manufacturer's manuals or other documentation for suggested calibration schedules and accuracy levels for each measurement device.
   j. Dates, times, and descriptions of deviations when the owner or operator's operations was carried out in a manner inconsistent with the fugitive dust plan required by subsection (C)(2).

I. Reporting. Within 30 days after the end of each calendar-year quarter, the owner or operator shall submit a report to the Department covering the prior quarter that includes the following:
1. All instances where observed fugitive emissions coming from sources covered in this Section were 15% or greater.
2. The date of all high wind events, with an identification of the location of the reading, wind speed, and duration of the event, and a description of actions taken as a result of the event on a source-by-source basis.
3. All instances where corrective action was required with identification of the emission source involved, what triggered the corrective action, what action the owner or operator undertook to abate or mitigate the problem, and whether the corrective action achieved the intended results.
4. A summary of all times when the electronic recordkeeping system was not recording data, and a summary and indication of the period when recorded data was outside of established operating parameters.
5. A summary of progress of all new construction, installation, upgrades, or modifications to equipment or structures at the facility required by the fugitive dust plan and subsection (D), including dates of commencement and completion of construction, dates of operations of new or modified equipment or structures, and dates old or outdated equipment or structures were permanently retired.
6. Raw monitoring data and calculated ambient lead concentrations from the ambient air monitoring stations required by subsection (F).

R18-2-B1302. Limits on SO_2 Emissions from the Hayden Smelter

A. Applicability.
1. This Section applies to the owner or operator of the Hayden Smelter. It establishes limits on sulfur dioxide emissions from the Hayden Smelter and monitoring, recordkeeping and reporting requirements for those limits.
2. Effective date. Except as otherwise provided, the requirements of this Section shall become applicable ~~on the earlier of July 1, 2018 or 180 days after completion of all project improvements authorized by Significant Permit Revision No. 60647~~upon smelter restart.
3. The sulfur dioxide emissions limitations contained in subsection (C)(3) shall become effective 60 days after the Hayden smelter achieves maximum production after smelter restart or 180 days after smelter restart, whichever occurs first.
4. The operational controls and limitations contained in subsection (D) shall be implemented upon smelter restart or the time specified as otherwise provided in subsection (D).

B. Definitions. In addition to definitions contained in R18-2-101 and R18-2-B1301, the following definitions apply to this rule.

1. "Anode Secondary Hood System" means the secondary hoods installed around each of the anode furnaces to improve the capture of fugitive emissions from the anode furnaces during charging, holding and processing, route the emissions to a new anode secondary hood baghouse for fabric filter control, and then to the annulus of the main stack.
~~1~~2. "Continuous emissions monitoring system" or "CEMS" means the total equipment, required under the emission monitoring provisions in this Chapter, used to sample, condition (if applicable), analyze, and to provide, on a continuous basis, a permanent record of emissions.
3. "Fuming ladle" means a ladle emitting an abnormal amount of fume after discharge of material.
4. "Maintenance downturn" means a scheduled maintenance period lasting at least eight working hours.
~~2~~5. "Operating day" means any calendar day in which any of the following occurs:
   a. Concentrate is smelted in the smelting furnace;
   b. Copper or sulfur bearing materials are processed in the converters;
   c. Blister or scrap copper is processed in the anode furnaces;
   d. Molten metal, including slag, matte or blister copper, is transferred between vessels; or
   e. Molten metal is cast into anodes or other intermediate or final products.
~~3~~6. "Out of control period" means the time that begins with the completion of the fifth, consecutive, daily calibration drift check with a calibration drift in excess of two times the allowable limit, or the time corresponding to the completion of the daily calibration drift check preceding the daily calibration drift check that results in a calibration drift in excess of four times the allowable limit, and the time that ends with the completion of the calibration check following corrective action that results in the calibration drifts at both the zero (or low-level) and high-level measurement points being within the corresponding allowable calibration drift limit.
7. "Smelter restart" means the first day after the issuance of Permit No. 96410 that concentrate is processed through the INCO flash furnace to produce matte.
8. "Table 1" means the table labeled "Uptake Improvement System, Flow Conditions and Damper Positions," in Appendix 1 of the attachment labeled "Hayden Smelter Site-Specific SIP Requirements," in the current Class I Air Quality Permit issued to the Hayden smelter.
9. "Table 2" means the table labeled "Uptake Improvement System Interlock Timing," in Appendix 1 of the attachment labeled "Hayden Smelter Site-Specific SIP Requirements," in the current Class I Air Quality Permit issued to the Hayden smelter.
10. "Table 3" means the table labeled "Anode Secondary Hood System Flow Conditions and Damper Positions," in Appendix 1 of the attachment labeled "Hayden Smelter Site-Specific SIP Requirements," in the current Class I Air Quality Permit issued to the Hayden smelter.
11. "Table 4" means the table labeled "Emergency Shutdown Ventilation Flue Emissions," in Appendix 1 of the attachment labeled "Hayden Smelter Site-Specific SIP Requirements," in the current Class I Air Quality Permit issued to the Hayden smelter.

C. Sulfur Dioxide Emissions Limitations.

1. Sulfur dioxide ~~Emissions~~ emissions from the Main Stack shall not exceed 1069.1 pounds per hour on a 14-operating day average. ~~unless 1,518 pounds or less is emitted during each hour of the 14-operating day period.~~
2. The owner ~~and~~ or operator shall not cause to be discharged into the atmosphere from any affected unit subject to 40 CFR 60 subpart P any gases which contain sulfur dioxide in excess of the limit set forth in 40 CFR § 60.163(a) (as in effect on July 1, 2016 and no later editions).
3. Fugitive emissions limits. These limits shall apply when the underlying processes are in operation, including periods of startup, shutdown and malfunction.
   a. Fugitive emissions of SO_2 from the flash furnace, matte tapping and slag skimming areas shall not exceed 38.5 pounds/hour, as measured by the flash furnace roofline monitoring system.
   b. Fugitive emissions of SO_2 from the converter aisle area shall not exceed 10.0 pounds/hour, as measured by the converter aisle roofline monitoring system.
   c. Fugitive emissions of SO_2 from the anode furnaces shall not exceed 9.0 pounds/hour, as measured by the anode furnace roofline monitoring system.
   d. The owner or operator may apply for a significant permit revision to change the applicable fugitive emissions limits in (a), (b), and (c) of this subsection to another set of limits provided in the following table:

Rebalanced Fugitive Emissions Limits	Fugitive emissions of SO_2 from the flash furnace, matte tapping, and slag skimming areas (pounds/hour)	Fugitive emissions of SO_2 from the converter aisle area (pounds/hour)	Fugitive emissions of SO_2 from the anode furnaces (pounds/hour)
Scenario 1	37	10	10
Scenario 2	35.5	10	11
Scenario 3	34	10	12
Scenario 4	36.5	11	9
Scenario 5	35	11	10
Scenario 6	34	11	11
Scenario 7	32.5	11	12
Scenario 8	35	12	9
Scenario 9	33.5	12	10
Scenario 10	32	12	11
Scenario 11	30.5	12	12
Scenario 12	33	13	9
Scenario 13	32	13	10
Scenario 14	30.5	13	11

Scenario 15	29.1	13	12

D. Operational Standards.

1. Process equipment and control device operations. At all times, including periods of startup, shutdown, and malfunction, the owner or operator shall, to the extent practicable, maintain and operate smelter processes and associated emission ~~control~~ capture and/or control equipment in a manner consistent with good air pollution control practices for minimizing SO_2 emissions to the levels required by subsection (C). Determination of whether acceptable operating and maintenance procedures are being used will be based on all information available to the Director and EPA Region IX, which may include, but is not limited to, monitoring results, review of operating and maintenance procedures and records, and inspection of the relevant equipment.
2. Capture system and control device operations and maintenance plan. The owner or operator shall develop and implement an operations and maintenance plan for each capture system and/or control device used to ventilate or control process gas or emissions from the flash furnace including matte tapping, slag skimming, and slag return operations; converter primary hoods, converter secondary hoods, tertiary ventilation system, and anode refining operations. The operations and maintenance plan must address the following requirements as applicable to each capture system and/or control device.
   a. Monitoring devices. The plan shall provide for installation, operation, calibration, and maintenance of appropriate monitoring devices to measure and record operating limit values or settings at all times the required capture and control system is operating, except during periods of monitor calibration, repair and malfunction. The initial plan shall provide for volumetric flow monitoring on the vent gas baghouse (inlet or outlet), each converter primary hood, each converter secondary hood, the tertiary ventilation system and the anode furnace baghouse (inlet or outlet). All monitoring devices shall be accurate within +/- 10% and calibrated according to manufacturer's instructions. If direct measurement of the exhaust flow is infeasible due to physical limitations or exhaust characteristics, the owner or operator may propose a reliable equivalent method for approval. Initial monitoring may be adjusted as provided in subsection (D)(2)(e). Dampers that are manually set and remain in the same position while the capture system is operating are exempt from these monitoring requirements. Capture system damper position ~~setting(s)~~ setting or settings shall be specified in the plan.
   b. Operational limits. The owner or operator shall establish operating limits in the operations and maintenance plan for the capture systems and/or control devices that are representative and reliable indicators of the performance of the capture system and control device operations. The initial operating limits may be adjusted as provided in subsection (D)(2)(e). Initial operating limits shall include the following:
      i. Identification of those modes of operation when the double dampers between the flash furnace vessel and the vent gas system will be closed and the interstitial space evacuated to the acid plant.
      ii. A minimum air flow for the furnace ventilation system and associated damper positions for each matte tapping hood or slag skimming hood when operating to ensure that the ~~operation(s)~~ operation or operations are within the confines or influence of the capture system.
      iii. A minimum air flow for the secondary hood baghouse and associated damper positions for each slag return hood to ensure that the operation is within the confines or influence of the capture system's ventilation draft during times when the associated process is operating.
      iv. A minimum air infiltration ratio for the converter primary hoods of 1:1 averaged over 24 converter Blowing hours, rolled hourly measured as volumetric flow in primary hood less the volumetric flow of tuyere Blowing compared to the volumetric flow of tuyere Blowing.
      v. A minimum secondary hood exhaust rate of 35,000 SCFM during converter Blowing, averaged over 24 converter Blowing hours, rolled hourly.
      vi. A minimum secondary hood exhaust rate of 133,000 SCFM during all non-Blowing operating hours, averaged over 24 non-Blowing hours, rolled hourly.
      vii. A minimum negative pressure drop across the secondary hood when the doors are closed equivalent to 0.007 inches of water.
      viii. A minimum exhaust rate on the tertiary hooding of 400,000 ACFM during all times material is processed in the converter aisle, averaged over 24 hours and rolled hourly.
      ix. Fan amperes or minimum air flow for the anode furnace baghouse and associated damper positions for each anode furnace hood to ensure that the anode furnace off-gas port is within the confines or influence of the capture system's ventilation draft during times when the associated furnace is operating.
      x. The anode furnace charge mouth shall be kept covered when the tuyeres are submerged in the metal bath except when copper is being charged to or transferred from the furnace.
      xi. The temperatures of the acid plant catalyst bed, which shall at minimum, meet the manufacturer's recommendations.
      xii. The acid plant catalyst replenishment criteria, which shall at minimum, meet the manufacturer's recommendations.
   c. Preventative maintenance. The owner or operator must perform preventative maintenance on each capture system and control device according to written procedures specified in the operation and maintenance plan. The procedures must include a preventative maintenance schedule that is consistent with the manufacturer's or engineer's instructions, or operator's experience working with equipment, and frequency for routine and long-term maintenance. This provision does not prohibit additional maintenance beyond that required by the plan.
   d. Inspections. The owner or operator must perform inspections in accordance with written procedures in the operations and maintenance plan for each capture system and control device that are consistent with the manufacturer's, engineer's or operator's instructions for each system and device.
   e. Plan development and revisions.
      i. The owner or operator shall develop and keep current the plan required by this Section. Any plan or plan revision shall be consistent with this Section, shall be designed to ensure that the capture and control system performance conforms to the attainment demonstration in the ~~Hayden 2010 Sulfur Dioxide National Ambient Air Quality Standards Nonattainment Area State Implementation Plan (SIP)~~ Final SIP Revision: 2023 Hayden Sulfur Dioxide Nonattainment Area

for the 1971 and 2010 SO_2 NAAQS, and shall be submitted to the Department for review. Any plan or plan revision submitted shall include the associated manufacturer's recommendations and/or instructions used for capture system and control device operations and maintenance.

ii. The owner or operator shall submit the ~~initial~~ revised plan to the Department ~~no later than May 1, 2018~~ within 180 days of smelter restart and shall include the initial volumetric flow monitoring provisions in subsection (D)(2)(a), the initial operational limits in subsection (D)(2)(b), the preventative maintenance procedures in subsection (D)(2)(c), and the inspection procedures in subsection (D)(2)(d).

iii. The owner or operator shall submit to the Department for approval a plan revision with changes, if any, to the initial volumetric flow monitoring provisions in subsection (D)(2)(a) and initial operational limits in subsection (D)(2)(b) not later than six months after completing a fugitive emissions study conducted in accordance with Appendix 14. The Department shall submit the approved changes to the volumetric flow monitoring provisions and operational limits pursuant to this subsection to EPA Region IX as a SIP revision not later than 12 months after completion of a fugitive emissions study.

iv. Other plan revisions may be submitted at any time when necessary. All plans and plan revisions shall be designed to achieve operation of the capture system and/or control device consistent with the attainment demonstration in the ~~Hayden 2010 Sulfur Dioxide National Ambient Air Quality Standards Nonattainment Area SIP~~ Final SIP Revision: 2023 Hayden Sulfur Dioxide Nonattainment Area for the 1971 and 2010 SO_2 NAAQS. Except for changes to the volumetric flow monitoring provisions in subsection (D)(2)(a) and operational limits in subsection (D)(2)(b), which shall require prior approval, plans and plan revisions may be implemented upon submittal and shall remain in effect until superseded or until disapproved by the Department. Disapprovals are appealable Department actions.

3. Flash Furnace Area Capture Improvements

a. Prior to smelter restart after issuance of Significant Permit Revision No. 96410, the owner or operator shall install additional hooding and interceptor walls (the "Uptake Improvement System") to improve the capture of fugitive emissions from the flash furnace area, matte tapping and slag skimming areas, route them to the existing converter secondary hood baghouse for fabric filter and high surface area lime injection control, and then to the annulus of the main stack.

b. The Uptake Improvement System shall have a design evaluation rate of 50,000 to 60,000 ACFM hourly average and shall operate when the flash furnace is in operation except for brief periods when slag is being returned to the flash furnace using the slag launder return. At those times, the ventilation for this system shall be switched to the slag return capture system and then switched back automatically to the Uptake Improvement System at the conclusion of the slag return cycle.

c. Establishment of Operational Ranges

i. The owner or operator shall establish a range of damper positions based upon the secondary hood baghouse flow monitor that provides reasonable assurance that the Uptake Improvement System exhaust flow is within the design range specified in (D)(3)(b). The ranges shall be established and verified by a stack test no later than 180 days after smelter restart and may be revised thereafter in the same fashion. The proposed ranges, stack test verifying evacuation rates compliant with (D)(3)(b) and proposed revision to Table 1 shall be submitted to the department within 45 days of the stack test. If the Director concurs that the proposed damper position ranges assure an exhaust flow compliant with (D)(3)(b), the Director shall issue a revised Table 1 reflecting the new damper position range. Thereafter, the owner or operator shall comply with the approved Table 1 range. Until the first submittal is approved, the owner or operator shall use ranges specified in Table 1 of Appendix I of Significant Permit Revision 96410. The current ranges shall be specified in Table 1 of the "Hayden Smelter Site-Specific SIP Requirements" attachment to the Class I Air Quality Permit for the smelter.

ii. The owner or operator shall establish a timed interlock on the slag return launder such that when slag is returned to the flash furnace the ventilation air from the Uptake Improvement System is switched to the slag return capture system for a defined period of not less than 5 minutes nor more than 10 minutes and then returns to the Uptake Improvement System automatically. The owner or operator shall optimize the period within the five to 10-minute range established during the initial 60-day optimization period by observation and analysis and thereafter as necessary. The first analysis, proposed time period, and proposed revisions to Table 2 shall be submitted no later than 75 days after the smelter restart. The Director shall approve any period that falls within both the five to 10-minute range and a range between the mean and mean plus a standard deviation of the observed slag return durations. If the Director concurs that the proposed range meets these requirements, the Director shall issue a revised Table 2. All analyses shall be submitted and approved by the Director. Until the first report is approved, the owner or operator shall use ranges specified in Table 2 of Appendix I of Significant Permit Revision No. 96410. The current ranges shall be specified in Table 2 the "Hayden Smelter Site-Specific SIP Requirements" attachment to the Class I Air Quality Permit for the smelter.

d. Operational requirements

i. The owner or operator shall operate the Uptake Improvement/Launder Return combined damper in accordance with the approved Table 1 range or ranges at all times the flash furnace is operating and at all times matte tapping, slag skimming or slag returning is occurring.

ii. The owner or operator shall operate the timed interlock in accordance with the approved Table 2 value. Operators shall trigger the interlock prior to starting slag return and may trigger the timed interlock again if slag is still returning at the end of the interlock cycle to minimize emissions.

iii. The owner or operator shall inspect the Uptake Improvement System during each scheduled maintenance downturn to ensure that the hooding and walls are in proper position and that there are no visible accretions of material in the mouth of the hooding that would preclude efficient operation. The owner or operator shall quarterly, evaluate the damper controlling air between the Uptake Improvement System and the slag return capture system to ensure it is operating properly. Records of these inspections shall be maintained for five years.

4. Converter and Material Transfer Area Capture Improvements

a. Prior to smelter restart after issuance of significant Permit Revision No. 96410, the owner or operator shall install a Fuming Ladle Capture System, which shall have a design evacuation rate of 40,000 to 50,000 ACFM when a ladle is present within the hooded area. The capture system shall run until the ladle is removed or for at least 20 minutes after the ladle is placed in the containment. Fuming ladles shall not be removed from the fuming Ladle Capture System containment unless fuming has stopped or the ladle is transported directly to the tunnel or within the capture area of a secondary hood.

b. The owner or operator shall develop training for its employees responsible for ladle movement on identification of fuming ladles. The training shall be developed within 60 days of smelter restart. Existing employees shall be trained within 90 days of smelter restart and any new employees shall be trained before working ladle operations unsupervised by a trained operator. Employees shall be retrained once every five years. Training records for the operators shall be kept for five years. The training and records shall be available for inspections.

c. The owner or operator shall, whenever a fuming ladle is detected, promptly move the fuming ladle into the Fuming Ladle Capture System.

d. The owner or operator shall conduct an initial flow test within 180 days of smelter restart to verify that the system achieves the design flow. The results of this flow test shall be reported to the Department within 45 days of completion of the test.

e. The owner or operator shall inspect the Fuming Ladle Capture System during each scheduled maintenance downturn to ensure that it is actuating properly, that the hoods and walls are in proper position, and there are no visible accretions of material in the mouth of the hood that would preclude efficient operation. Records of these inspections shall be maintained for five years.

5. Anode Furnace Secondary Hood Capture Control System

a. Prior to smelter restart after issuance of Significant Permit Revision No. 96410, the owner or operator shall install secondary hoods around each of the anode furnaces to improve the capture of fugitive emissions from the anode furnaces during charging, holding and processing, route the emissions to a new anode secondary hood baghouse for fabric filter control, and then to the annulus of the main stack. This is the Anode Secondary Hood system.

b. The Anode Secondary Hood System

i. The Anode Secondary Hood System shall have an overall design evacuation rate for the total system of 150,000 ACFM hourly average.

ii. The anode secondary hood baghouse shall have a maximum design emission rate of 0.002 gr/scf.

iii. Each secondary hood shall be equipped with dampers that can close completely and operate with a range from 20 to 100% to modulate flows to the individual anode furnace.

iv. The Anode Secondary Hood System shall be operated to achieve balanced flows (± 15%) on the two operating anode furnaces when neither are charging. When one anode furnace is charging, the Anode Secondary Hood System shall be balanced so that the charging furnace achieves a minimum of 100,000 ACFM and the other operating furnace gets the balance.

c. The owner or operator shall establish a range of damper positions and total flow conditions based upon the anode secondary hood baghouse flow monitor that provides reasonable assurance that the Anode Secondary Hood system exhaust flow is within the design range. These ranges and flow conditions shall be verified during a performance test within 180 days of smelter restart and may be revised thereafter in the same fashion. The proposed ranges and flow conditions, stack test verifying evacuation rates compliant with (D)(5)(b)(i) and (D)(5)(b)(iv) and proposed revision to Table 3 of Appendix 1 shall be submitted to the Department within 45 days of the stack test. If the Director concurs that the proposed damper position and flow ranges assure an exhaust flow compliant with (D)(5)(b)(i) and (D)(5)(b)(iv), the Director shall issue a revised Table 3 of Appendix 1 reflecting the new approved Table 3 ranges. Until the first performance test, the owner or operator shall use ranges specified by the air pollution control designer in Table 3 of Attachment I of Significant Permit Revision 96410. The current flows shall be specified in Table 3 of Appendix 1 of the "Hayden Smelter Site-specific SIP attachment" to the Class I air quality permit for the smelter. Damper positions shall be logged and the logs kept for five years.

d. Operational requirements. The owner or operator shall operate the Anode Secondary Hoods in accordance with the approved Table 3 range or ranges at all times the anode furnaces are operating.

e. The owner or operator shall inspect the Anode Secondary Hood System during scheduled maintenance down turn to ensure that the dampers are working properly, the hoods and walls are in proper position and that there are no visible accretions of material in the mouth of the hoods that would preclude efficient operation. Records of these inspections shall be maintained for five years.

~~3~~6. Emissions from the anode furnace baghouse stack shall be routed to the Main Stack.

E. Main Stack Monitoring.

1. To determine compliance with subsection (C)(1) the owner or operator of the Hayden Smelter shall install, calibrate, maintain, and operate a CEMS for continuously monitoring and recording SO_2 concentrations and stack gas volumetric flow rates at the following locations.
   a. The exit of the acid plant;
   b. The exit of the secondary hood particulate control device after the High Surface Area (HSA) lime injection system;
   c. The exit of the flash furnace particulate control device after the HSA lime injection system;
   d. The tertiary ventilation system prior to mixing with any other exhaust streams; ~~and~~
   e. The anode furnace baghouse stack prior to mixing with any other exhaust streams~~.~~; and
   f. The exit of the Anode Secondary Hood Baghouse. This system shall be installed and a relative accuracy test audit (RATA) successfully completed within 180 days of the effective date of this section under (A)(3).
2. Except during periods of systems breakdown, repairs, maintenance, out-of-control periods, calibration checks, and zero and span adjustments, the owner or operator shall continuously monitor SO_2 concentrations and stack gas volumetric flow rates at each location in subsection (E)(1).

3. For purposes of this Section, continuous monitoring means the taking and recording of at least one measurement of SO_2 concentration and stack gas flow rate reading from the effluent of each affected stack, outlet, or other approved measurement location in each 15-minute period when the associated process units are operating. Fifteen-minute periods start at the beginning of each clock hour, and run consecutively. All CEMS required by subsection (E)(1) shall complete at least one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.

~~4. If the owner or operator can demonstrate to the Director that measurement of stack gas volumetric flow rate in the outlet of any particular piece of SO_2 control equipment would yield inaccurate results or would be technologically infeasible, then the Director may allow measurement of the flow rate at an alternative sampling point.~~

~~5~~4. The owner or operator shall demonstrate that the CEMS required by subsection (E)(1) meet all of the following requirements:

a. The SO_2 CEMS installed and operated under this Section meets the requirements of 40 CFR 60, Appendix B, Performance Specification 2 and Performance Specification 6. The CEMS on the anode furnace baghouse stack and tertiary ventilation system shall complete an initial Relative Accuracy Test Audit (RATA) in accordance with Performance Specification 2. The RATA runs shall be tied to when the anode furnace is in use and, for the tertiary system, when the converters are in operation and/or material is being transferred in the converter aisle. Asarco may petition the Department and EPA Region IX on the criteria for subsequent RATAs for the anode furnace baghouse stack or tertiary ventilation system CEMS. The petition shall include submittal of CEMS data during the year.

b. The SO_2 CEMS installed and operated under this Section meets the quality assurance requirements of 40 CFR 60, Appendix F.

c. The owner or operator shall notify the Director in writing at least 30 days in advance of the start of the relative accuracy test audit (RATA) performed on the CEMS.

d. The Director shall approve the location of all sampling points for monitoring SO_2 concentration and stack gas volumetric flow rates and the appropriate span values for the monitoring systems. This approval shall be in writing before installation and operation of the measurement instruments.

e. The measurement system installed and used under this subsection is subject to the manufacturer's recommended zero adjustment and calibration procedures at least once per operating day unless the manufacturer specifies or recommends calibration at shorter intervals, in which case the owner or operator shall follow those specifications or recommendations. The owner or operator shall make available a record of these procedures that clearly shows instrument readings before and after zero adjustment and calibration.

f. The owner or operator shall maintain on hand and ready for immediate installation sufficient spare parts or duplicate systems for the CEMS required by this Section to allow for the replacement within six hours of any monitoring equipment part that fails or malfunctions during operation.

~~6~~5. ~~The owner or operator of the Hayden Smelter may petition the Department to substitute annual stack testing for the tertiary ventilation or the anode furnace baghouse stack CEMS if the owner or operator demonstrates, for a period of two years, that either CEMS contribute(s) less than 5% individually of the total sulfur dioxide emissions. The Department must determine the demonstration adequate to approve the petition.~~ Annual stack testing shall use EPA Methods 1, 4, and 6C in 40 CFR 60 Appendix A or an alternate method approved by the Department and EPA Region IX. Annual stack testing shall commence no later than the one year after the date the continuous emission monitoring system was removed. The owner or operator shall submit a test protocol to the Department at least 30 days in advance of testing. The protocol shall provide for three or more 24-hour runs unless the owner or operator justifies a different period and the Department approves such different period. Reports of testing shall be submitted to the Department no later than 60 days after testing or 30 days after receipt, whichever is later. The report shall provide an emissions rate, in the form of a pound per hour or pound per unit of production factor, that shall be used in the compliance demonstration in subsection ~~(F)(1)~~ (H)(1). Except as provided herein, the owner or operator shall otherwise comply with Section R18-2-312 in conducting such testing.

F. Fugitive Emissions Monitoring.

1. To determine compliance with subsection (C)(3) the owner or operator of the Hayden Smelter shall install, calibrate, maintain and operate a CEMS for continuously monitoring and recording SO_2 emissions and volumetric flows at the roofline of the following areas when the underlying process units are operating:
   a. Flash furnace roofline system, located on the penthouse and roof of the flash furnace building;
   b. Converter aisle roofline system, located at the north and south ends of the converter aisle, and
   c. Anode aisle roofline system, located over the anode furnaces.
2. These systems shall be installed and certified successfully completed within 180 days of the effective date of this section under (C)(3). The owner or operator shall notify the Director in writing at least 30 days in advance of the initial certification testing performed on the CEMS.
3. The CEMS shall meet the requirements of (E)(4) except that everywhere those provisions specify a relative accuracy test audit (RATA) a cylinder gas audit (CGA) shall be used instead.
4. The owner or operator shall develop a roofline monitoring system operations and maintenance plan (Roofline Plan) that addresses the roofline monitoring system required by (F)(1). The roofline Plan shall include the following elements:
   a. A diagram showing the location of each intake point and which intake points are directed to which CEMS;
   b. A protocol for how the intake points will be sampled by the CEMS;
   c. A description of each CEMS, its required Quality Assurance/Quality Control procedures and span;
   d. Manufacturer's or installer's recommended zero adjustment and calibration procedures, which must provide for instrument readings before and after zero adjustments and calibrations, to be implemented at least once per operating day on the CEMS and at a frequency set forth in the protocol for flow meters;
   e. A list of replacement parts that shall be maintained on hand and ready for immediate installation on the CEMs within 6 hours and to allow fabrication of new sample runs and installation within 10 days; and
   f. Equations showing how mass emission rates will be calculated.

5. The owner or operator shall submit the roofline Plan to the Department and EPA Region IX at least 90 days prior to smelter restart. The owner or operator may submit other revisions at any time when necessary. All revisions shall be designed to achieve data collection at the roofline monitoring system consistent with the attainment demonstration in Final SIP Revision: 2023 Hayden Sulfur Dioxide Nonattainment Area for the 1971 and 2010 SO_2 NAAQS. Plans and plan revisions may be implemented upon submittal and shall remain in effect until superseded or until disapproved by the Department or EPA Region IX.

G. Emergency Shutdown Ventilation Flue Monitoring. The owner or operator shall install instrumentation on the Emergency Shutdown Ventilation Flue to detect and record all periods that the bypass is in operation. The owner or operator shall keep a log of all times of both damper positions and, when both dampers are open, whether the period is a planned or unplanned maintenance period. The owner or operator shall log any periods when one damper is open and the other damper is closed stating when the malfunctioning damper was repaired. For purposes of this rule, "planned maintenance" means any period where the owner or operator has shut down the associated emissions units and run the evacuation system until the inlet meter at the acid plant registers the equivalent of 53.5 lbs/hr or less before opening the emergency Shutdown Ventilation Flue. The inlet concentration shall be documented in the operating log.

~~F~~**H.** Compliance Demonstration Requirements.

1. For purposes of determining compliance with the emission limit in subsection (C)(1) the owner or operator shall calculate emissions for each operating day as follows:
   a. Sum the hourly pounds of SO_2 vented to each uncontrolled shutdown ventilation flue and through each monitoring point listed in subsection (E)(1) for the current operating day and the preceding 13-operating days to calculate the total pounds of SO_2 emissions over the 14-operating day averaging period, as applicable.
   b. Divide the total amount of SO_2 emissions calculated from subsection ~~(F)(1)(a)~~ (H)(1)(a) by 336 to calculate the 14-operating day average SO_2 emissions.
   ~~c. If the calculation in subsection (F)(1)(b) exceeds 1069.1 pounds per hour, then the owner or operator shall sum the hourly pounds of SO_2 vented to each uncontrolled shutdown ventilation flue and through each monitoring point listed in subsection (E)(1) for each hour of the current operating day and each hour of the preceding 13-operating days to ascertain if any hour exceeded 1,518 pounds per hour.~~
2. When no valid hour or hours of data have been recorded by a continuous monitoring system required by subsections (E)(1) and (E)(2) and the associated process unit is operating, the owner or operator shall calculate substitute data for each such period according to the following procedures:
   a. For a missing data period less than or equal to 24 hours, substitute the average of the hourly SO_2 concentrations recorded by the system for the hour before and the hour after the missing data period.
   b. For a missing data period greater than 24 hours, substitute the greater of:
      i. The 90th percentile hourly SO_2 concentrations recorded by the system during the previous 720 quality-assured monitor operating hours.
      ii. The average of the hourly SO_2 concentrations recorded by the system for the hour before and the four hours after the missing data period.
   c. Notwithstanding subsections ~~(F)(3)(a)~~ (H)(3)(a) and ~~(F)(3)(b)~~ (H)(3)(b), the owner or operator may present any credible evidence as to the quantity or concentration of emissions during any period of missing data.
3. The owner or operator shall determine compliance with the requirements in subsection (D)(2) as follows:
   ~~a.~~ Maintaining and operating the emissions capture and control equipment in accordance with the capture system and control device operations and maintenance plan required in subsection (D)(2) and recording operating parameters for capture and control equipment as required in subsection (D)(2)(b)~~; and.~~
   ~~b. Conducting a fugitive study in accordance with Appendix 14 starting not later than six months after completion of the Converter Retrofit Project authorized by Significant Permit Revision No. 60647. The fugitive study shall demonstrate, as set forth in Appendix 14, that fugitive emissions from the smelter are consistent with estimates used in the attainment demonstration in the Hayden 2010 Sulfur Dioxide National Ambient Air Quality Standards Nonattainment Area SIP.~~
4. The owner or operator shall include periods of startup, shutdown, malfunction, or other upset conditions when determining compliance with the emission limits in subsection (C).
5. The owner and operator shall demonstrate compliance with the limit in subsection (C)(2) in accordance with 40 CFR §§ 60.165 and 60.166 (as in effect on July 1, 2016 and not later editions).
6. Notwithstanding subsections (H)(2)(a) and (H)(2)(b), the owner or operator may present any credible evidence as to the quantity or concentration of emissions during any period of missing data.
7. For purposes of demonstrating compliance with the main stack limit in (C)(1) and (H)(2)(a), the pounds of SO_2 in the emergency shutdown vent shall be calculated for unplanned use of the emergency shutdown ventilation system as the total volume of the emergency shutdown system at the maximum expected SO_2 concentrations in each segment and 10 percent of that amount for planned shutdowns when the evacuation system is run until SO_2 emissions shown on the combined CEMS system are less than 53.5 lb/hr. Future changes to the design volume of the emergency shutdown system or to the maximum SO_2 concentrations used in the calculation shall be submitted to the Department with a written justification for the change and revised calculations showing the newly calculated planned and unplanned shutdown emissions. This justification may be included as part of a required permit or permit revision. The change shall not be made until approved by the Director. A copy of the current calculations and planned and unplanned shutdown emissions values shall be included in Table 4.

I. Fugitive Limit Compliance Demonstration Requirements.

1. Compliance with the fugitive emission limits in (C)(3) shall be demonstrated as follows:
   a. Each valid hour of calculated emissions from the flash furnace roofline system in (F)(1)(a) shall be compared to the limit in (C)(3) to demonstrate compliance.
   b. Each valid hour of calculated emissions from the converter aisle roofline system in (F)(1)(b) shall be compared to the limit in (C)(3) to demonstrate compliance.

c. Each valid hour of calculated emissions from the anode aisle roofline system in (F)(1)(c) shall be compared to the limit in (C)(3).
d. The owner or operator shall maintain 95% or more valid hours for each system listed in (F)(1).
e. The owner or operator shall include periods of startup, shutdown, malfunction, or other upset condition when determining compliance with the limits in (C)(3).

2. Conducting a fugitive study in accordance with Appendix 14 starting not later than six months after completion of the Converter Retrofit Project authorized by Significant Permit Revision No. 60647. The fugitive study shall demonstrate, as set forth in Appendix 14, that fugitive emissions from the smelter are consistent with estimates used in the attainment demonstration in the Final SIP Revision: 2023 Hayden Sulfur Dioxide Nonattainment Area for the 1971 and 2010 SO_2 NAAQS.

J. For the purposes of demonstrating compliance with the limits in subsection (C), all CEMS listed in (C), (E), and (F) shall use the following data validity requirements:

1. Except as provided under (J)(3) for a full operating hour (any clock hour with 60 minutes of unit operation), at least four valid data points are required to calculate the hourly average, i.e., one data point in each of the 15-minute quadrants of the hour.
2. Except as provided under (J)(3) for a partial operating hour (any clock hour with less than 60 minutes of unit operation), at least one valid data point in each 15-minute quadrant of the hour in which the unit operates is required to calculate the hourly average.
3. For any operating hour in which required maintenance or quality-assurance activities are performed:
   a. If the unit operates in two or more quadrants of the hour, a minimum of two valid data points, separated by at least 15 minutes, is required to calculate the hourly average; or
   b. If the unit operates in only one quadrant of the hour, at least one valid data point is required to calculate the hourly average.
4. If a daily calibration error check is failed during any operating hour, all data for that hour shall be invalidated, unless a subsequent calibration error test is passed in the same hour and the requirements of (J)(3) are met, based solely on valid data recorded after the successful celebration.
5. For each full or partial operating hour, all valid data points shall be used to calculate the hourly average.
6. Data recorded during periods of continuous monitoring system breakdown, repair, maintenance, out of control periods, calibration checks, and zero and span adjustments shall not be included in the data averages computed under (H) and (I).
7. Either arithmetic or integrated averaging of all data may be used to calculate the hourly average. The data may be recorded in reduced or non-reduced form.

~~G.~~**K.** Recordkeeping.

1. The owner or operator shall maintain a record of each operation and maintenance plan required under subsection ~~(D)(2)~~ (D)(1).
2. The owner or operator shall maintain the following records for at least five years:
   a. All measurements from the continuous monitoring system required by ~~subsection~~ subsections (E)(1) and (F)(1), including the date, place, and time of sampling or measurement; parameters sampled or measured; and results. All measurements will be calculated daily.
   b. All records of quality assurance and quality control activities for emissions measuring systems required by subsections (E)(1) and (F)(1).
   c. All records of calibration checks, adjustments, maintenance, and repairs conducted on the continuous monitoring systems required by ~~subsection~~ subsections (E) and (F); including records of all compliance calculations required by ~~subsection~~ subsections (H) and ~~(F)~~(I).
   d. All records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of concentrate drying, smelting, converting, anode refining and casting emission units; any malfunction of the associated air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device required by ~~subsection~~ subsections (E)(1) or (F)(1) is inoperative or not operating correctly.
   e. All records of planned and unplanned shutdown ventilation flue utilization events and calculations used to determine emissions from shutdown ventilation flue utilization events if the owner or operator chooses to use the alternative compliance determination method.
   f. All records of major maintenance activities and inspections conducted on emission units, capture system, air pollution control equipment, and CEMS, including those set forth in the operations and maintenance plan required by subsection (D)(2).
   g. All records of operating days and production records required for calculations in subsection ~~(F)~~(I).
   h. All records of fugitive emissions studies and study protocols conducted in accordance with Appendix 14.
   i. All records of reports and notifications required by subsection ~~(H)~~(L).

~~H.~~**L.** Reporting.

1. The owner or operator shall notify the Director in writing at least 30 days in advance of the start of relative accuracy test audit (RATA) procedures performed on the continuous monitoring systems required by subsection (E)(1)~~.~~.
2. Within 30 days after the end of each calendar quarter, the owner or operator shall submit a data assessment report to the Director in accordance with 40 CFR Part 60, Appendix F for the continuous monitoring systems required by ~~subsection~~ subsections (E) and (F).
3. The owner or operator shall submit an excess emissions and monitoring systems performance report or summary report form in accordance with 40 CFR § 60.7(c) to the Director quarterly for the continuous monitoring systems required by subsection (E)(1). Excess emissions means any 14-operating day average as calculated in subsection ~~(F)~~(H) in excess of the emission limit in subsection (C)(1), any period in which the capture and control system was operating outside of its parameters specified in the capture system and control device operation and maintenance plan in subsection (D)(2). ~~For any 14-operating day period exceeding 1069.1 pounds per hour that the owner or operator claims does not exceed the limit in subsection (C)(1) because all hours in the operating period are below 1,518 pounds per hour, the owner or operator shall submit the CEMS data for each hour during that period.~~ All reports shall be postmarked by the 30th day following the end of each calendar quarter time period.
4. The owner or operator shall provide the following to the Director:

a. The owner or operator shall notify the Director of commencement of construction of any equipment necessary to comply with the operational or emission limits.
b. The owner or operator shall submit semiannual progress reports on construction of any such equipment postmarked by July 30 for the preceding January-June period and January 30 for the preceding July-December period.
c. The owner or operator shall submit notification of initial startup of any such equipment within 15 business days of such startup.

5. The owner or operator shall notify the Director of any control equipment malfunctions that cause an exceedance of an applicable limit within two working days within discovery.

~~I.~~**M.** Preconstruction review. This Section is determined to be Reasonably Available Control Technology (RACT) for SO_2 emissions from the operations subject to subsection (C) for purposes of minor source NSR requirement addressed in R18-2-334.

A14. Appendix 14. Procedures for Sulfur Dioxide and Lead Fugitive Emissions Studies for the Hayden Smelter

A14.1. Applicability

This Appendix applies to the owner or operator of the primary copper smelter located in Hayden, Arizona at latitude 33º0'15"N and longitude 110º46'31"W.

A14.2. Study Objectives

The owner or operator shall conduct fugitive emissions studies to derive a measurement or accurate estimate of total fugitive sulfur dioxide and lead emissions from the Hayden smelter during operations, including planned and unplanned start-up and shutdown periods and malfunctions, for the processes identified in A14.3 below. The studies shall include uncaptured fugitive sulfur dioxide emissions from the smelter processing units, but not emissions due solely to the use of fuel for space heating or steam generation, burners at anode casting, or slag pouring at the slag dump. The studies shall evaluate the extent to which correlations may exist between fugitive sulfur dioxide, lead, and particulate matter ($PM/PM_{10}/PM_{2.5}$) emissions, and shall develop such correlations as feasible.

The studies shall also be used to help validate that the operating conditions or ranges specified in the capture and control device maintenance and operations plans required in R18-2-B1301(D)(2) and R18-2-B1302(D)(2) are consistent with operating conditions demonstrating attainment of the 2008 Lead National Ambient Air Quality Standards (NAAQS) in the ~~Hayden 2008 Lead NAAQS Nonattainment Area State Implementation Plan (SIP) and the 2010 Sulfur Dioxide NAAQS in the Hayden 2010 Sulfur Dioxide NAAQS Nonattainment Area SIP~~ State Implementation Plan Revision: 2024 Hayden Lead (Pb) Nonattainment Area for 2008 Pb NAAQS and the Final State Implementation Plan Revision: 2023 Hayden Sulfur Dioxide Nonattainment Area for the 1971 and 2010 SO_2 NAAQS.

A14.3. Processes Evaluated

From the fugitive emissions studies, the owner or operator shall develop an emission factor or accurate estimate of fugitive emissions for sulfur dioxide and lead during operations, including planned and unplanned start-up and shutdown periods and malfunctions, produced by each of the following smelting processes:

i. Flash furnace building, including flash furnace and dryer operations
ii. Converter aisle, including converter and related operations
iii. Anode furnace aisle, including oxidizing, poling and related operations

A14.4. Averaging Periods

The emission estimate shall include the average pounds per hour emission factor for the fugitive lead and sulfur dioxide emissions from each step in the smelting process identified in A14.3. The estimate shall include all time periods, including planned and unplanned start-up and shutdown periods and malfunctions.

A14.5. Methods and Study Protocols

A14.5.1. Sulfur Dioxide Fugitive Emissions Studies

The fugitive emissions studies for Sulfur Dioxide shall be completed according to the updated Fugitive Emissions Study Protocol submitted to the EPA on January 20, 2017 and approved by the EPA on May 31, 2017. The owner or operator may submit modifications to the protocol six months prior to each study for EPA approval and Department comment. Upon EPA approval, the modified protocol shall take effect. Study protocols shall specify the method or methods used to meet the study objectives as described in A14.2, including during all recurring operating scenarios from all processes identified in A14.3.

~~The owner or operator shall submit to the Department and EPA Region IX for review and approval study protocols at least six months prior to conducting fugitive emission studies. Study protocols must be approved by the Department and EPA Region IX prior to commencement of fugitive emissions studies. Study protocols shall specify the method(s) used to meet the study objectives as described in A14.2, including during all recurring operating scenarios from all processes identified in A14.3.~~

Each fugitive emissions measurement system shall include validation of adequate velocity for flow measurements (i.e., the expected exhaust velocity is within the measurement range of the instrument), and have a sufficient number of flow and temperature sensors to ensure calculation of representative exhaust flows through each roof monitor vent. The number of such sensors and their locations for each monitoring system shall account for the physical configuration of the roof monitor vent, the locations of emitting activities relative to the roof monitor vent, and heat generated by the equipment served by the roof monitor vent.

The fugitive emissions studies shall include operation and process information to help understand the emission impacts of startup, shutdown, malfunctions, and significant changes in process operations. This shall include, for example, dates, times and duration of these events, cause of malfunctions, and descriptions of process changes.

After the completion of each fugitive emissions study, the owner or operator shall modify study methods based on data and lessons learned from previous studies, and submit such modified methods in the proceeding study protocols prior to conducting future emissions studies.

A14.5.2. Lead Fugitive Emissions Studies

The fugitive emissions studies for Lead shall be completed according to the updated Fugitive Emissions Study Protocol submitted to the EPA on January 20, 2017 and approved by the EPA on May 31, 2017. The owner or operator may submit modifica-

tions to the protocol six months prior to each study for EPA approval and Department comment. Upon EPA approval, the modified protocol shall take effect. Study protocols shall specify the method or methods used to meet the study objectives as described in A14.2, including during all recurring operating scenarios from all processes identified in A14.3.

Each fugitive emissions measurement system shall include validation of adequate velocity for flow measurements (i.e., the expected exhaust velocity is within the measurement range of the instrument), and have a sufficient number of flow and temperature sensors to ensure calculation of representative exhaust flows through each roof monitor vent. The number of such sensors and their locations for each monitoring system shall account for the physical configuration of the roof monitor vent, the locations of emitting activities relative to the roof monitor vent, and heat generated by the equipment served by the roof monitor vent.

The fugitive emissions studies shall include operation and process information to help understand the emission impacts of startup, shutdown, malfunctions, and significant changes in process operations. This shall include, for example, dates, times and duration of these events, cause of malfunctions, and descriptions of process changes.

After the completion of each fugitive emissions study, the owner or operator shall modify study methods based on data and lessons learned from previous studies, and submit such modified methods in the proceeding study protocols prior to conducting future emissions studies.

A14.6. Study Duration, Frequency, and Submission Schedule

A14.6.1. Sulfur Dioxide Fugitive Emissions Studies

The first fugitive emissions study must commence not later than six months after the completion of ~~the Converter Retrofit Project~~ all project improvements authorized by Significant Permit Revision No. ~~60647~~96410. The second study commencement date shall occur within the same calendar quarter, but five years later from the date of commencement of the first study. The owner or operator shall submit the results of each fugitive emissions study in a report to the Department and EPA Region IX for review and approval not later than six months after completing a study. The data collection portion of the first and second fugitive emissions studies shall be conducted for a period of 12 months to assess the content and quantity of fugitive sulfur dioxide and lead emissions.

A14.6.2. Lead Fugitive Emissions Studies

The first fugitive emissions study must commence within six months after restart of the smelter following the 2019 shutdown or three months after EPA approval of a modified protocol, whichever is later. The second study commencement date shall occur within the same calendar quarter, but five years after the date of commencement of the first study. The owner or operator shall submit the results of each fugitive emissions study in a report to the Department and EPA Region IX for review and approval not later than six months after completing a study. The data collection portion of the first and second fugitive emissions studies shall be conducted for a period of 12 months to assess the content and quantity of fugitive lead emissions.

A14.7. Study Reports and Subsequent Studies

At minimum, fugitive emission study reports submitted pursuant to A14.6 must include:

i. Resultant emission factors used to determine fugitive emissions of sulfur dioxide and lead.
ii. Resultant average fugitive lead emissions for each process identified in A14.3.
iii. Resultant peak one-hour fugitive sulfur dioxide emissions for each process identified in A14.3.
iv. Seasonal differences, if any.
v. Comparisons of results from past studies, if any.
vi. Descriptions and identification of volumetric flow monitoring provisions in R18-2-B1301(D)(2)(a) and R18-2-B1302(D)(2)(a) and operational limits R18-2-B1301(D)(2)(b) and R18-2-B1302(D)(2)(b) that are associated with fugitive emissions.
vii. An analysis of whether the results from a study demonstrate that the volumetric flow monitoring provisions in R18-2-B1301(D)(2)(a) and R18-2-B1302(D)(2)(a) and the operational limits in R18-2-B1301(D)(2)(b) and R18-2-B1302(D)(2)(b) continuously ensure that actual fugitive sulfur dioxide and lead emissions are consistent with the modeled emission rates used in the attainment demonstrations in the ~~Hayden 2008 Lead NAAQS Nonattainment Area SIP and the Hayden 2010 Sulfur Dioxide NAAQS Nonattainment Area SIP~~ State Implementation Plan Revision: 2024 Hayden Lead (Pb) Nonattainment Area for 2008 Pb NAAQS and the Final State Implementation Plan Revision: 2023 Hayden Sulfur Dioxide Nonattainment Area for the 1971 and 2010 SO_2 NAAQS. The analysis must also identify subsequent fugitive emissions studies, if any, needed to remedy inaccurate operational limits and volumetric flow monitoring provisions and to ensure attainment of the 2008 Lead NAAQS and 2010 Sulfur Dioxide NAAQS. The scope, duration, and frequency of any subsequent fugitive emissions studies must also be identified. This provision and the report's conclusion neither require nor prohibit future fugitive emission studies.
viii. An analysis of whether supplemental modeling is needed to ~~demonstrate that resultant fugitive emissions from a study provide attainment of the 2008 Lead NAAQS and 2010 Sulfur Dioxide NAAQS.~~ evaluate whether the 2010 Sulfur Dioxide NAAQS and/or 2008 Lead NAAQS will be attained at the emissions rates determined by the study.
ix. A summary of methods as followed per approved study protocols.

A14.7.1. Lead Specific

For lead fugitive emissions, a study shall also

i. Evaluate the effectiveness of MiniVol samplers in providing high quality, replicable data.
ii. Compare the MiniVol sampler data to estimates derived from lb/ton emission factors or other process parameters or surrogates.
iii. Evaluate the accuracy and cost effectiveness of various monitoring approaches.
iv. Recommend either a new lb/ton concentrate emission factor or a SIP revision to incorporate an improved monitoring methodology.

If the lead fugitive emissions study concludes that the lb/ton concentrate emission factor should be retained, permittee shall submit a justification for why an improved monitoring methodology (e.g., MiniVols) is not feasible and a justification for the

selected lb/ton concentrate factor and how it may be revised to maintain accuracy and representativeness. If the study concludes that a new methodology should be proposed, the owner or operator shall submit a petition to the Department to revise the SIP within 90 days after submitting the report unless either EPA or the Department provides comments upon the report, in which case the deadline is 60 days after the receipt of the final comments but no earlier than 90 days after the report submittal.

A14.8. Revisions to Operations and Maintenance Plan

If an analysis conducted in accordance with A14.7(vi) demonstrates that fugitive emissions associated with volumetric flow monitoring provisions in R18-2-B1301(D)(2)(a) and R18-2-B1302(D)(2)(a) and operational limits in R18-2-B1301(D)(2)(b) and R18-2-B1302(D)(2)(b) may exceed the modeled emission rates used in the ~~Hayden 2008 Lead NAAQS Nonattainment Area SIP attainment demonstration and/or the Hayden 2010 Sulfur Dioxide NAAQS Nonattainment Area SIP attainment demonstration~~ State Implementation Plan Revision: 2024 Hayden Lead (Pb) Nonattainment Area for 2008 Pb NAAQS and/or the Final State Implementation Plan Revision: 2023 Hayden Sulfur Dioxide Nonattainment Area for the 1971 and 2010 SO_2 NAAQS, and result in an increased likelihood of a NAAQS exceedance based on modeling required under A14.9, then the owner or operator shall submit to the Department for approval, not later than six months after completing a study, recommended changes to operational limits and volumetric flow monitoring provisions as an operations and maintenance plan revision pursuant to R18-2-B1301(D)(2)(e) and R18-2-B1302(D)(2)(e) that would achieve necessary fugitive emissions levels to demonstrate attainment of the NAAQS at the same level of assurance as in the attainment demonstrations. Until receiving approval of the plan revision, the owner or operator shall operate and maintain the volumetric flow monitoring provisions and the operational limits in accordance with the plan as initially submitted pursuant to R18-2-B1301(D)(2)(e) and R18-2-B1302(D)(2)(e). Additionally, the owner and operator shall submit new attainment demonstrations pursuant to A14.9, making appropriate demonstrations of attainment at adjusted fugitive emissions levels.

Similarly, if an analysis conducted in accordance with A14.7(vi) demonstrates that fugitive emissions associated with the volumetric flow monitoring provisions in R18-2-B1301(D)(2)(a) and R18-2-B1302(D)(2)(a) and operational limits in R18-2-B1301(D)(2)(b) and R18-2-B1302(D)(2)(b) may exceed the modeled emission rates used in the ~~Hayden 2008 Lead NAAQS Nonattainment Area SIP attainment demonstration and/or the Hayden 2010 Sulfur Dioxide NAAQS Nonattainment Area SIP attainment demonstration~~ State Implementation Plan Revision: 2024 Hayden Lead (Pb) Nonattainment Area for 2008 Pb NAAQS and/or the Final State Implementation Plan Revision: 2023 Hayden Sulfur Dioxide Nonattainment Area for the 1971 and 2010 SO_2 NAAQS, and result in an increased likelihood of a NAAQS exceedance based on modeling required under A14.9, then the Department shall submit appropriate changes to the operational limits and volumetric flow monitoring provisions, and any revised attainment demonstration pursuant to A14.9, if applicable, to EPA Region IX as a SIP revision not later than 12 months after completion of a fugitive emissions study.

A14.9. Supplemental Modeling

If an analysis conducted in accordance with A14.7(vii) demonstrates that fugitive emissions associated with volumetric flow monitoring provisions in R18-2-B1301(D)(2)(a) and R18-2-B1302(D)(2)(a) and operational limits in R18-2-B1301(D)(2)(b) and R18-2-B1302(D)(2)(b) are greater than the modeled emission rates used in the ~~Hayden 2008 Lead NAAQS Nonattainment Area SIP attainment demonstration and/or the Hayden 2010 Sulfur Dioxide NAAQS Nonattainment Area SIP attainment demonstration~~ State Implementation Plan Revision: 2024 Hayden Lead (Pb) Nonattainment Area for 2008 Pb NAAQS and/or the Final State Implementation Plan Revision: 2023 Hayden Sulfur Dioxide Nonattainment Area for the 1971 and 2010 SO_2 NAAQS, the owner or operator shall remodel to ~~demonstrate~~ evaluate whether the 2010 Sulfur Dioxide NAAQS and/or 2008 Lead NAAQS will be attained as such higher rates. The owner or operator shall submit such modeling to the Department and EPA Region IX for review and approval not later than six months after completing a fugitive emissions study.

If the revised modeling demonstrates that the 2010 Sulfur Dioxide NAAQS and/or 2008 Lead NAAQS will be attained, the Department shall submit such modeling demonstration and revised fugitive emissions assumptions as a SIP revision to EPA Region IX not later than 12 months after completion of a fugitive emissions study. Alternatively, the owner or operator shall propose additional emission control requirements to revise the SIP, or any combination of revised control measures and modeled attainment, to demonstrate attainment of the 2010 Sulfur Dioxide NAAQS and/or 2008 Lead NAAQS.

NOTICE OF PROPOSED RULEMAKING

TITLE 21. CHILD SAFETY

CHAPTER 1. DEPARTMENT OF CHILD SAFETY ADMINISTRATION

[R25-209]

PREAMBLE

1. Permission to proceed with this proposed rulemaking was granted under A.R.S. § 41-1039 by the governor on:

May 19, 2025

2. Article, Part, or Section Affected (as applicable)	**Rulemaking Action**
R21-1-501	Amend
R21-1-502	Amend
R21-1-504	Amend
R21-1-505	Amend
R21-1-506	Amend
R21-1-507	Amend

Exhibit A-II: Notice of Final Rulemaking

SIP Revision: Rules Incorporating Hayden Smelter Permit Conditions to Supplement Arizona's 2023 SO_2 SIP

On December 2, 2025, the Arizona Governor's Regulatory Review Council (Arizona GRRC) approved the Hayden Pb and SO_2 rulemaking. Accordingly, the Arizona GRRC-approved Notice of Final Rulemaking (NFRM) package was submitted to the Arizona Secretary of State (SOS) on December 9, 2025. The NFRM will be published in the Arizona Administrative Register (A.A.R.) in the next three weeks. The rules included in the NFRM will become effective 60 days after the NFRM is filed in the office of the SOS and the time and date are affixed as provided in Arizona Revised Statutes (A.R.S.) § 41-1031. The codified version of the rules will be updated in the A.A.C. in a quarterly supplement. Pursuant to A.A.C. R1-1-302(C), the quarterly supplement is released on the last day of the calendar quarter.

ADEQ is enclosing the Arizona GRRC-approved NFRM package for EPA's review. The language included below is final and will be represented in the A.A.R.

NOTICE OF FINAL RULEMAKING

TITLE 18. ENVIRONMENTAL QUALITY

CHAPTER 2. DEPARTMENT OF ENVIRONMENTAL QUALITY – AIR POLLUTION CONTROL

PREAMBLE

1. Permission to proceed with this final rulemaking was granted under A.R.S. § 41-1039 by the governor on:

May 1, 2024.

2. Article, Part, or Section Affected (as applicable)	**Rulemaking Action**
A.A.C. R18-2-B1301	Amend
A.A.C. R18-2-B1301.01	Amend
A.A.C. R18-2-B1302	Amend
A14. Appendix 14	Amend

3. Citations to the agency's statutory rulemaking authority to include the authorizing statute (general) and the implementing statute (specific):

Authorizing statute: A.R.S. §§ 49-104(A)(1) and (A)(10), 49-404(A), and 49-406.

Implementing statute: A.R.S. § 49-425(A).

4. The effective date of the rule:

This rule shall become effective 60 days after a certified original and preamble are filed in the Office of the Secretary of State pursuant to A.R.S. § 41-1032(A). The effective date is (to be filled in by *Register* editor).

a. If the agency selected a date earlier than the 60-day effective date as specified in A.R.S. § 41-1032(A), include the earlier date and state the reason the agency selected the earlier effective date as provided in A.R.S. § 41-1032(A)(1) through (5):

Not applicable.

b. If the agency selected a date later than the 60-day effective date as specified in A.R.S. § 41-1032(A), include the later date and state the reason the agency selected the later effective date as provided in A.R.S. § 41-1032(B):

Not applicable.

5. Citations to all related notices published in the *Register* as specified in R1-1-409(A) that pertain to the current record of the final rule:

Notice of Rulemaking Docket Opening: 31 A.A.R. 2256, Issue Date: July 4, 2025, Issue Number: 27, File Number R25-146.

Notice of Proposed Rulemaking: 31 A.A.R. 2871, Issue Date: September 12, 2025, Issue Number: 37, File number: R25-208.

6. The agency's contact person who can answer questions about the rulemaking:

Name: Lexi Ahmad

Title: Environmental Legal Specialist II

Division: Air Quality Division

Address: Arizona Department of Environmental Quality

1110 W Washington St.

Phoenix, AZ 85007

Telephone: (602) 771-4149

Email: airplanning@azdeq.gov

Website: https://azdeq.gov/

7. An agency's justification and reason why a rule should be made, amended, repealed or renumbered, to include an explanation about the rulemaking:

Summary.

This Arizona Department of Environmental Quality (ADEQ) is amending Arizona Administrative Code (A.A.C.) Title 18, Chapter 2, Article 13, R18-2-B1301, R18-2-B1301.01, and R18-2-B1302 to incorporate the Title V permit terms for the Hayden Smelter, owned by ASARCO Grupo México (ASARCO), that forms the basis for the controls at the facility for the lead (Pb) and sulfur dioxide (SO_2) National Ambient Air Quality Standards (NAAQS). The current site-specific rules establishing limits on Pb and SO_2 emissions from the Hayden Smelter do not include key permit terms set forth in the revised permits. Codifying these permit conditions into state rule will facilitate EPA approval of both of the Pb and SO_2 state implementation plan (SIP) revisions.

Background.

In September 2014, EPA redesignated the Hayden Pb area from "unclassifiable" to "nonattainment" for the 2008 primary NAAQS (79 FR 52205 (Sept. 3, 2014)). On March 3, 2017 ADEQ submitted a SIP revision to demonstrate attainment of the 2008 Lead NAAQS by the statutory attainment date of October 3, 2019. EPA approved the plan and associated control measures in 2018. On January 31, 2022, EPA published a finding of failure to attain the 2008 Pb NAAQS by the October 3, 2019 attainment date (83 FR 7614 (February 22, 2018), 83 FR 56734 (November 14, 2018), and 83 FR 56736 (November 14, 2018)). ADEQ subsequently submitted a Pb nonattainment SIP revision in September, 2024.

In 2017, ADEQ submitted the Final SIP Revision: 2017 Hayden Sulfur Dioxide Nonattainment Area for the 2010 SO_2 NAAQS.

In 2020, EPA issued both a limited approval/limited disapproval (85 FR 70483 (Nov. 5, 2020)) and a partial approval/partial disapproval (85 FR 71547 (Nov. 10, 2020)) of the 2017 SIP revision. These actions triggered an 18-month sanctions clock for the area for the imposition of 2:1 emissions offset sanctions for SO_2 (imposed May 2022); 6 months later (November 2022), EPA imposed highway funding sanctions that apply to the approval by the Secretary of Transportation of any projects or the awarding by the Secretary of Transportation of any grants, under Title 23, U.S. Code. *See* CAA § 179. ADEQ decided against addressing the deficiencies outlined by EPA in the 2020 actions for the following reasons: 1) EPA and ASARCO were unable to agree on how to cure the deficiencies that were outlined by EPA; 2) 2:1 emissions sanctions only impact the Hayden Smelter, which was not operating at that time; 3) there were no federal highway projects planned or ongoing that would be effected by the highway funding sanctions; and 4) the Hayden Smelter was not operating, so the impact to public health and the environment was minimal, given that the Hayden Smelter was the primary source of SO_2 emissions within the Hayden SO_2 nonattainment area.

In January 2022, EPA found that the Hayden SO_2 nonattainment area failed to attain the 2010 1-hour SO_2 primary NAAQS by the applicable attainment date of October 4, 2018 (87 FR 4805 (Jan. 31, 2022)). ADEQ subsequently submitted the Final SIP Revision: 2023 Hayden Sulfur Dioxide Nonattainment Area for the 1971 and 2010 SO_2 NAAQS in October, 2023.

ADEQ is committed to securing EPA's approval of both the Pb and SO_2 SIP revisions in order to protect human health and the environment, and to also lift sanctions on the Hayden SO_2 nonattainment area. Previously, ADEQ relied on interpretation of A.A.C. R18-2-306.01 to allow permitted facilities to adopt voluntary limits in order to ensure compliance with a NAAQS, regional haze program, or other purpose under the Clean Air Act (CAA). Subsequently, ADEQ incorporated these voluntary limits as enforceable permit conditions for Pb and SO_2 and submitted the permits to the EPA for inclusion into the Arizona SIP. However, based on the specific language of A.A.C. R18-2-306.01, EPA recently informed ADEQ that it would no longer be accepting ADEQ's interpretation

of the rule. Therefore, ADEQ commenced a rulemaking (30 A.A.R. 3365 (Nov. 15, 2024)) to address EPA's concern with the voluntary limits. ADEQ does not anticipate this rulemaking will be complete, and approved by EPA, within the timeframe necessary to obtain approval of both the Hayden Pb and SO_2 SIP revisions. Therefore, ADEQ is incorporating ASARCO's current permit conditions into the A.A.C. to bolster the approvability of the subsequent Pb and SO_2 SIP revisions.

The Hayden Smelter, located in Hayden, AZ, which is owned and operated by ASARCO, is the only facility impacted by the permitting conditions being codified into state rule. ASARCO was involved throughout the development of such permit conditions and is already required to comply with them. Through discussions with both ADEQ and EPA, ASARCO became aware that codification of the permitting conditions would likely become necessary. Codification is only intended to address the EPA's concerns about ADEQ's current authority to issue voluntary permit conditions outside of the plain language of A.A.C. R18-2-306.01 so that the relevant SIP revisions will be approved. This rulemaking will not place any additional burden on ASARCO or the regulated community in general, as it incorporates already binding permit conditions.

8. A reference to any study relevant to the rule that the agency reviewed and either relied on or did not rely on in its evaluation of or justification for the rule, where the public may obtain or review each study, all data underlying each study, and any analysis of each study and other supporting material:

Not applicable.

9. A showing of good cause why the rulemaking is necessary to promote a statewide interest if the rulemaking will diminish a previous grant of authority of a political subdivision of this state:

Not applicable.

10. A summary of the economic, small business, and consumer impact:

The following discussion addresses each of the elements required for an Economic, Small Business, and Consumer Impact Statement (EIS) under A.R.S. § 41-1055.

An identification of the rulemaking: 18 A.A.C. 2, Article 13, R18-2-B1301, R18-2-1301.01, and R18-2-B1302

ADEQ is amending Arizona Administrative Code (A.A.C.) Title 18, Chapter 2, Article 13, R18-2-B1301, R18-2-B1301.01, and R18-2-B1302 to incorporate the Title V permit terms for the Hayden Smelter that forms the basis for the controls at the facility for the lead (Pb) and sulfur dioxide (SO_2) National Ambient Air Quality Standards (NAAQS) into state rule. The current site-specific rules establishing limits on Pb and SO_2 emissions from the Hayden Smelter do not include key permit terms set forth in the revised permits. Codifying these permit conditions into state rule will facilitate EPA approval of both of the Pb and SO_2 SIP revisions.

Further, the Hayden Smelter, located in Hayden, AZ, and owned/operated by ASARCO, is the only facility impacted by the relevant permitting conditions. ASARCO was involved in the development of the permit conditions and is required to comply with them. Through discussions with both ADEQ and EPA, ASARCO became aware that codification of the permitting conditions would likely become necessary. Codification is only intended to address the EPA's concerns about ADEQ's current authority to issue voluntary permit conditions outside of the plain language of A.A.C. R18-2-306.01 so that the relevant SIP revision will be approved. This rulemaking will not place any additional burden on ASARCO or the regulated community in general, as it incorporates already binding permit conditions.

An identification of the persons who will be directly affected by, bear the cost of or directly benefit from the rulemaking:

a) ADEQ/State of Arizona;

b) ASARCO;

c) Hayden Pb nonattainment area; and

d) Hayden SO_2 nonattainment area.

A cost benefit analysis:

(a) Cost/benefit stakeholder matrix

The purpose of this rulemaking is to codify already existing permit conditions into state rule. These requirements are being codified into state rule to bolster the approvability of the Hayden Pb and Hayden SO_2 SIP revisions. Accordingly, ADEQ anticipates only minimal economic impacts as explained in the table below.

Description of Affected Groups	Description of Effect	Increased Cost/Decreased Revenue or Benefit	Decreased Cost/Increased Revenue or Benefit
A. State and Local Government Agencies			
ADEQ/State of Arizona	The administrative burden of the rulemaking on ADEQ/State of Arizona is minimal. These permit conditions have already been agreed upon by all relevant parties and memorialized in two Title V permits. There is no associated increase in staff.	Minimal.	Minimal.
B. Private Businesses			
ASARCO	The economic effect of this rulemaking on ASARCO is minimal. The permit conditions codified into rule were already agreed upon during the permit revision process and have been memorialized in two Title V permits.	Minimal.	Minimal.
C. Public			
Hayden Pb nonattainment area	These rules codify permit conditions that apply only to the Hayden Smelter. The Hayden Smelter is already operating under these conditions. Further, incorporation of permit conditions into state rule will facilitate the approval of the Hayden Pb SIP. There are no sanctions in place for this area, so there are no economic benefits of this rulemaking on Hayden Pb nonattainment area.	Minimal.	Minimal.
Hayden SO_2 nonattainment area	These rules codify permit conditions that apply only to the Hayden Smelter. The Hayden Smelter is already operating under these conditions. However, the incorporation of permit conditions into state rule will facilitate the approval of the Hayden SO_2 SIP. This area is currently under sanctions, and EPA's approval of the Hayden SO_2 SIP Revision will lift them. Accordingly, there is a	Minimal.	Significant (approval of Hayden SO_2 nonattainment SIP revision lifts sanctions on the area).

	significant benefit of this rulemaking on the Hayden SO_2 nonattainment area.			
Minimal	**Moderate**	**Substantial**	**Significant**	**Marginal**
$5,000 or less	$5,001 to $25,000	Greater than $25,000	Cost or benefit cannot be easily quantified, but ADEQ expects it to be significant.	Cost or benefit cannot be easily quantified, but ADEQ expects it to be marginal.

(b) Individual stakeholder summaries/calculations

ADEQ/State of Arizona

Amending the current state rule will address EPA's concerns about ADEQ's current authority to issue voluntary permit conditions outside of the plain language of A.A.C. R18-2-306.01 so that the relevant Hayden Pb and SO_2 SIP revisions can be approved. ADEQ expects to incur minimal additional staffing costs related to implementing these control measures due to the fact that they are already included in Permits No. 39948 (As Amended by Significant Permit Revision No. 97168) and No. 39948 (As amended by Significant Permit Revision No. 96410). Accordingly, ADEQ will not require any new staff or any substantial contractor expenditures to implement the proposed amendments.

ADEQ will benefit from amending this rule because doing so will facilitate the approval of the Hayden Pb and SO_2 SIP revisions. The approval of these SIP revisions will protect public health and the environment, in alignment with ADEQ's mission statement.

ASARCO

The current implementation of Permits No. 39948 (As Amended by Significant Permit Revision No. 97168) and 39948 (As amended by Significant Permit Revision No. 96410) already required close coordination between ADEQ and ASARCO. Further, the draft rule language is pulled directly from the Title V permits that was agreed upon by ADEQ, EPA, and ASARCO. The terms included in the relevant permits were discussed and agreed upon by all parties. Accordingly, ASARCO is already bound by the Title V permits and must implement the control measures listed in the relevant Title V permits and proposed state rule. Codification is only intended to address the EPA's concerns about ADEQ's current authority to issue voluntary permit conditions outside of the plain language of A.A.C. R18-2-306.01 so that the relevant SIP revisions will be approved.

Hayden SO_2 Nonattainment Area

Currently, the Hayden SO_2 nonattainment area is subject to both 2:1 offset sanctions and federal highway fund sanctions. As discussed in item 7 of this document, ADEQ submitted the Final SIP Revision: 2017 Hayden Sulfur Dioxide Nonattainment Area for the 2010 SO_2 NAAQS in 2017. In 2020, EPA issued both a limited approval/limited disapproval (85 FR 70483 (Nov. 5, 2020)) and a partial approval/partial disapproval (85 FR 71547 (Nov. 10, 2020)) of the 2017 SIP revision. These actions triggered an 18-month sanctions clock for the area for the imposition of 2:1 emissions offset sanctions for SO_2 and a 24-month sanctions clock for the area for the imposition of highway funding sanctions. ADEQ decided against addressing the deficiencies outlined by EPA in the 2020 actions for the following reasons: 1) EPA and ASARCO were unable to agree on how to cure the deficiencies that were outlined by EPA; 2) 2:1 emissions sanctions would only impact the Hayden Smelter, which was not operating at that time; 3) there were no federal highway projects planned or ongoing that would be effected by the highway funding sanctions; and 4) the Hayden Smelter was not operating, so the impact to public health and the environment was minimal, given that the Hayden Smelter was the primary source of SO_2 emissions within the Hayden SO_2 nonattainment area.

ADEQ has since submitted the Final SIP Revision: 2023 Hayden Sulfur Dioxide Nonattainment Area for the 1971 and 2010 SO_2 NAAQS, which will cure the deficiencies and allow the sanctions to be lifted. The codification of permit conditions into state rule will facilitate the approval of the 2023 SIP Revision.

As discussed, there are two types of sanctions under the Clean Air Act and the Hayden SO_2 nonattainment area is under both. The first sanction clock that starts on the effective date of a triggering action relates to the emissions offset requirement under the nonattainment new source review program. Specifically, a ratio of at least 2:1 must be achieved within the nonattainment area to offset emissions from new or modified major facilities. This sanction applies 18 months after the effective date of the triggering action if the SIP deficiency has not been resolved.

Accordingly, the Hayden SO_2 nonattainment area has been under this specific sanction since May 2022.

The second sanction clock begins on the effective date of a triggering action and relates to the imposition of certain restrictions on federal highway funding. This sanction applies 24 months after the effective date of the triggering action if the SIP deficiency has not been resolved.

Accordingly, the Hayden SO_2 nonattainment area has been under this specific sanction since November 2022.

Relieving this area of these sanctions is imperative to the area's economic growth and well-being.

Hayden Pb Nonattainment Area

Currently, the Hayden Pb nonattainment area does not have an approved SIP in place. In September, 2024, ADEQ submitted a SIP revision to EPA. The codification of permit conditions into state rule will facilitate the approval of the SIP revision.

A general description of the probable impact on private and public employment in businesses, agencies, and political subdivisions of this state directly affected by the rulemaking.

Since the rule updates proposed for Article 13 are only to codify existing control measures for the Hayden Smelter, the rule does not substantially change state or department operations or processes. As such there is no expected impact on public employment.

Similarly, ADEQ anticipates no employment impact codifying these control measures into state rule as these control measures have already been included in the relevant Title V permits.

A statement of the probable impact of the rulemaking on small businesses.

(a) An identification of the small businesses subject to the rulemaking

Under A.R.S. § 41-1001(23) "Small business" means a concern, including its affiliates, which is independently owned and operated, which is not dominant in its field and which employs fewer than one hundred full-time employees or which had gross annual receipts of less than four million dollars in its last fiscal year. For purposes of a specific rule, an agency may define small business to include more persons if it finds that such a definition is necessary to adapt the rule to the needs and problems of small businesses and organizations.

ADEQ does not believe that there are any small businesses that would be subject to this rulemaking.

(b) The administrative and other costs required for compliance with the rulemaking.

Not applicable.

(c) A description of the methods that the agency may use to reduce the impact on small businesses.

Not applicable.

(d) The probable costs and benefit to private persons and consumers who are directly affected by the rulemaking.

Not applicable.

A statement of the probable effect on state revenues

Since the proposed rule does not substantially affect commercial activity from which the state of Arizona would receive tax revenue, ADEQ projects no effect on state revenues resulting from the rulemaking.

A description of any less intrusive or less costly alternative methods of achieving the purpose of the rulemaking.

Since this rulemaking aligns with federal law (the Clean Air Act) and reflects permit conditions already agreed upon by all relevant parties, there is not a less intrusive or less costly alternative available at this time.

A description of any data on which a rule is based with a detailed explanation of how the data was obtained and why the data is acceptable data. An agency advocating that any data is acceptable data has the burden of proving that data is acceptable. For the purposes of this paragraph "acceptable data" means empirical, replicable, and testable data as evidenced in supporting documentation, statistics, reports, studies or research.

Not applicable.

11. A description of any changes between the proposed rulemaking, to include supplemental notices, and the final rulemaking:

The reference to "Permit No. 96410" in R18-2-B1302(B)(7) has been changed to "Significant Permit Revision No. 96410" for clarity, accuracy, and consistency with the rest of the rule language.

R18-2-B1302(C)(3)(e) was added for clarity.

12. An agency's summary of the public or stakeholder comments made about the rulemaking and the agency response to the comments:

Comment 1: ADEQ received a comment that expressed concerns about what this rulemaking means for the reopening of the Hayden Smelter.

Response to Comment 1: ADEQ appreciates this comment. ADEQ emphasizes that this rulemaking is intended to codify existing permit conditions and to create enforceable fugitive emissions limitations that will be protective of the relevant National Ambient Air Quality Standard (NAAQS), for the purpose of securing U.S. Environmental Protection Agency (EPA) approval of both the State Implementation Plan Revision: 2024 Hayden Lead (Pb) Nonattainment Area for 2008 Pb NAAQS and State Implementation Plan Revision: 2023 Hayden Sulfur Dioxide Nonattainment Area for the 1971 and 2010 SO_2 NAAQS. These rules, therefore, do not contain any new information about or guidance on the reopening of the Hayden Smelter. Accordingly, this comment falls outside of the scope of the rulemaking.

ADEQ recommends that stakeholders refer to https://azdeq.gov/PublicNotices for relevant upcoming public comment opportunities. ADEQ encourages stakeholders to reach out to airpermits@azdeq.gov with any further questions about the reopening of the Hayden Smelter.

Comment 2: ADEQ received a comment that expressed concerns about the Hayden Smelter being reopened and permitted in a piecemeal fashion with no public understanding or oversight.

Response to Comment 2: ADEQ appreciates this comment. However, ADEQ disagrees with the commenter's assertion that the SIP planning process or permitting processes are piecemeal without public involvement.

As described above in item 7 of this preamble, ADEQ has provided opportunity for the public to review and comment on both its SIP revisions and significant permit revisions (SPR), consistent with Arizona Revised Statutes (A.R.S.) and ADEQ's administrative rules. Further, ADEQ notes that Arizona Administrative Code (A.A.C.) R18-2-330(A) requires ADEQ to provide public notice, an

opportunity for public comment, and an opportunity for a hearing before taking any of the following actions: the issuance or denial of a permit or permit renewal; the issuance or denial of a significant permit revision; the revocation and reissuance or reopening of a permit; the grant of any conditional orders pursuant to A.A.C. R18-2-328; or the issuance or denial of a registration for the construction of a source. ADEQ thus recommends that stakeholders refer to https://azdeq.gov/PublicNotices for relevant upcoming public comment opportunities related to the permitting of the Hayden Smelter.

ADEQ also encourages stakeholders to reach out to airpermits@azdeq.gov with any further questions about the reopening of the Hayden Smelter.

ADEQ notes that this rulemaking is necessary to address EPA's concerns regarding the federal enforceability of the permit limits included in SIPs and adopted pursuant to A.A.C. R18-2-306.01. It is intended to codify existing permit conditions and to create enforceable fugitive emissions limitations that will be protective of the relevant National Ambient Air Quality Standard (NAAQS), for the purpose of securing EPA approval of both the State Implementation Plan Revision: 2024 Hayden Lead (Pb) Nonattainment Area for 2008 Pb NAAQS and State Implementation Plan Revision: 2023 Hayden Sulfur Dioxide Nonattainment Area for the 1971 and 2010 SO_2 NAAQS. These SIP revisions, and associated SPRs, are necessary to bring the Hayden Pb and SO_2 nonattainment areas back into attainment of these NAAQS. These rules do not contain any new information about or guidance on the reopening of the Hayden Smelter.

Comment 3: ADEQ received a comment stating that the commenter would like the conversation around the reopening of the Hayden Smelter to be continued before any changes are made.

Response to Comment 3: ADEQ appreciates this comment. However, continuing this particular conversation is not possible, due to the requirements set forth by the proposed consent decree in Center for Biological Diversity and Sierra Club v. Regan, No. 4:24-cv-01900-HSG (N.D. Cal.). In that case, the Center for Biological Diversity and the Sierra Club filed suit against Michael S. Regan, in his official capacity as the Administrator of EPA, alleging that EPA failed to execute its nondiscretionary duty to promulgate a FIP for the Hayden SO_2 nonattainment area. On November 1, 2024, the U.S. District Court for the Northern District of California proposed a consent decree, providing that on or before August 28, 2026, the appropriate EPA official is to sign a notice of final rulemaking promulgating under CAA section 110(c), 42 U.S.C .§ 7410(c), a Federal Implementation Plan (FIP) for the Hayden, Arizona SO_2 nonattainment area.

To avoid the implementation of a FIP for the Hayden SO_2 nonattainment area, ADEQ must submit a complete plan to EPA, and EPA must approve this plan as meeting applicable requirements. Though ADEQ submitted the Final SIP Revision: 2023 Hayden Sulfur Dioxide Nonattainment Area for the 1971 and 2010 SO_2 NAAQS in October of 2023, EPA expressed concerns about ADEQ's current authority to issue voluntary permit conditions outside of the plain language of A.A.C. R18-2-306.01, as described in the preamble of this document. Accordingly, ADEQ commenced this rulemaking to incorporate voluntary permit conditions for the Hayden Smelter into state rule to address EPA's concerns.

The agency is therefore proceeding with this rulemaking to supplement both the State Implementation Plan Revision: 2024 Hayden Lead (Pb) Nonattainment Area for 2008 Pb NAAQS and the State Implementation Plan Revision: 2023 Hayden Sulfur Dioxide Nonattainment Area for the 1971 and 2010 SO_2 NAAQS to bolster their approvability. Receiving approval of the State Implementation Plan Revision: 2023 Hayden Sulfur Dioxide Nonattainment Area for the 1971 and 2010 SO_2 NAAQS as soon as practicable is necessary to prevent the implementation of a FIP.

Comment 4: ADEQ received a comment that again expressed concerns about the smelter being reopened and permitted piece by piece.

Response to Comment 4: ADEQ appreciates this comment. As described above in item 7 of this preamble, ADEQ has provided

opportunity for the public to review and comment on both its SIP revisions and significant permit revisions (SPR), consistent with Arizona Revised Statutes (A.R.S.) and ADEQ's administrative rules. Further, ADEQ notes that Arizona Administrative Code (A.A.C.) R18-2-330(A) requires ADEQ to provide public notice, an opportunity for public comment, and an opportunity for a hearing before taking any of the following actions: the issuance or denial of a permit or permit renewal; the issuance or denial of a significant permit revision; the revocation and reissuance or reopening of a permit; the grant of any conditional orders pursuant to A.A.C. R18-2-328; or the issuance or denial of a registration for the construction of a source. ADEQ thus recommends that stakeholders refer to https://azdeq.gov/PublicNotices for relevant upcoming public comment opportunities related to the permitting of the Hayden Smelter. ADEQ encourages stakeholders to reach out to airpermits@azdeq.gov with any further questions about the reopening of the Hayden Smelter.

Comment 5: ADEQ received a comment expressing that ADEQ should change the reference in R18-2-B1302(B)(7) from "Permit No. 96410" to "Significant Permit Revision No. 96410" for clarification, precision, and consistency with the rest of the rule language.

Response to Comment 5: ADEQ appreciates this comment and has changed the reference to "Permit No. 96410" to "Significant Permit Revision No. 96410" for clarity, precision, and consistency with the rest of the rule language.

Comment 6: ADEQ received a comment expressing that R18-2-B1302(C)(3) should be amended to include an additional subsection, R18-2-B1302(C)(3)(e), that provides, "Unless and until the Department issues a significant permit revision replacing the applicable fugitive emissions limits in (a), (b), and (c) of this subsection with another set of limits provided in the table in (d) of this subsection, the limits in (a), (b), and (c) shall remain the applicable fugitive emissions limits."

Response to Comment 6: ADEQ appreciates this suggestion. ADEQ has included an additional subsection, R18-2-B1302(C)(3)(e), after the alternative limits table, that states: "Unless and until the Department issues a significant permit revision replacing the applicable fugitive emissions limits in subsections (C)(3)(a), (b), and (c) with another set of limits provided in the table in subsection (C)(3)(d), the limits in subsections (C)(3)(a), (b), and (c) shall remain the applicable fugitive emissions limits." ADEQ has included this suggested subsection as it improves the clarity of the rule.

13. All agencies shall list other matters prescribed by statute applicable to the specific agency or to any specific rule or class of rules. Additionally, an agency subject to Council review under A.R.S. §§ 41-1052 and 41-1055 shall respond to the following questions:

There are no other matters prescribed by statutes applicable specifically to ADEQ or this specific rulemaking.

a. Whether the rule requires a permit, whether a general permit is used and if not, the reasons why a general permit is not used:

This rulemaking does not require a permit.

b. Whether a federal law is applicable to the subject of the rule, whether the rule is more stringent than federal law and if so, citation to the statutory authority to exceed the requirements of federal law:

This rulemaking will help Arizona comply with the federal Clean Air Act. This rulemaking is no more stringent than required by federal law.

c. Whether a person submitted an analysis to the agency that compares the rule's impact of the competitiveness of business in this state to the impact on business in other states:

Not applicable.

14. A list of any incorporated by reference material as specified in A.R.S. § 41-1028 and its location in the rules:

Not applicable.

15. Whether the rule was previously made, amended or repealed as an emergency rule. If so, cite the notice published in the *Register* as specified in R1-1-409(A). Also, the agency shall state where the text was changed between the emergency and the final rulemaking packages:

Not applicable.

16. The full text of the rules follows:

Rule text begins on the next page.

TITLE 18. ENVIRONMENTAL QUALITY

CHAPTER 2. DEPARTMENT OF ENVIRONMENTAL QUALITY – AIR POLUTION CONTROL

ARTICLE 13. STATE IMPLEMENTATION PLAN RULES FOR SPECIFIC LOCATIONS

PART B. HAYDEN, ARIZONA, PLANNING AREA

ARTICLE 13. STATE IMPLEMENTATION PLAN RULES FOR SPECIFIC LOCATIONS

PART B. HAYDEN, ARIZONA, PLANNING AREA

R18-2-B1301. Limits on Lead Emissions from the Hayden Smelter

A. Applicability.

1. This Section applies to the owner or operator of the Hayden Smelter. It establishes limits on lead emissions from the Hayden Smelter and monitoring, recordkeeping, and reporting requirements for those limits.
2. Effective date. ~~Except as otherwise provided, the requirements of this Section shall become applicable on the earlier of July 1, 2018 or 180 days after completion of all project improvements authorized by Significant Permit Revision No. 60647~~ With the exception of the following requirements, this rule is in effect. Additional requirements in subsections (C)(1), (C)(2), (D)(3), (D)(4), (D)(5), (E)(1), (E)(7), (F)(1), (F)(2), (F)(3), (F)(4) (F)(5), (F)(6), (G)(1), (G)(2), (G)(4), (G)(5), (H)(4), (H)(9), (H)(10), (I)(7), (1)(8), and (I)(9) take effect 60 days after the Hayden Smelter achieves maximum production after smelter restart or 180 days after smelter restart, whichever occurs first.

B. Definitions. In addition to general definitions contained in R18-2-101, the following definitions apply to this Section:

1. "ACFM" means actual cubic feet per minute.
2. "Anode furnace baghouse stack" means the dedicated stack that vents controlled off-gases from the anode furnaces to the Main Stack.
3. "Blowing" shall mean the introduction of air or oxygen-enriched air into the converter furnace molten bath through tuyeres that are submerged below the level of the molten bath. The flow of air through the tuyeres above the level of the molten bath or into an empty converter shall not constitute blowing.
4. "Capture system" means the collection of components used to capture gases and fumes released from one or more emission units, and to convey the captured gases and fumes to one or more control devices or a stack. A capture system may include, but is not limited to, the following components as applicable to a given capture system design: duct intake devices, hoods, enclosures, ductwork, dampers, manifolds, plenums, and fans.
5. "Control device" means a piece of equipment used to clean and remove pollutants from gases and fumes released from one or more emission units that would otherwise be released to the atmosphere. Control devices may include, but are not limited to, baghouses, Electrostatic Precipitators (ESPs), and sulfuric acid plants.
6. "Fuming ladle" means a ladle emitting an abnormal amount of fume after discharge of material.

~~6~~7. "Hayden Smelter" means the primary copper smelter located in Hayden, Gila County, Arizona at latitude 33º0'15"N and longitude 110º46'31"W.

8. "Ladle" means a piece of equipment used to move/pour molten material.

~~7~~9. "Main Stack" means the center and annular portions of the 1,000-foot stack, which vents controlled off-gases from the INCO flash furnace, the converters, and anode furnaces and also vents exhaust from the tertiary hoods.

10. "Maintenance downturn" means a scheduled maintenance period lasting at least eight working hours.

~~8~~11. "SCFM" means standard cubic feet per minute.

~~9~~12. "SLAMS monitor" means an ambient air monitor part of the State and Local Air Monitoring Stations network operated by State or local agencies for the purpose of demonstrating compliance with the National Ambient Air Quality Standards.

13. "Smelter restart" means the first day after the issuance of Significant Permit Revision No. 97168 that concentrate is processed through the INCO flash furnace to produce matte.

~~10~~14. "Smelting process-related fugitive lead emissions" means uncaptured and/or uncontrolled lead emissions that are released into the atmosphere from smelting copper in the INCO flash furnace, converters, and anode furnaces.

15. "Table 1" means the table labeled "Uptake Improvement System Flow Conditions and Damper Positions," in the attachment labeled "Hayden Smelter Site-Specific SIP Requirements," to the current Class I permit.

16. "Table 2" means the table labeled "Uptake Improvement System Interlock Timing," in the attachment labeled "Hayden Smelter Site-Specific SIP Requirements," to the current Class I permit.

17. "Table 3" means the table labeled "Anode Secondary Hood System Flow Conditions and Damper Positions," in the attachment labeled "Hayden Smelter Site-Specific SIP Requirements," to the current Class I permit.

18. "Table 4" means the table labeled "Emergency Shutdown Ventilation Flue Emissions," in the attachment labeled "Hayden Smelter Site-Specific SIP Requirements," to the current Class I permit.

C. Lead ~~Emission Limit~~ Emissions Limitations. ~~Main Stack lead emissions shall not exceed 0.683 pound of lead per hour.~~

1. Notwithstanding the addition of emissions from the anode secondary hood baghouse, total lead emissions from the main stack shall not exceed 0.683 pounds of lead per hour.

2. Total process fugitive lead emissions from the Hayden Smelter furnaces and converters shall not exceed 0.326 pounds of lead per hour calculated as a 3-month rolling average in accordance with subsection (F).

D. Operational Standards.

1. Process equipment and control device operations. At all times, including periods of startup, shutdown, and malfunction, the owner or operator shall, to the extent practicable, maintain and operate smelter processes and associated emission capture and/or control equipment in a manner consistent with good air pollution control practices for minimizing lead emissions to the level required by subsection (C). Determination of whether acceptable operating and maintenance procedures are being used shall be based on all information available to the Department and EPA Region IX, which may include, but is not limited to, monitoring results, review of operating and maintenance procedures and records, and inspection of the relevant equipment.
2. Capture system and control device operations and maintenance plan. The owner or operator shall develop and implement an operations and maintenance plan for each capture system and/or control device used to ventilate or control process gas or emissions from the flash furnace, including matte tapping, slag skimming and slag return operations; converter primary hoods, converter secondary hoods, tertiary ventilation system; and anode refining operations. The operations and maintenance plan must address the following requirements as applicable to each capture system and/or control device.
    a. Monitoring devices. The plan shall provide for installation, operation, calibration, and maintenance of appropriate monitoring devices to measure and record operating limit values or settings at all times the required capture and control system is operating, except during periods of monitor calibration, repair, and malfunction. The initial plan shall provide for volumetric flow monitoring on the vent gas baghouse (inlet or outlet), each converter primary hood, each converter secondary hood, the tertiary ventilation system, and the anode furnace baghouse (inlet or outlet). All monitoring devices shall be accurate within +/- 10% and calibrated according to manufacturer's instructions. If direct measurement of the exhaust flow is infeasible due to physical limitations or exhaust characteristics, the owner or operator may propose a reliable equivalent method for approval. Initial monitoring may be adjusted as provided in subsection (D)(2)(e). Dampers that are manually set and remain in the same position while the capture system is operating are exempt from these monitoring requirements. Capture system damper position ~~setting(s)~~ setting or settings shall be specified in the plan.
    b. Operational limits. The owner or operator shall establish operating limits in the operations and maintenance plan for the capture systems and/or control devices that are representative and reliable indicators of the performance of the capture system and control device operations. Initial operating limits may be adjusted as provided in subsection (D)(2)(e). Initial operating limits shall include the following:

i. A minimum air flow for the furnace ventilation system and associated damper positions for each matte tapping hood or slag skimming hood when operating to ensure that the ~~operation(s)~~ operation or operations are within the confines or influence of the capture system.

ii. A minimum air flow for the secondary hood baghouse and associated damper positions for each slag return hood to ensure that the operation is within the confines or influence of the capture system's ventilation draft during times when the associated process is operating.

iii. A minimum air infiltration ratio for the converter primary hoods of 1:1 averaged over 24 converter Blowing hours, rolled hourly measured as volumetric flow in primary hood less the volumetric flow of tuyere Blowing compared to the volumetric flow of tuyere Blowing.

iv. A minimum secondary hood exhaust rate of 35,000 SCFM during converter Blowing, averaged over 24 converter Blowing hours, rolled hourly.

v. A minimum secondary hood exhaust rate of 133,000 SCFM during all non-Blowing operating hours, averaged over 24 non-Blowing hours, rolled hourly.

vi. A minimum negative pressure drop across the secondary hood when the doors are closed equivalent to 0.007 inches of water.

vii. A minimum exhaust rate on the tertiary hooding of 400,000 ACFM during all times material is processed in the converter aisle, averaged over 24 hours and rolled hourly.

viii. Fan amperes or minimum air flow for the anode furnace baghouse and associated damper positions for each anode furnace hood to ensure that the anode furnace off-gas port is within the confines or influence of the capture system's ventilation draft during times when the associated furnace is operating.

ix. The anode furnace charge mouth shall be kept covered when the tuyeres are submerged in the metal bath except when copper is being charged to or transferred from the furnace.

c. Preventative maintenance. The owner or operator shall perform preventative maintenance on each capture system and control device according to written procedures specified in the operations and maintenance plan. The procedures must include a preventative maintenance schedule that is consistent with the manufacturer's or engineer's instructions, or operator's experience working with the equipment, and frequency for routine and long-term maintenance. This provision does not prohibit additional maintenance beyond that required by the plan.

d. Inspections. The owner or operator shall perform inspections in accordance with written procedures in the operations and maintenance plan for each capture system and control device that are consistent with the manufacturer's, engineer's, or operator's instructions for each system and device.

e. Plan development and revisions.

i. The owner or operator shall develop and keep current the plan required by this Section. Any plan or plan revision shall be consistent with this Section, shall be designed to ensure that the capture and control system performance conforms to the attainment demonstration in the ~~Hayden 2008 Lead National Ambient Air Quality Standards Nonattainment Area State Implementation Plan (SIP)~~ State Implementation Plan Revision: 2024 Hayden Lead (Pb) Nonattainment Area for 2008 Pb NAAQS, and shall be submitted to the Department for review. Any plan or plan revision submitted shall include the associated manufacturer's, engineer's or operator's recommendations and/or instructions used for capture system and control device operations and maintenance.

ii. The owner or operator shall submit the initial plan to the Department no later than May 1, 2018 and shall include the initial volumetric flow monitoring provisions in subsection (D)(2)(a), the initial operational limits in subsection (D)(2)(b), the preventative maintenance procedures in subsection (D)(2)(c), and the inspection procedures in subsection (D)(2)(d).

iii. The owner or operator shall submit to the Department for approval a plan revision with changes, if any, to the initial volumetric flow monitoring provisions in subsection (D)(2)(a) and initial operational limits in subsection (D)(2)(b) not later than six months after completing a fugitive emissions study conducted in accordance with Appendix 14. The Department shall submit the approved changes to the volumetric flow monitoring provisions and operational limits pursuant to this subsection to EPA Region IX as a SIP revision not later than 12 months after completion of a fugitive emissions study.

iv. Other plan revisions may be submitted at any time when necessary. All plans and plan revisions shall be designed to achieve operation of the capture system and/or control device consistent with the attainment demonstration in the ~~Hayden 2008 Lead National Ambient Air Quality Standards Nonattainment Area SIP~~ State Implementation Plan Revision: 2024 Hayden Lead (Pb) Nonattainment Area for 2008 Pb NAAQS. Except for changes to the volumetric flow monitoring provisions in subsection (D)(2)(a) and operational limits in subsection (D)(2)(b), which shall require prior approval, plans and plan revisions may be implemented upon submittal and shall remain in effect until superseded or until disapproved by the Department. Disapprovals are appealable Department actions.

3. Flash Furnace Capture Improvements.

a. The owner or operator shall install additional hooding and interceptor walls (the "Uptake Improvement System") to improve the capture of fugitive emissions from the flash furnace area, matte tapping and slag skimming areas, route them to the existing converter secondary hood baghouse for fabric filter and high surface area lime injection control, and then to the annulus of the main stack.

b. The Uptake Improvement System shall have a design evacuation rate of 50,000 to 60,000 ACFM hourly average and shall operate when the flash furnace is in operation except for brief periods when slag is being returned to the flash furnace using the slag launder return. At those times, the ventilation for this system shall be switched to the slag return capture system and then switched back automatically to the Uptake Improvement System at the conclusion of the slag return cycle.

c. Establishment of Operational Ranges.

i. The owner or operator shall establish a range of damper positions based upon the secondary hood baghouse flow monitor that provides reasonable assurance that the Uptake Improvement System exhaust flow is within the design range specified in subsection (D)(3)(b). The ranges shall be established and verified by a stack test no later than 180 days after smelter restart and may be revised thereafter in the same fashion. The proposed ranges, stack test verifying evacuation rates compliant with subsection (D)(3)(b) and proposed revision to Table 1 shall be submitted to the department within 45 days of the stack test. If the Director concurs that the proposed damper position ranges assure an exhaust flow compliant with subsection (D)(3)(b), the Director shall issue a revised Table 1 reflecting the new damper position range. Thereafter, the owner or operator shall comply with the approved Table 1 range. Until the first submittal is approved, the owner or operator shall use ranges specified by the air pollution control designer. The current ranges can be found in Table 1 of the attachment labeled "Hayden Smelter Site-Specific SIP Requirements," to the current Class I permit.

ii. The owner or operator shall establish a timed interlock on the slag return launder such that when slag is returned to the flash furnace the ventilation air from the Uptake Improvement System is switched to the slag return capture system for a defined period of not less than 5 minutes nor more than 10 minutes and then returns to the Uptake Improvement System automatically. The owner or operator shall optimize the period within the five to 10- minute range during the initial 60-day optimization period by observation and analysis and thereafter as necessary. The first analysis, proposed time period, and proposed revisions to Table 2 shall be submitted no later than 75 days after smelter restart. The Director shall approve any period that falls within both the five to 10-minute range and a range between the mean and mean plus one standard deviation of observed slag return durations. If the Director concurs that the proposed range meets these requirements, the Director shall issue a revised Table 2. All analyses shall be submitted and approved by the Director. Until the first report is approved, the owner or operator shall use ranges specified by the air pollution control designer. The current ranges are specified in Table 2 of the attachment labeled "Hayden Smelter Site-Specific SIP Requirements" to the current Class I permit.

d. Operational requirements.

i. The owner or operator shall operate the Uptake Improvement/Launder Return combined damper in accordance with the approved Table 1 range or ranges at all times the flash furnace is operating and at all times matte tapping, slag skimming or slag returning is occurring.

ii. The owner or operator shall operate the timed interlock in accordance with the approved Table 2 value. Operators shall trigger the interlock prior to starting slag return and may trigger the timed interlock again if slag is still returning at the end of the interlock cycle to minimize emissions.

iii. The owner or operator shall inspect the Uptake Improvement System during each scheduled maintenance downturn to ensure that the hooding and walls are in proper position and that there are no visible accretions of material in the mouth of the hooding that would preclude efficient operation. The owner or operator shall quarterly, evaluate the damper controlling air between the Uptake Improvement System and the slag return capture system to ensure it is operating properly. Records of these inspections shall be maintained for five years.

4. Converter and Material Transfer Area Capture Improvements.

a. The owner or operator shall install a hood and interceptor walls (the "Fuming Ladle Capture System") to provide a system for the capture of fugitive emissions from fuming ladles in the converter aisle and material transfer areas, route them to the existing converter secondary hood baghouse for fabric filter and high surface area lime injection control, and then to the annulus of the main stack.

b. The Fuming Ladle Capture System shall have a design evacuation rate of 40,000 to 50,000 ACFM when a ladle is present within the hooded area. The capture system shall run until the ladle is removed or for at least 20 minutes after the ladle is placed in the containment. Fuming ladles shall not be removed from the fuming Ladle Capture System containment unless transported directly to the tunnel or within the capture area of a secondary hood.

c. The owner or operator shall, whenever a fuming ladle is detected, promptly move the fuming ladle into the Fuming Ladle Capture System, the tunnel or within the capture area of a secondary hood.

i. The owner or operator shall develop training for its employees responsible for ladle movement on identification of fuming ladles. The training shall be developed within 60 days of smelter restart. Existing employees shall be trained within 90 days of smelter restart and any new employees shall be trained before working ladle operations unsupervised by a trained operator. Employees shall be retrained once every five years. Training records for the operators shall be kept for five years. The training and records shall be available for inspections.

ii. The training program curriculum required under subsection (D)(4)(b)(i) shall include:

(1) Identification of fuming ladles, including oral description from experienced operators, written descriptions and, after smelter restart, photographs and video of fuming and nonfuming ladles;

(2) Procedures on observing ladles to determine when they are fuming;

(3) Instruction on when marginal ladles may be moved to the matte tunnels or a secondary hood for control and when they should be moved to the Fuming Ladle Capture System (FLCS);

(4) Prompt movement of ladles to, placement in, and operation of the FLCS;

(5) When and how ladles may be removed from the FLCS;

(6) Steps to take if a ladle remains fuming after initial time out of the FLCS; and

(7) Procedures for additional scrutiny of first slag and shell out ladles.

iii. The owner or operator shall submit the curriculum required under subsection (D)(4)(b)(ii) and any written and photographic/video training materials to the Department within 10 days of development of the curriculum and thereafter shall provide the curriculum and materials to inspectors upon request.

iv. The owner or operator shall keep a log of the occurrences of fuming ladle events. The log shall include the date of the event, duration of the event, severity of the fuming ladle, and the time elapsed between identification of the fuming ladle and the operator moving the fuming ladle into the Fuming Ladle Capture System, within a secondary hood or into the matte tunnel.

v. Training records for the operators shall be kept for five years. The training and records shall be available for inspection.

d. The owner or operator shall conduct an initial flow test within 180 days of smelter restart to verify that the system achieves the design flow. The results of this flow test shall be reported to the Department within 45 days of completion of the test.

e. The owner or operator shall inspect the Fuming Ladle Capture System during each scheduled maintenance downturn to ensure that it is actuating properly, that the hoods and walls are in proper position, and there are no visible accretions of material in the mouth of the hood that would preclude efficient operation. Records of these inspections shall be maintained for five years.

5. Anode Furnace Secondary Hood Capture Control System.

a. The owner or operator shall install secondary hoods around each of the anode furnaces to improve the capture of fugitive emissions from the anode furnaces during charging, holding and processing, route the emissions to a new anode secondary hood baghouse for fabric filter control, and then to the annulus of the main stack. This is the Anode Secondary Hood system.

b. The Anode Secondary Hood System.

i. The Anode Secondary Hood System shall have an overall design evacuation rate for the total system of 150,000 ACFM hourly average.

ii. The anode secondary hood baghouse shall have a maximum design particulate matter emission rate of 0.002 gr/scf.

iii. Each secondary hood shall be equipped with dampers that can close completely and operate with a range from 20 to 100% to modulate flows to the individual anode furnace.

iv. The Anode Secondary Hood System shall be operated to achieve balanced flows (± 15%) on the two operating anode furnaces when neither are charging. When one anode furnace is charging, the Anode Secondary Hood System shall be balanced so that the charging furnace achieves a minimum of 100,000 ACFM and the other operating furnace gets the balance.

c. The owner or operator shall establish a range of damper positions and total flow conditions based upon the anode secondary hood baghouse flow monitor that provides reasonable assurance that the Anode Secondary Hood system exhaust flow is within the design range. These ranges and flow conditions shall be verified during a performance test within 180 days of smelter restart and may be revised thereafter in the same fashion. The proposed ranges and flow conditions, stack test verifying evacuation rates compliant with subsection (D)(5)(b)(iii) and subsection (D)(5)(b)(iv) and proposed revision to Table 3 shall be submitted to the Department within 45 days of the stack test. If the Director concurs that the proposed damper position and flow ranges assure an exhaust flow compliant with subsection (D)(5)(b)(iii) and subsection (D)(5)(b)(iv), the Director shall issue a revised Table 3 reflecting the new approved Table 3 ranges. Until the first performance test, the owner or operator shall use ranges specified by the air pollution control designer. The current flows shall be specified in Table 3. Damper positions shall be logged and the logs kept for five years.

d. Operational requirements.

i. The owner or operator shall operate the Anode Secondary Hoods in accordance with the approved Table 3 range or ranges at all times the anode furnaces are operating.

ii. The owner or operator shall inspect the Anode Secondary Hood System during which scheduled maintenance down turn to ensure that the dampers are working properly, the hoods and walls are in proper position and that there are no visible accretions of material in the mouth of the hoods that would preclude efficient operation. Records of these inspections shall be maintained for five years.

~~3~~6. Emissions from the anode furnace baghouse stack shall be routed to the Main Stack.

E. Performance Test Requirements.

1. Main stack performance tests. No later than 180 calendar days after ~~completion of all Converter Retrofit Project improvements authorized by Significant Permit Revision No. 60647~~ smelter restart, the owner or operator shall conduct initial performance tests on the following:

a. The gas stream exiting the anode furnaces baghouse prior to mixing with other gas streams routed to the Main Stack.
b. The gas stream exiting the acid plant at a location prior to mixing with other gas streams routed to the Main Stack.
c. The gas stream exiting the converter secondary baghouse at a location prior to mixing with other gas streams routed to the Main Stack.
d. The gas stream collected by the tertiary hooding at a location prior to mixing with other gas streams routed to the Main Stack.
e. The gas stream exiting the vent gas baghouse at a location prior to mixing with other gas streams routed to the Main Stack.
f. The gas stream exiting the anode secondary hood baghouse at a location prior to mixing with the other gas streams routed to the Main Stack.

2. Subsequent performance tests on the gas streams specified in subsection (E)(1) shall be conducted at least annually.
3. Performance tests shall be conducted under such conditions as the Department specifies to the owner or operator based on representative performance of the affected sources and in accordance with 40 CFR 60, Appendix A, Reference Method 29.
4. At least 30 calendar days prior to conducting a performance test pursuant to ~~subsection~~ subsections (E)(1) and (E)(2), the owner or operator shall submit a test plan, in accordance with R18-2-312(B) and the Arizona Testing Manual, to the Department for approval. The test plan must include the following:
   a. Test duration;
   b. Test ~~location(s)~~ location or locations;
   c. Test ~~method(s)~~ method or methods, including those for test method performance audits conducted in accordance with subsection (E)(6); and
   d. Source operation and other parameters that may affect the test result.
5. The owner or operator may use alternative or equivalent performance test methods as defined in 40 CFR § 60.2 when approved by the Department and EPA Region IX, as applicable, prior to the test.
6. The owner or operator shall include a test method performance audit during every performance test in accordance with 40 CFR § 60.8(g).
7. The owner or operator shall evaluate opacity at the time of each performance test. The opacity evaluation shall evaluate both the opacity at the roofline monitor and note the opacity exiting from the walls or other openings but shall not include dust entrained from vehicles passing through an entryway. The opacity evaluation of the flash furnace building and anode aisle shall be conducted in accordance with 40 CFR 60.13 and the opacity evaluation of the converter aisle shall be conducted in accordance with 40

CFR 63.1450(c). If complying with 40 CFR Part 63, Subpart QQQ, then testing to demonstrate compliance with that standard shall satisfy this requirement for the converter aisle.

F. Monitoring Requirements.

1. The owner or operator shall install, calibrate, maintain and operate a monitoring device that continuously records the volumetric flow rate, or alternative parameter that has a direct relationship to volumetric flow rate such as pressure drop (delta P), if approved by the Department, at a representative point in the anode secondary hood system, fuming ladle control system and uptake improvement hood system.
2. If the owner or operator seeks an alternative to a volumetric flow monitor, the owner or operator shall submit a proposal to the Department for review and approval. The proposal shall include the following:
   a. Identification of the parameter or parameter to be monitored in lieu of volumetric flow rate;
   b. Identification of the location in the hooding system where such monitors would be placed and how such location will give appropriate and representative measurements in accordance with good engineering practices;
   c. A detailed explanation, including sample calculations, of how such parameters or a parameter has a direct relationship to volumetric flow rate in the hooding system and how such a parameter or parameters will ensure proper operation in accordance with design at all times, including detecting any degraded performance over time; and
   d. Proposed limit or limits including sample calculations, for the selected parameters that would be an enforceable demonstration of acceptable performance. Upon the Department's approval within 180 days of the effective date in subsection (A)(2), this limit shall take effect and be enforceable thereafter until changed in accordance with this paragraph.
3. The owner or operator shall monitor the pressure drop across the anode secondary hood baghouse.
4. The owner or operator shall monitor the damper positions for the Uptake Improvement System and Fuming Ladle Control System at all times.
5. The owner or operator shall install, certify, calibrate, maintain and operate PM continuous emission monitoring systems (CEMS) at the locations specified in subsection (F)(1) according to EPA Performance Specification 11 in 40 CFR Part 60, Appendix B (PS-11) and the quality assurance requirements of Procedure 2 in 40 CFR Part 60, Appendix F and in accordance with the requirements of the following subsections.
   a. No later than 180 days after the effective date of this rule, the owner or operator shall submit to the Department for review and approval a proposed Installation, Certification, and Quality Assurance/Quality Control (Installation, Certification, and QA/QC) Protocol, developed in consultation with the PM CEMS vendor or vendors, for the PM CEMS required on the anode secondary hood baghouse in subsection (F)(4).

b. The Installation, Certification, and QA/QC Protocol shall include a schedule and specifically describe a proposed testing plan that is designed to maximize the likelihood of successful certification of the PM CEMS. If certification is not approved, then the owner or operator shall consult with the PM CEMS vendor and the Department. Within 60 days of completion of the PS-11 testing (including receipt of the results) that was conducted pursuant to the original Installation, Certification, and QA/QC Protocol for that PM CEMS, the owner or operator shall submit a revised Installation, Certification, and QA/QC Protocol for that PM CEMS to the Department and the EPA for review and approval.

c. Each PM CEMS shall include a continuous particle mass monitor to measure and record PM concentration, directly or indirectly, and gas stream flow rates on an hourly average basis.

d. The owner or operator shall maintain, in an electronic database, the hourly average emission values of all PM CEMS in milligrams per dry standard cubic meter (mg/dscm) and pounds per hour (lbs/hr).

e. In the event that no PM CEMS is successfully certified after the first round of testing, the owner or operator shall, within 90 days of certification failure, submit an updated Installation, Certification and QA/QC Protocol to EPA and the Department for review and approval. Upon completion of the second round of PS-11 testing (including receipt of the results), if the PM CEMS fails to certify, the owner or operator shall submit an alternative PM monitoring plan for such gas stream or stream for review and approval by the EPA and the Department. The alternative monitoring plan shall propose a methodology for using data from the PM CEMS as a continuous parametric monitoring system (CPMS) and stack performance test to ensure continuous compliance with operational limits in subsection (D)(5). Upon approval by the EPA and Department, the owner or operator shall continuously operate the PM CEMS as a CPMS.

f. The owner or operator shall use reasonable efforts to keep each PM CEMS running and producing data whenever any gas at that location is being exhausted to the atmosphere. If operation of the PM CEMS cannot be maintained for a minimum of 12 months, the owner or operator may submit a demonstration to the Department and EPA that identifies the cause or causes of and explanation or explanations why the PM CEMS is infeasible to operate. The demonstration shall include an alternative PM monitoring plan for review and approval by the Department and the EPA. Operation of the PM CEMS shall be considered infeasible if:

   i. The PM CEMS cannot be kept in working condition for sufficient periods of time to produce reliable, adequate, or useful data consistent with the Quality Assurance/Quality Control protocol (including, without limitation, PS-11 and Procedure 2); or

ii. Recurring, chronic, or unusual equipment adjustment, servicing, or replacement needs in relation to other types of continuous emission monitors cannot be resolved through reasonable expenditures of resources. If the Department and the EPA approve the owner or operator's demonstration that it is infeasible to continue operating a PM CEMS, the owner or operator shall be entitled to discontinue operation of and remove the PM CEMS. At that point, the owner or operator shall comply with the approved alternative PM monitoring plan. The Department's and the EPA's disapproval of the owner or operator's demonstration or alternative monitoring plan shall constitute and appealable agency action.

6. The owner or operator shall complete two fugitive emissions studies as required by Appendix 14.
   a. The studies shall be completed according to the updated Fugitive Emissions Study Protocol submitted to the EPA January 20, 2017 and approved by the EPA May 31, 2017. The owner or operator may submit modifications to the protocol six months prior to each study for EPA approval and Department comment. Upon EPA approval, the modified protocol shall take effect.
   b. The first fugitive study shall commence no later than six months after smelter restart or three months after EPA approval of a modified protocol. The owner or operator shall complete 12 months of monitoring and submit a report to the Department and EPA no later than three months after the conclusion of the study. The study shall evaluate the effectiveness of MiniVol samplers in providing high quality, replicable data; compare the MiniVol sampler data to estimates derived from lb/ton emission factors or other process parameters or surrogates; evaluate the accuracy and cost effectiveness of various monitoring approaches; and recommend either a new lb/ton concentrate emission factor or a SIP revision to incorporate an improved monitoring methodology. If the study concludes that the lb/ton concentrate emission factor should be retained, the owner or operator shall submit a justification for why an improved monitoring methodology (e.g., MiniVols) is not feasible and a justification for the selected lb/ton concentrate factor and how it may be revised to maintain accuracy representativeness. If the study concludes that a new methodology should be proposed, the owner or operator shall submit a petition to the Department to revise the SIP within 90 days after submitting the report unless either EPA or the Department provides comments upon the report, in which case the deadline is 60 days after the receipt of the final comments but no earlier than 90 days after the report submittal.
   c. The second fugitive study shall be commenced within the same calendar quarter, but five years after, the date of commencement of the first study or three months after EPA approval of the protocol, if later, and shall run for 12 months. The second fugitive study shall evaluate whether the monitoring methodology remains appropriate. The owner or operator shall submit a report to EPA and the Department on the adequacy of the monitoring methodology within 90 days after completion of the

fugitive monitoring. Based upon the study results, the owner or operator may petition the Department for a SIP revision. The Department or EPA may require the owner or operator to submit a revised monitoring methodology if, based upon the second fugitive study or other credible evidence, the then-current methodology underestimates emissions by 15 percent or more or overestimates emissions by 20 percent or more.

~~F~~**G.** Compliance Demonstration Requirements.

1. For purposes of determining compliance with the Main Stack emission limit in subsection ~~(C)~~(C)(1), the owner or operator shall calculate the combined lead emissions in pounds per hour from the gas streams identified in subsection (E)(1) based on the most recent performance tests conducted in accordance with subsection (E). Continuous compliance with the emission limit in subsection (C)(1) is demonstrated if the most recent performance test under subsection (E)(1) was 0.683 lbs/hr or less.
2. The owner or operator shall determine compliance with the requirements in subsection (D)(2) as follows:
   a. By ~~Maintaining~~ maintaining and operating the emissions capture and control equipment in accordance with the capture system and control device operations and maintenance plan required in subsection (D)(2) and recording operating parameters for capture and control equipment as required in subsection (D)(2)(b); and
   b. By ~~Conducting~~ conducting a fugitive emissions study in accordance with Appendix 14 starting not later than six months after ~~completion of the Converter Retrofit Project authorized by Significant Permit Revision No. 60647~~ smelter restart or three months after EPA approval of a modified protocol. The fugitive emissions study shall demonstrate, as set forth in Appendix 14, that fugitive emissions from the smelter are consistent with estimates used in the attainment demonstration in the ~~Hayden 2008 Lead National Ambient Air Quality Standards Nonattainment Area SIP~~ State Implementation Plan Revision: 2024 Hayden Lead (Pb) Nonattainment Area for 2008 Pb NAAQS.
3. The owner or operator shall include periods of startup, shutdown, malfunction, or other upset conditions when determining compliance with the emission limit in subsection (C).
4. Proper operation of the control and capture system shall be verified as follows:
   a. For each outlet identified in subsection (E)(1) that is equipped with a certified PM CEMS, a 30-day average of PM CEMS mg/dscm shall be calculated based on the average of all valid hour data during the prior 30 operating days for each outlet and then across all outlets on a flow-weighted basis using the following equation:

$$E = \frac{\left(\sum_{i=1}^{n} C_i \times VF_i\right)}{\sum_{i=1}^{n} VF_i}$$

Where:

E = Main stack concentration PM, mg/dscm.

i = ith certified PM CEMS identified in subsection (G)(1).

n = number of certified PM CEMS covered by subsection (G)(1).

C = 30-day average of PM CEMS i, mg/dcsm.

VF1 = 30-day average of volumetric flow measured at PM CEMS i, dscm.

b. For each outlet identified in subsection (E)(1) that is not equipped with a certified PM CEMS, a 30-day average of the continuous parametric data shall be calculated based on the approved alternative monitoring rate.

c. Proper operation of the control and capture system is verified if "E" in subsection (G)(4)(a) is 23 mg/dscm or less, and any outlet subject to an approved alternative monitoring plan is in compliance.

5. The owner or operator shall demonstrate compliance with the process fugitive limit in subsection (D)(5)(f):

a. By demonstrating that all work practice standards set forth in subsections (D)(5), (F)(1), (F)(2), and (F)(3) are being met with no more than a 3-hour consecutive period out of manufacturer's specification before the underlying process unit was shut down or idled; and

b. Until the fugitive study required under subsection (F)(5) is completed, by the fifth working day of each month, the owner or operator shall calculate rates of process fugitive lead emissions by multiplying the tons of concentrate processed through the flash furnaces during the three prior calendar months by 0.0018 lb lead/ton of concentrate and then dividing that value by the number of operating hours during the same three calendar months, where an operating is defined as 24 hours for each operating day as defined in R18-2-B1302(B)(2) less any maintenance downturn hours during an operating day in that month, with compliance demonstrated if the calculated value is 0.326 lb/hr or less. The lb/ton concentrate factor provisions in subsection (G)(5) shall remain in effect until a SIP revision replacing them is approved, as modified by subsection (G)(5)(c).

c. After the fugitive emissions studies described in subsection (F)(5) are completed, by the fifth working day of each month, the owner or operator shall calculate rates of process fugitive lead emissions by multiplying the tons of concentrate processed during the three prior calendar month by the factor for lead that is developed in the most recent fugitive study and then dividing that value by the number of operating hours, as defined in subsection (F)(5), in the same three calendar months to calculate an average pound/hour with compliance demonstrated if the calculated value is 0.326 lb/hr or less.

~~G~~**H.** Recordkeeping. The owner or operator shall maintain the following records for at least five years and keep on-site for at least two years:

1. All records as specified in the operations and maintenance plan required under subsection ~~(D)(2)~~(D).
2. All records of major maintenance activities and inspections conducted on emission units, capture systems, monitoring devices, and air pollution control equipment, including those set forth in the operations and maintenance plan required by subsection ~~(D)(2)~~(D).
3. All records of performance tests, test plans, and audits required by subsection (E).
4. The output of the PM CEMS and 30-day flow weighted average value required by subsection (D)(3).
4~~5~~. All records of compliance calculations required by subsection (F).
5~~6~~. All records of fugitive emission studies and study protocols conducted in accordance with Appendix 14.
6~~7~~. All records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of concentrate drying, smelting, converting, anode refining, and casting emission units; and any malfunction of the associated air pollution control equipment that is inoperative or not operating correctly.
7~~8~~. All records of reports and notifications required by subsection ~~(H)~~(I).
9. Records of the fugitive studies and their supporting data required by subsection (F)(5), in accordance with Appendix 14.
10. Records of daily concentrate processed and operating hours and the corresponding calculation of 90-day average fugitive lead emissions required by subsection (G)(5).

~~H~~**I.** Reporting. The owner or operator shall provide the following to the Department:

1. Notification of commencement of construction of any equipment necessary to comply with the operational or emission limits.
2. Semiannual progress reports on construction of any such equipment postmarked by July 30 for the preceding January-June period and January 30 for the preceding July-December period.
3. Notification of initial startup of any such equipment within 15 business days of such startup.
4. Whenever the owner or operator becomes aware of any exceedance of the emission limit set forth in subsection (C), the owner or operator shall notify the Department orally or by electronic or facsimile transmission as soon as practicable, but no later than two business days after the owner or operator first knew of the exceedance.
5. Within 30 days after the end of each calendar-year quarter, the owner or operator shall submit a quarterly report to the Department for the preceding quarter that shall include dates, times, and descriptions of deviations when the owner or operator operated smelting processes and related control equipment in a manner inconsistent with the operations and maintenance plan required by subsection (D)(2).
6. Reports from performance testing conducted pursuant to subsection (E) shall be submitted to the Department within 60 calendar days of completion of the performance test. The reports shall be submitted in accordance with the Arizona Testing Manual and A.A.C. R18-2-312(A).

7. The owner or operator shall submit reports to the Department providing the results of the fugitive studies required in subsection (F)(5) within six months of completion of each study.
8. The owner or operator shall submit quarterly, by 30 days after the end of each calendar quarter, a summary report showing the date, time and magnitude of any exceedance of the PM CEMS (or approved alternative monitoring system) calculated in accordance with subsection (G)(4) and any exceedance of the fugitive parameters calculation in accordance with subsection (G)(5).
9. The owner or operator shall submit a report to the Department showing that contingency measures required in subsection (J) were implemented within 90 days of receipt of notice from the Department or EPA Region 9 that the requirement for implementing the contingency measures is triggered.

R18-2-B1301.01. Limits on Lead-Bearing Fugitive Dust from the Hayden Smelter

A. Applicability.

1. This Section applies to the owner or operator of the Hayden Smelter.
2. Effective Date. Except as otherwise provided, the requirements of this Section shall become applicable on December 1, 2018.

B. Definitions. In addition to definitions contained in R18-2-101 and R18-2-B1301, the following definitions apply to this Section:

1. "Acid plant scrubber blowdown drying system" means the process in which Venturi scrubber blowdown solids are dried and packaged via a thickener, filter press, electric dryer, and supersack filling stations.
2. "Control measure" means a piece of equipment used, or actions taken, to minimize lead-bearing fugitive dust emissions that would otherwise be released to the atmosphere. Control equipment may include, but are not limited to, wind fences, chemical dust suppressants, and water sprayers. Actions may include, but are not limited to, relocating sources, curtailing operations, or ceasing operations.
3. "Hayden Lead Nonattainment Area" means the townships in Gila and Pinal Counties, as identified and codified in 40 CFR § 81.303, that are designated nonattainment for the 2008 Lead National Ambient Air Quality Standards.
4. "High wind event" means any period of time beginning when the average wind speed, as measured at a meteorological station maintained by the owner or operator that is approved by the Department, is greater than or equal to 15 mph over a 15 minute period, and ending when the average wind speed, as measured at the approved meteorological station maintained by the owner or operator, falls below 15 mph over a 15 minute period.
5. "Lead-bearing fugitive dust" means uncaptured and/or uncontrolled particulate matter containing lead that is entrained in the ambient air and is caused by activities, including, but not limited to, the movement of soil, vehicles, equipment, and wind.

6. “Material pile” means material, including concentrate, uncrushed reverts, crushed reverts, and bedding material, that is stored in a pile outside a building or warehouse and is capable of producing lead-bearing fugitive dust.
7. “Non-smelting process sources” means sources of lead-bearing fugitive dust that are not part of the hot metal process, which includes smelting in the INCO flash furnace, converting, and anode refining and casting. Non-smelting process sources include storage, handling, and unloading of concentrate, uncrushed reverts, crushed reverts, and bedding material; acid plant scrubber blowdown solids; and paved and unpaved roads.
8. “Ongoing visible emissions” means observed emissions to the outside air that are not brief in duration.
9. “Road” means any surface on which vehicles pass for the purpose of carrying people or materials from one place to another in the normal course of business at the Hayden Smelter.
10. “Slag” means the inorganic molten material that is formed during the smelting process and has a lower specific gravity than copper-bearing matte.
11. “Slag hauler” means any vehicle used to transport molten slag.
12. “Storage and handling” means all activities associated with the handling and storage of materials that take place at the Hayden Smelter, including, but not limited to, stockpiling, transport on conveyor belts, transport or storage in rail cars, crushing and milling, arrival and handling of offsite concentrate, bedding, and handling of reverts.
13. “Trackout/carry-out” means any materials that adhere to and agglomerate on the surfaces of motor vehicles, haul trucks, and/or equipment (including tires) and that may then fall onto the road.

C. Operational Standards.

1. Equipment operations. At all times, the owner or operator shall operate and maintain all non-smelting process sources, including all associated air pollution control equipment, control measures, and monitoring equipment, in a manner consistent with good air pollution control practices for minimizing lead-bearing fugitive dust, and in accordance with the fugitive dust plan required by subsection (C)(2) and performance and housekeeping requirements in subsection (D). A determination of whether acceptable operating and maintenance procedures are being used shall be based on all available information to the Department and EPA Region IX, which may include, but is not limited to, monitoring results, review of operating and maintenance procedures and records, review of fugitive dust plans, and inspection of the relevant equipment.
2. Fugitive dust plan. The owner or operator shall develop, implement, and follow a fugitive dust plan that is designed to minimize lead-bearing fugitive dust from non-smelting process sources. At minimum, the fugitive dust plan shall contain the following:
    a. Performance and housekeeping requirements in subsection (D).

b. Design plans and specifications for each wind fence to be installed to control lead-bearing fugitive dust from non-smelting process sources identified in subsections (D)(11) through (D)(14). The dust plan shall contain height limits for the materials being stored in each wind fence, consistent with the design plans and specifications for that particular wind fence. Wind fence design and specifications shall:
   i. Require full encircling of the source to be controlled, with reasonable and sufficient openings for ingress and egress;
   ii. Consider the orientation of the wind fence to the prevailing winds;
   iii. Consider the strength of the winds in the area where the fence will be located;
   iv. Consider the porosity of the material to be used, which shall not exceed 50%; and
   v. Consider the height of the fence relative to the height of the material being stored. At minimum, wind fence height shall be greater than or equal to the material pile height.

c. Design plans and specifications for each new or modified water sprayer system used to control lead-bearing fugitive dust from non-smelting process sources specified in subsections (D)(11) through (D)(14). The number, type, location, watering intensity, flow rates, and other operational parameters of the water sprayers must meet moisture content objectives for sources specified in subsections (D)(11) through (D)(14). The owner or operator may include in the dust plan an exemption to the water requirements at times when the materials are sufficiently moist or it is raining and thus there is no need for additional wetting until the next scheduled watering to meet moisture content objectives. The dust plan shall include the following for each water sprayer:
   i. Watering schedule;
   ii. Watering intensity;
   iii. Minimum flow rate or pressure drop;
   iv. Appropriate and/or continuous monitoring;
   v. Schedule for calibration based on the manufacturer's recommended calibration schedule;
   vi. Preventative maintenance schedule; and
   vii. Other applicable operational parameters.

d. Necessary improvements and/or modifications to material conveyor systems, along with a schedule for implementing improvements or modifications, targeted to minimize lead-bearing fugitive dust from non-smelting process sources specified in subsections (D)(11) through (D)(14), as applicable, to the greatest extent practicable. The improvements or modifications may include, but is not limited to, hooding of transfer points, utilizing water sprayers, and employing scrapers, brushes, or cleaning systems at all points where belts loop around themselves to catch and contain material before it falls to the ground.

e. Design plans for the concrete pads for the non-smelting process sources specified in subsections (D)(11) and (D)(13). The concrete pads shall be designed to capture, store, and control stormwater or sprayed water to minimize emissions to the greatest extent practicable, including curbing around the outer edges of the concrete pad where feasible.

f. Additional controls and measures for sources specified in subsections (D)(11) through (D)(14) to be implemented during high wind events. These additional controls or measures, which must include curtailment or other alteration of activity when appropriate, must be implemented at these sources during all periods of high wind.

g. Sample inspection sheets, checklists, or logsheets for each of the inspections identified in subsection (D)(6), and in accordance with the following:

i. The inspection sheets or checklists shall include:

(1) Specific descriptions of the equipment being inspected and the specific functions being evaluated;

(2) The findings of the inspection;

(3) The date, time, and location of inspections; and

(4) An identification of who performed the inspection or logged the results.

ii. The logsheets for high wind events shall include:

(1) High wind event start time;

(2) High wind event end time;

(3) Description of area or activity inspected; and

(4) Description of corrective action taken if necessary.

h. Design plans of the new acid plant scrubber blowdown drying system specified in subsection (D)(15).

i. The name and location of the meteorological station, which must be approved by the Department, that is to be used by the owner or operator for determining high wind events pursuant to subsection (B)(4) and for implementing control requirements pursuant to subsection (D)(5).

3. Plan development and revisions. The owner or operator shall develop and keep current the fugitive dust plan required by subsection (C)(2). Any plan or plan revision shall be consistent with this Section and shall be submitted to the Department for review. The initial plan shall be submitted to the Department for review no later than May 1, 2017. Plans and plan revisions shall be consistent with good air pollution control practice for fugitive dust. Except for the meteorological station to be used for high wind events pursuant to subsection (D)(5), which shall require prior approval, plans and plan revisions may be implemented upon submittal and shall remain in effect until superseded or until disapproved by the Department. Disapprovals are appealable Department actions.

D. Performance and Housekeeping Requirements. The owner or operator shall comply with these requirements at all times regardless of a fugitive dust plan.

1. Water sprayers. The owner or operator shall implement a recordkeeping system to capture sprayer operations, including identification of the particular operation, lead-bearing fugitive dust source, timing and intensity of watering, and data regarding the quantity of water used at each water sprayer.
2. Wind fences. The owner or operator shall ensure that wind fences used to control lead-bearing fugitive dust from the non-smelting process sources specified in subsections (D)(11) through (D)(14) meet the following requirements:
    a. Wind fence height shall be greater than or equal to the material pile height. The allowed material pile height shall be posted in a readily visible location at each wind fence.
    b. Wind fence porosity shall not exceed 50%.
3. Material conveyor systems. For sources specified in subsections (D)(11) through (D)(14), as applicable, the owner or operator shall:
    a. Minimize conveyor drop heights to the greatest extent practicable.
    b. Clean any spills from conveyors within 30 minutes of discovery. The material collected must be handled in such a way so as to minimize lead-bearing fugitive dust to the maximum extent practicable.
4. Vehicle transport of materials. The owner or operator shall maintain vehicle cargo compartments used to transport materials capable of producing lead-bearing fugitive dust so that the cargo compartment is free of holes or other openings and is covered by a tarp.
5. High wind event requirements.
    a. During high wind events, the owner or operator shall evaluate the non-smelting process sources specified in subsections (D)(11) through (D)(14) for ongoing visible emissions using the appropriate logsheet for each source.
    b. If ongoing visible emissions are observed, the owner or operator shall promptly wet the source of emissions with the objective of mitigating further emissions.
    c. If wetting does not appear to mitigate the ongoing visible emissions to 20% opacity or less, the owner or operator shall postpone associated handling of the source until the high wind event has ceased.
6. Physical inspections. The owner or operator shall conduct physical inspections as follows:
    a. Daily inspections of all water sprayers to make sure they are functioning and are in accordance with the dust plan;

b. Daily visual inspections of all material piles to make sure they are maintained within areas protected by a wind fence, that they are not higher than allowed for the wind fence, and to verify that moisture content requirements are met;
c. Daily inspections of all material handling areas to identify and clean up track out or spills of materials;
d. Daily inspections of conveyor systems to identify and clean up material spills;
e. Daily inspections of rumble grates sump levels;
f. Daily spot inspections of vehicles carrying lead-bearing fugitive dust-producing materials when vehicles are in use to ensure that material is not overloaded, is properly covered, and cargo compartments are intact;
g. Weekly inspections of wind fences for material integrity and structural stability;
h. Daily inspections of all paved roads to identify and clean up track out or spills of materials;
i. Daily inspections of unpaved roads in subsection (D)(10)(a) to identify areas where chemical dust suppressant coverage has broken down; and
j. Bi-weekly inspections of the acid plant scrubber blowdown drying system enclosure.

7. Opacity limit and Method 9 readings.
   a. Opacity from lead-bearing fugitive dust emissions shall not exceed 20% from any part of the facility at any time. Opacity shall be determined by using 40 CFR 60, Appendix A, Reference Method 9, except for unpaved roads, in which opacity shall be determined pursuant to subsection (D)(10)(c).
   b. In the event that an employee observes ongoing visible emissions at a non-smelting process source covered by this Section, that employee shall promptly contact a Reference Method 9-certified observer, who shall promptly evaluate the emissions and conduct a Reference Method 9 reading, if possible.
   c. A Reference Method 9-certified observer shall conduct a weekly visible emissions survey of all non-smelting process sources covered by this Section and perform a Reference Method 9 reading for any plumes that on an instantaneous basis appear to exceed 15% opacity.
8. Corrective actions.
   a. At any time that visible emissions from the non-smelting process sources covered by this Section appear to exceed 15% opacity, the owner or operator shall take prompt corrective action to identify the source of the emissions and abate such emissions, with the corrective action starting within 30 minutes after discovery.

   For any non-smelting process source that produces visible emissions that appear to exceed 15% opacity, the owner or operator shall perform an analysis of the root cause, and implement a strategy designed to prevent, to the extent feasible, the ongoing recurrence of the source of visible emissions.

Within 14 days of completion of its analysis, if appropriate, the owner or operator shall modify the fugitive dust plan in subsection (C)(2) for any changes identified from the analysis differing from the current provisions of the fugitive dust plan.

b. At any time that the owner or operator becomes aware that provisions of the fugitive dust plan and/or performance and housekeeping provisions required by this Section are not being met, the owner or operator shall take prompt action to return to compliance, which may include modifications to monitoring, recordkeeping, and reporting requirements in the fugitive dust plan. This includes, but is not limited to, the following actions:
   i. Return water sprayers to full operational status;
   ii. Repair damaged conveyor hoodings or other enclosures;
   iii. Apply additional water to ensure that sources are meeting moisture content requirements;
   iv. Clean any trackout or spillage of dust-producing material, including dropoff of dust producing material from conveyors, using a street sweeper, vacuum, or wet broom with sufficient water and at the speed recommended by the manufacturer;
   v. Reapplication of chemical dust suppressants in areas where the coating has broken down on unpaved roads; and
   vi. Revisions to the fugitive dust plan to undertake improved monitoring, recordkeeping, and reporting requirements necessary to ensure that the controls contained in the fugitive dust plan are being implemented as contemplated by the fugitive dust plan.

9. Paved Roads. These requirements apply to all roads at the facility currently paved and roads to be paved in the future. The owner or operator shall:
   a. Clean roads at least once daily with a sweeper, vacuum, or wet broom in accordance with applicable manufacturer recommendations.
   b. Maintain the integrity of the road surface.
   c. Clean up trackout and carry-out of material on the following schedule:
      i. As expeditiously as practicable, when trackout and carry-out extends a cumulative distance of 50 linear feet or more; and
      ii. At the end of the workday, for all other trackout and carry-out.
   d. Comply with a speed limit not to exceed 15 mph for all vehicular traffic. At minimum, speed limit signs shall be posted at all entrances and truck loading and unloading areas and/or at conspicuous areas along the roadway.
10. Unpaved Roads. These requirements apply to the unpaved roads identified in subsections (D)(10)(a)(i) through (D)(10)(a)(iii) below, including any access points where the unpaved roads adjoin paved roads and any areas of vehicular handling of material. The owner or operator shall:

a. Implement a chemical dust suppressant application intensity and schedule, which at minimum shall be:
    i. For the slag hauler road and all other unpaved roads used or to be used by the slag hauler, chemical dust suppressant shall be applied at least once per week during the summer, and once per every two weeks during the winter.
    ii. For the main road to the secondary crusher, chemical dust suppressant shall be applied at least once every six weeks, year-round.
    iii. For unpaved roads near reverts and silica flux crushing operations, chemical dust suppressant shall be applied at least once per two weeks during the summer, and once per month in the winter.
b. Increase the frequency of chemical dust suppressant application if necessary to reduce fugitive dust emissions from unpaved roads.
c. Not allow visible emissions to exceed 20% opacity and shall not allow silt loading equal to or greater than 0.33 oz/ft2. However, if silt loading is equal to or greater than 0.33 oz/ft2, then the owner or operator shall not allow the average percent silt content to exceed 6%. Compliance with these requirements shall be determined by the test methods described in Appendix 15.
d. Maintain sufficient watering trucks and personnel to operate such trucks to be employed as an interim measure whenever visible emissions or a breakdown in dust suppressant covering are observed at any point along the treated unpaved road system.
e. Immediately, but no later than 30 minutes after initial observation of any visible emissions, apply water or chemical dust suppressant to the portion of the unpaved road where the visible emissions were observed.
f. Reapply chemical dust suppressant within 24 hours of discovery of any area where the surface chemical dust suppressant coverage has broken down.
g. Collect and prevent from becoming airborne any runoff or material from rinsing or sweeping as soon as practicable.
h. Comply with a speed limit not to exceed 15 mph for all vehicular traffic. At minimum, speed limit signs shall be posted at all entrances and truck loading and unloading areas and/or at conspicuous areas along the roadway.

11. Concentrate Storage, Handling, and Unloading. The owner or operator shall:
    a. Consolidate and manage all concentrate storage piles in one or more concrete storage pads.
    b. Store concentrate in an area with a wind fence in accordance with requirements set forth in the fugitive dust plan and pursuant to subsection (D)(2).

c. Maintain water sprayers in accordance with requirements set forth in the fugitive dust plan and to ensure the surfaces of concentrate piles are wetted to maintain a nominal 10% surface moisture content as determined from representative samples using ASTM Method D2216-10 or other equivalent methods approved by the Department and EPA Region IX.
d. Minimize the footprint of the concentrate storage piles by pushing into the stockpile with a front end loader and sweeping open areas of the pads with a self-powered vacuum sweeper at least daily during use.

12. Uncrushed Reverts Handling and Storage. The owner or operator shall:
    a. Manage uncrushed revert material only in areas protected by a wind fence in accordance with requirements set forth in the fugitive dust plan and pursuant to subsection (D)(2).
    b. Maintain water sprayers in accordance with requirements set forth in the fugitive dust plan and to ensure the surface of uncrushed revert material is wetted with the objective to minimize lead-bearing fugitive dust emissions to the greatest extent practicable.
13. Reverts Crushing Operations and Crushed Reverts Storage. The owner or operator shall:
    a. Crush revert and store crushed revert only on one or more concrete pads.
    b. Crush revert and store crushed revert only within an area protected by a wind fence in accordance with requirements set forth in the fugitive dust plan and pursuant to subsection (D)(2).
    c. Maintain water sprayers in accordance with requirements set forth in the fugitive dust plan and to ensure the surfaces of all crushed revert material, including revert managed after it is crushed, is wetted to maintain a nominal 10% surface moisture content as determined from representative samples using ASTM Method D2216-10 or other equivalent methods approved by the Department and EPA Region IX.
    d. By October 2017, relocate all revert crushing operations to 33º 00’ 25.84” N, 110º 46’ 26.55” W and shall crush revert only at this new location.
14. Bedding Operations, Including Handling, Storage, and Unloading. The owner or operator shall:
    a. Perform all bedding activities, including loading and unloading of materials to be blended, only within an area protected by a wind fence in accordance with requirements set forth in the fugitive dust plan and pursuant to subsection (D)(2). These activities include the storage and handling areas for potentially lead-bearing fugitive dust-producing material within the bedding plant area.
    b. Maintain water sprayers in accordance with requirements set forth in the fugitive dust plan and to ensure the surfaces of material in the bedding area is wetted to maintain a nominal 10% surface moisture content as determined from representative samples using ASTM Method D2216-10 or other equivalent methods approved by the Department and EPA Region IX.

c. Maintain rumble grates at all of the bedding plant's entrances and exits to shake off material on the loader tires as they enter and exit the area. Material that is tracked out of the bedding area must be cleaned up at the end of the workday.

d. Operate its bedding activities in a manner designed to avoid any trackout outside an area protected by a wind fence. Areas of material spillage or trackout, whether inside or outside of an area protected by a wind fence, shall be rinsed or cleaned daily.

15. Acid Plant Scrubber Blowdown Drying System.

a. The owner or operator shall dry acid plant scrubber blowdown solids only in an enclosed system that uses a venturi scrubber, thickener, filter press, and electric dryer that is maintained under negative pressure at all times that materials are being dried.

b. The owner or operator shall maintain the negative pressure of the electric dryer using a 2,500 ACFM dryer ventilation fan that must run at all times the electric dryer is operational. Monitoring of the negative pressure shall be demonstrated through the run and stop states of the ventilation fan and electric dryer.

c. The acid plant scrubber blowdown drying system shall include the following elements:

i. Venturi scrubber slurry that reports to a new thickener.

ii. Underflow from the thickener that goes to a filter press for further liquid removal, with the resulting filter cake sent to two electric dryers operating in parallel to provide final drying of the dust cake.

iii. Exhaust from the dryers sent to the packed gas cooling tower inlet duct.

iv. Dried cake discharged directly into bags.

d. The owner or operator shall clean all areas previously used for scrubber blowdown drying and no longer use previous areas for scrubber blowdown drying.

E. Contingency Requirements.

1. ~~If the owner or operator does not meet the compliance schedule below in subsection (E)(3), or if the Hayden Lead Nonattainment Area does not attain the 2008 Lead National Ambient Air Quality Standards by the attainment date established in the Act, whichever occurs first, then the owner or operator shall increase the paved road cleaning frequency specified in subsection (D)(9) to twice per day.~~ Contingency measures

a. The owner or operator shall install wind fencing starting west of the filter plant and proceeding around its northern perimeter for an approximate length of 790 feet. The fence shall be at least 20 feet high or greater than or equal to the material pile height at the filter plant, whichever is greater. The allowed material pile height shall be posted in a readily visible location at the wind fence. Wind fence porosity shall not exceed 50 percent.

b. The owner or operator shall install a wind fence along the south perimeter road starting at the east end of the former SmithCo processing area and extending for an approximate length of 655 feet. The fence shall be at least 20 feet high or greater than or equal to the material pile height, whichever is greater. The allowed material pile height shall be posted in a readily visible location at the wind fence. Wind fence porosity shall not exceed 50 percent.

c. The owner or operator shall install a new perimeter fence on the southwest corner of the property extending from the south entry gateway area toward the chlorinator area and then reconnecting to the existing perimeter at the former SmithCo area. The fence shall be at least six feet high and shall be posted for no trespassing.

d. The fencing shall approximate that shown in Figure 4-3 of the State Implementation Plan Revision: 2024 Hayden Lead (Pb) Nonattainment Area for 2008 Pb NAAQS.

2. ~~The owner or operator shall implement the contingency measure in subsection (E)(1) within 60 days of notification by EPA Region IX of either a failure to meet the compliance schedule in subsection (E)(3) or a failure to attain by the attainment date established in the Act, whichever occurs first.~~ Triggers. The owner or operator shall implement the contingency measures set forth in subsection (H)(1) no later than 60 days after receiving notice from the Department or EPA Region 9 that any of the following have occurred:

   a. Failure to attain the 2008 Pb NAAQS by the January 31, 2027 attainment date.

   b. Failure to make reasonable further progress (RFP).

3. ~~The compliance schedule is as follows. The Fugitive Dust Plan referred to in the compliance schedule shall mean the Fugitive Dust Plan submitted to the Administrator by the owner or operator to comply with requirements set forth in Consent Decree No. CV-15-02206-PHX-DLR, which became effective on December 30, 2015 in the United States District Court for the District of Arizona, as that plan may be later revised pursuant to subsection (C)(3):~~ The owner or operator shall complete construction of the contingency measures as expeditiously as possible, but no later than 120 to 180 days after initiation.

~~**Control Measure**~~	~~**Date of Implementation**~~
~~Implementation of chemical dust suppression for unpaved roads.~~	~~Within 30 days of Administrator approval of application intensity and schedules in Fugitive Dust Plan.~~

~~Implementation of wind fences for materials piles (uncrushed reverts, reverts crushing and crushed reverts, bedding materials, and concentrate).~~	~~Within 120 days of Administrator approval of the Fugitive Dust Plan or the date of completion in the approved Fugitive Dust Plan, whichever is later.~~
~~Implementation of water sprays for materials piles (uncrushed reverts, reverts crushing and crushed reverts, bedding materials, and concentrate).~~	~~Within 120 days of Administrator approval of the Fugitive Dust Plan or the date of completion in the approved Fugitive Dust Plan, whichever is later.~~
~~Implementation of new acid plant scrubber blowdown drying system.~~	~~November 30, 2016~~
~~Implementation of new primary, secondary, and tertiary hooding systems for converter aisle for purposes of complying with requirements in R18-2-B1301.~~	~~July 1, 2018~~
~~Implementation of new ventilation system for matte tapping and slag skimming for flash furnace for purposes of complying with requirements in R18-2-B1301.~~	~~July 1, 2018~~

F. Ambient Air and Meteorological Monitoring Requirements.

1. The owner or operator shall conduct ambient air monitoring and sampling for lead as follows:
   a. At minimum, the owner or operator shall continue to maintain and operate the ambient lead monitors located at ST-14 (the smelter parking lot), ST-23 (Hillcrest area), ST-26 (post office), and ST-18 (next to the concentrate handling area).

b. Samples must be collected continuously at all monitor sites specified in subsection (F)(1)(a). For the purposes of this requirement, "continuously" means that 24-hour filters are placed and collected at minimum, every six calendar days at all sites consistent with 40 CFR § 58.12.

c. The owner or operator shall follow the Hayden Smelter's Quality Assurance Project Plan (QAPP) applicable to these monitors.

d. The monitors must be operated and maintained in accordance with 40 CFR 58, Appendix A.

e. The owner or operator shall submit each filter removed from each monitor to a certified laboratory for analysis no later than 18 calendar days after the filter's removal. The owner or operator shall ensure that the laboratory performs its analysis and submits the results to the owner or operator no later than 21 calendar days from the lab's receipt of the filter.

f. The owner or operator shall calculate, update, and maintain as a record the following data within 14 calendar days of receipt of any results pertaining to the monitor filters received from a certified lab:

i. The total pollutants on the filters collected and analyzed; and

ii. Calculations of 30-day rolling average ambient air levels of lead for the ST-23, ST-26, and ST-18 monitors, and 60-day rolling average ambient air levels of lead for the ST-14 monitor, expressed as µg/m3.

g. The owner or operator shall retain lead samples collected pursuant to this Section for at least three years. The samples shall be stored in individually sealed containers and labeled with the applicable monitor and date. Upon request, the samples shall be provided to the Department within five business days.

2. The owner or operator shall conduct meteorological monitoring as follows:

a. Continuously monitor and record wind speed and direction data using equipment and a meteorological station approved by the Department.

b. The owner or operator shall calculate and record average wind speed in miles per hour over 15 minutes, rolled each minute.

c. Conduct wind speed and direction measurements using methods in accordance with EPA's Quality Assurance Handbook for Air Pollution Measurement Systems, Volume IV, Meteorological Measurements, Version 2.0.

3. The ambient air and meteorological monitoring stations required by this Section may be discontinued at the end of three full calendar years after the Hayden Lead Nonattainment Area is redesignated attainment for the 2008 Lead National Ambient Air Quality Standards.

G. Compliance Demonstration Requirements. The owner or operator shall demonstrate compliance with this Section by complying with all requirements in the fugitive dust plan pursuant to subsection (C)(2) and implementing all housekeeping and performance requirements pursuant to subsection (D).

H. Recordkeeping.

1. The owner or operator shall maintain the following records for at least five years and keep on-site for at least two years:
   a. Current and past fugitive dust plans required by subsection (C)(2).
   b. Physical inspection sheets, checklists, and logsheets for inspections conducted in accordance with subsection (D)(6).
   c. All records of opacity and stabilization tests, if any, conducted in accordance with subsection (D)(10)(c).
   d. All records of surface moisture content tests, if any, conducted in accordance with subsection (D)(11), subsection (D)(13), and subsection (D)(14).
   e. All records of major maintenance activities and inspections conducted on monitors required by subsection (F).
   f. All records of quality assurance and quality control activities for the monitors required by subsection (F).
   g. All air quality monitoring samples, rolling averages of ambient lead concentrations and necessary calculations, and data required by subsection (F).
   h. All records of wind data from the meteorological station required by subsection (F).
   i. All records of any periods during which a monitoring device required by subsection (F) is inoperative or not operating correctly.
   j. All records of reports and notifications required by subsection (I).
2. All of the following records maintained for the purposes of the fugitive dust plan required by subsection (C)(2) must be maintained in a recordkeeping log or recordkeeping system. As part of the records, the owner or operator shall include the dates and times for each of the following observations or activities, the name of the employee documenting each activity or observation, and the nature and location of each observation activity:
   a. Each instance of observed visible emissions of 15% opacity or greater, along with a description of any corrective action undertaken and its success.
   b. Water sprayer operations, including timing and intensity of watering to be captured in the water sprayer recordkeeping system.
   c. Timing, location, type, and amount of chemical suppressant and water applied to unpaved roads, and a description of the nature and timing of any additional corrective action taken, as necessary, to minimize emissions to the greatest extent practicable.
   d. Timing and location of all sweeping and cleaning of trackout or spillage material.
   e. Timing and location of all washdown of concrete areas.

f. Timing and location of sump cleanouts.

g. Results of all visible emissions surveys and Reference Method 9 readings.

h. Appropriate records for operating conditions, including electric dryer ventilation fan start and stop times for the newly designed acid plant scrubber blowdown drying system.

i. Calibration records for all measurement devices, including maintenance of manufacturer's manuals or other documentation for suggested calibration schedules and accuracy levels for each measurement device.

j. Dates, times, and descriptions of deviations when the owner or operator's operations was carried out in a manner inconsistent with the fugitive dust plan required by subsection (C)(2).

I. Reporting. Within 30 days after the end of each calendar-year quarter, the owner or operator shall submit a report to the Department covering the prior quarter that includes the following:

1. All instances where observed fugitive emissions coming from sources covered in this Section were 15% or greater.
2. The date of all high wind events, with an identification of the location of the reading, wind speed, and duration of the event, and a description of actions taken as a result of the event on a source-by-source basis.
3. All instances where corrective action was required with identification of the emission source involved, what triggered the corrective action, what action the owner or operator undertook to abate or mitigate the problem, and whether the corrective action achieved the intended results.
4. A summary of all times when the electronic recordkeeping system was not recording data, and a summary and indication of the period when recorded data was outside of established operating parameters.
5. A summary of progress of all new construction, installation, upgrades, or modifications to equipment or structures at the facility required by the fugitive dust plan and subsection (D), including dates of commencement and completion of construction, dates of operations of new or modified equipment or structures, and dates old or outdated equipment or structures were permanently retired.
6. Raw monitoring data and calculated ambient lead concentrations from the ambient air monitoring stations required by subsection (F).

R18-2-B1302. Limits on SO_2 Emissions from the Hayden Smelter

A. Applicability.

1. This Section applies to the owner or operator of the Hayden Smelter. It establishes limits on sulfur dioxide emissions from the Hayden Smelter and monitoring, recordkeeping and reporting requirements for those limits.

2. Effective date. Except as otherwise provided, the requirements of this Section shall become applicable ~~on the earlier of July 1, 2018 or 180 days after completion of all project improvements authorized by Significant Permit Revision No. 60647~~ upon smelter restart.
3. The sulfur dioxide emissions limitations contained in subsection (C)(3) shall become effective 60 days after the Hayden smelter achieves maximum production after smelter restart or 180 days after smelter restart, whichever occurs first.
4. The operational controls and limitations contained in subsection (D) shall be implemented upon smelter restart or the time specified as otherwise provided in subsection (D).

B. Definitions. In addition to definitions contained in R18-2-101 and R18-2-B1301, the following definitions apply to this rule.

1. "Anode Secondary Hood System" means the secondary hoods installed around each of the anode furnaces to improve the capture of fugitive emissions from the anode furnaces during charging, holding and processing, route the emissions to a new anode secondary hood baghouse for fabric filter control, and then to the annulus of the main stack.

~~1~~2. "Continuous emissions monitoring system" or "CEMS" means the total equipment, required under the emission monitoring provisions in this Chapter, used to sample, condition (if applicable), analyze, and to provide, on a continuous basis, a permanent record of emissions.

3. "Fuming ladle" means a ladle emitting an abnormal amount of fume after discharge of material.

4. "Maintenance downturn" means a scheduled maintenance period lasting at least eight working hours.

~~2~~5. "Operating day" means any calendar day in which any of the following occurs:

a. Concentrate is smelted in the smelting furnace;
b. Copper or sulfur bearing materials are processed in the converters;
c. Blister or scrap copper is processed in the anode furnaces;
d. Molten metal, including slag, matte or blister copper, is transferred between vessels; or
e. Molten metal is cast into anodes or other intermediate or final products.

~~3~~6. "Out of control period" means the time that begins with the completion of the fifth, consecutive, daily calibration drift check with a calibration drift in excess of two times the allowable limit, or the time corresponding to the completion of the daily calibration drift check preceding the daily calibration drift check that results in a calibration drift in excess of four times the allowable limit, and the time that ends with the completion of the calibration check following corrective action that results in the calibration drifts at both the zero (or low-level) and high-level measurement points being within the corresponding allowable calibration drift limit.

7. "Smelter restart" means the first day after the issuance of Significant Permit Revision No. 96410 that concentrate is processed through the INCO flash furnace to produce matte.

8. "Table 1" means the table labeled "Uptake Improvement System, Flow Conditions and Damper Positions," in Appendix 1 of the attachment labeled "Hayden Smelter Site-Specific SIP Requirements," in the current Class I Air Quality Permit issued to the Hayden smelter.
9. "Table 2" means the table labeled "Uptake Improvement System Interlock Timing," in Appendix 1 of the attachment labeled "Hayden Smelter Site-Specific SIP Requirements," in the current Class I Air Quality Permit issued to the Hayden smelter.
10. "Table 3" means the table labeled "Anode Secondary Hood System Flow Conditions and Damper Positions," in Appendix 1 of the attachment labeled "Hayden Smelter Site-Specific SIP Requirements," in the current Class I Air Quality Permit issued to the Hayden smelter.
11. "Table 4" means the table labeled "Emergency Shutdown Ventilation Flue Emissions," in Appendix 1 of the attachment labeled "Hayden Smelter Site-Specific SIP Requirements," in the current Class I Air Quality Permit issued to the Hayden smelter.

C. Sulfur Dioxide Emissions Limitations.

1. Sulfur dioxide ~~Emissions~~ emissions from the Main Stack shall not exceed 1069.1 pounds per hour on a 14-operating day average~~unless 1,518 pounds or less is emitted during each hour of the 14-operating day period.~~
2. The owner ~~and~~ or operator shall not cause to be discharged into the atmosphere from any affected unit subject to 40 CFR 60 subpart P any gases which contain sulfur dioxide in excess of the limit set forth in 40 CFR § 60.163(a) (as in effect on July 1, 2016 and no later editions).
3. Fugitive emissions limits. These limits shall apply when the underlying processes are in operation, including periods of startup, shutdown and malfunction.
   a. Fugitive emissions of SO_2 from the flash furnace, matte tapping and slag skimming areas shall not exceed 38.5 pounds/hour, as measured by the flash furnace roofline monitoring system.
   b. Fugitive emissions of SO_2 from the converter aisle area shall not exceed 10.0 pounds/hour, as measured by the converter aisle roofline monitoring system.
   c. Fugitive emissions of SO_2 from the anode furnaces shall not exceed 9.0 pounds/hour, as measured by the anode furnace roofline monitoring system.
   d. The owner or operator may apply for a significant permit revision to change the applicable fugitive emissions limits in subsections (C)(3)(a), (b), and (c) to another set of limits provided in the following table:

Rebalanced Fugitive Emissions Limits	Fugitive emissions of SO2 from the flash furnace, matte tapping, and	Fugitive emissions of SO2 from the converter	Fugitive emissions of SO2 from the anode

	slag skimming areas (pounds/hour)	aisle area (pounds/hour)	furnaces (pounds/hour)
Scenario 1	37	10	10
Scenario 2	35.5	10	11
Scenario 3	34	10	12
Scenario 4	36.5	11	9
Scenario 5	35	11	10
Scenario 6	34	11	11
Scenario 7	32.5	11	12
Scenario 8	35	12	9
Scenario 9	33.5	12	10
Scenario 10	32	12	11
Scenario 11	30.5	12	12
Scenario 12	33	13	9
Scenario 13	32	13	10
Scenario 14	30.5	13	11
Scenario 15	29.1	13	12

e. Unless and until the Department issues a significant permit revision replacing the applicable fugitive emissions limits in subsections (C)(3)(a), (b), and (c) with another set of limits provided in subsection(C)(3)(d), the limits in subsections (C)(3)(a), (b), and (c) shall remain the applicable fugitive emissions limits.

D. Operational Standards.

1. Process equipment and control device operations. At all times, including periods of startup, shutdown, and malfunction, the owner or operator shall, to the extent practicable, maintain and operate smelter processes and associated emission ~~control~~ capture and/or control equipment in a manner consistent with good air pollution control practices for minimizing SO_2 emissions to the levels required by subsection (C). Determination of whether acceptable operating and maintenance procedures are being used will be based on all information available to the Director and EPA Region IX, which may include, but is not limited to, monitoring results, review of operating and maintenance procedures and records, and inspection of the relevant equipment.
2. Capture system and control device operations and maintenance plan. The owner or operator shall develop and implement an operations and maintenance plan for each capture system and/or control device used to ventilate or control process gas or emissions from the flash furnace including matte tapping, slag

skimming, and slag return operations; converter primary hoods, converter secondary hoods, tertiary ventilation system, and anode refining operations. The operations and maintenance plan must address the following requirements as applicable to each capture system and/or control device.

a. Monitoring devices. The plan shall provide for installation, operation, calibration, and maintenance of appropriate monitoring devices to measure and record operating limit values or settings at all times the required capture and control system is operating, except during periods of monitor calibration, repair and malfunction. The initial plan shall provide for volumetric flow monitoring on the vent gas baghouse (inlet or outlet), each converter primary hood, each converter secondary hood, the tertiary ventilation system and the anode furnace baghouse (inlet or outlet). All monitoring devices shall be accurate within +/- 10% and calibrated according to manufacturer's instructions. If direct measurement of the exhaust flow is infeasible due to physical limitations or exhaust characteristics, the owner or operator may propose a reliable equivalent method for approval. Initial monitoring may be adjusted as provided in subsection (D)(2)(e). Dampers that are manually set and remain in the same position while the capture system is operating are exempt from these monitoring requirements. Capture system damper position ~~setting(s)~~ setting or settings shall be specified in the plan.

b. Operational limits. The owner or operator shall establish operating limits in the operations and maintenance plan for the capture systems and/or control devices that are representative and reliable indicators of the performance of the capture system and control device operations. The initial operating limits may be adjusted as provided in subsection (D)(2)(e). Initial operating limits shall include the following:

    i. Identification of those modes of operation when the double dampers between the flash furnace vessel and the vent gas system will be closed and the interstitial space evacuated to the acid plant.

    ii. A minimum air flow for the furnace ventilation system and associated damper positions for each matte tapping hood or slag skimming hood when operating to ensure that the ~~operation(s)~~ operation or operations are within the confines or influence of the capture system.

    iii. A minimum air flow for the secondary hood baghouse and associated damper positions for each slag return hood to ensure that the operation is within the confines or influence of the capture system's ventilation draft during times when the associated process is operating.

    iv. A minimum air infiltration ratio for the converter primary hoods of 1:1 averaged over 24 converter Blowing hours, rolled hourly measured as volumetric flow in primary hood less the volumetric flow of tuyere Blowing compared to the volumetric flow of tuyere Blowing.

v. A minimum secondary hood exhaust rate of 35,000 SCFM during converter Blowing, averaged over 24 converter Blowing hours, rolled hourly.

vi. A minimum secondary hood exhaust rate of 133,000 SCFM during all non-Blowing operating hours, averaged over 24 non-Blowing hours, rolled hourly.

vii. A minimum negative pressure drop across the secondary hood when the doors are closed equivalent to 0.007 inches of water.

viii. A minimum exhaust rate on the tertiary hooding of 400,000 ACFM during all times material is processed in the converter aisle, averaged over 24 hours and rolled hourly.

ix. Fan amperes or minimum air flow for the anode furnace baghouse and associated damper positions for each anode furnace hood to ensure that the anode furnace off-gas port is within the confines or influence of the capture system's ventilation draft during times when the associated furnace is operating.

x. The anode furnace charge mouth shall be kept covered when the tuyeres are submerged in the metal bath except when copper is being charged to or transferred from the furnace.

xi. The temperatures of the acid plant catalyst bed, which shall at minimum, meet the manufacturer's recommendations.

xii. The acid plant catalyst replenishment criteria, which shall at minimum, meet the manufacturer's recommendations.

c. Preventative maintenance. The owner or operator must perform preventative maintenance on each capture system and control device according to written procedures specified in the operation and maintenance plan. The procedures must include a preventative maintenance schedule that is consistent with the manufacturer's or engineer's instructions, or operator's experience working with equipment, and frequency for routine and long-term maintenance. This provision does not prohibit additional maintenance beyond that required by the plan.

d. Inspections. The owner or operator must perform inspections in accordance with written procedures in the operations and maintenance plan for each capture system and control device that are consistent with the manufacturer's, engineer's or operator's instructions for each system and device.

e. Plan development and revisions.

i. The owner or operator shall develop and keep current the plan required by this Section. Any plan or plan revision shall be consistent with this Section, shall be designed to ensure that the capture and control system performance conforms to the attainment demonstration in the ~~Hayden 2010 Sulfur Dioxide National Ambient Air Quality Standards Nonattainment Area State Implementation Plan (SIP)~~ Final SIP Revision: 2023 Hayden Sulfur Dioxide Nonattainment Area for the 1971 and 2010 SO_2 NAAQS, and shall be submitted to the Department for review.

Any plan or plan revision submitted shall include the associated manufacturer's recommendations and/or instructions used for capture system and control device operations and maintenance.

ii. The owner or operator shall submit the ~~initial~~ revised plan to the Department ~~no later than May 1, 2018~~ within 180 days of smelter restart and shall include the initial volumetric flow monitoring provisions in subsection (D)(2)(a), the initial operational limits in subsection (D)(2)(b), the preventative maintenance procedures in subsection (D)(2)(c), and the inspection procedures in subsection (D)(2)(d).

iii. The owner or operator shall submit to the Department for approval a plan revision with changes, if any, to the initial volumetric flow monitoring provisions in subsection (D)(2)(a) and initial operational limits in subsection (D)(2)(b) not later than six months after completing a fugitive emissions study conducted in accordance with Appendix 14. The Department shall submit the approved changes to the volumetric flow monitoring provisions and operational limits pursuant to this subsection to EPA Region IX as a SIP revision not later than 12 months after completion of a fugitive emissions study.

iv. Other plan revisions may be submitted at any time when necessary. All plans and plan revisions shall be designed to achieve operation of the capture system and/or control device consistent with the attainment demonstration in the ~~Hayden 2010 Sulfur Dioxide National Ambient Air Quality Standards Nonattainment Area SIP~~ Final SIP Revision: 2023 Hayden Sulfur Dioxide Nonattainment Area for the 1971 and 2010 SO_2 NAAQS. Except for changes to the volumetric flow monitoring provisions in subsection (D)(2)(a) and operational limits in subsection (D)(2)(b), which shall require prior approval, plans and plan revisions may be implemented upon submittal and shall remain in effect until superseded or until disapproved by the Department. Disapprovals are appealable Department actions.

3. Flash Furnace Area Capture Improvements.

a. Prior to smelter restart after issuance of Significant Permit Revision No. 96410, the owner or operator shall install additional hooding and interceptor walls (the "Uptake Improvement System") to improve the capture of fugitive emissions from the flash furnace area, matte tapping and slag skimming areas, route them to the existing converter secondary hood baghouse for fabric filter and high surface area lime injection control, and then to the annulus of the main stack.

b. The Uptake Improvement System shall have a design evaluation rate of 50,000 to 60,000 ACFM hourly average and shall operate when the flash furnace is in operation except for brief periods when slag is being returned to the flash furnace using the slag launder return. At those times, the

ventilation for this system shall be switched to the slag return capture system and then switched back automatically to the Uptake Improvement System at the conclusion of the slag return cycle.

c. Establishment of Operational Ranges.

i. The owner or operator shall establish a range of damper positions based upon the secondary hood baghouse flow monitor that provides reasonable assurance that the Uptake Improvement System exhaust flow is within the design range specified in subsection (D)(3)(b). The ranges shall be established and verified by a stack test no later than 180 days after smelter restart and may be revised thereafter in the same fashion. The proposed ranges, stack test verifying evacuation rates compliant with subsection (D)(3)(b) and proposed revision to Table 1 shall be submitted to the department within 45 days of the stack test. If the Director concurs that the proposed damper position ranges assure an exhaust flow compliant with subsection (D)(3)(b), the Director shall issue a revised Table 1 reflecting the new damper position range. Thereafter, the owner or operator shall comply with the approved Table 1 range. Until the first submittal is approved, the owner or operator shall use ranges specified in Table 1 of Appendix I of Significant Permit Revision 96410. The current ranges shall be specified in Table 1 of the "Hayden Smelter Site-Specific SIP Requirements" attachment to the Class I Air Quality Permit for the smelter.

ii. The owner or operator shall establish a timed interlock on the slag return launder such that when slag is returned to the flash furnace the ventilation air from the Uptake Improvement System is switched to the slag return capture system for a defined period of not less than five minutes nor more than 10 minutes and then returns to the Uptake Improvement System automatically. The owner or operator shall optimize the period within the five to 10-minute range established during the initial 60-day optimization period by observation and analysis and thereafter as necessary. The first analysis, proposed time period, and proposed revisions to Table 2 shall be submitted no later than 75 days after the smelter restart. The Director shall approve any period that falls within both the five to 10-minute range and a range between the mean and mean plus a standard deviation of the observed slag return durations. If the Director concurs that the proposed range meets these requirements, the Director shall issue a revised Table 2. All analyses shall be submitted and approved by the Director. Until the first report is approved, the owner or operator shall use ranges specified in Table 2 of Appendix I of Significant Permit Revision No. 96410. The current ranges shall be specified in Table 2 the "Hayden Smelter Site-Specific SIP Requirements" attachment to the Class I Air Quality Permit for the smelter.

d. Operational requirements.

i. The owner or operator shall operate the Uptake Improvement/Launder Return combined damper in accordance with the approved Table 1 range or ranges at all times the flash furnace is operating and at all times matte tapping, slag skimming or slag returning is occurring.

ii. The owner or operator shall operate the timed interlock in accordance with the approved Table 2 value. Operators shall trigger the interlock prior to starting slag return and may trigger the timed interlock again if slag is still returning at the end of the interlock cycle to minimize emissions.

iii. The owner or operator shall inspect the Uptake Improvement System during each scheduled maintenance downturn to ensure that the hooding and walls are in proper position and that there are no visible accretions of material in the mouth of the hooding that would preclude efficient operation. The owner or operator shall quarterly, evaluate the damper controlling air between the Uptake Improvement System and the slag return capture system to ensure it is operating properly. Records of these inspections shall be maintained for five years.

4. Converter and Material Transfer Area Capture Improvements.

a. Prior to smelter restart after issuance of significant Permit Revision No. 96410, the owner or operator shall install a Fuming Ladle Capture System, which shall have a design evacuation rate of 40,000 to 50,000 ACFM when a ladle is present within the hooded area. The capture system shall run until the ladle is removed or for at least 20 minutes after the ladle is placed in the containment. Fuming ladles shall not be removed from the fuming Ladle Capture System containment unless fuming has stopped or the ladle is transported directly to the tunnel or within the capture area of a secondary hood.

b. The owner or operator shall develop training for its employees responsible for ladle movement on identification of fuming ladles. The training shall be developed within 60 days of smelter restart. Existing employees shall be trained within 90 days of smelter restart and any new employees shall be trained before working ladle operations unsupervised by a trained operator. Employees shall be retrained once every five years. Training records for the operators shall be kept for five years. The training and records shall be available for inspections.

c. The owner or operator shall, whenever a fuming ladle is detected, promptly move the fuming ladle into the Fuming Ladle Capture System.

d. The owner or operator shall conduct an initial flow test within 180 days of smelter restart to verify that the system achieves the design flow. The results of this flow test shall be reported to the Department within 45 days of completion of the test.

e. The owner or operator shall inspect the Fuming Ladle Capture System during each scheduled maintenance downturn to ensure that it is actuating properly, that the hoods and walls are in proper

position, and there are no visible accretions of material in the mouth of the hood that would preclude efficient operation. Records of these inspections shall be maintained for five years.

5. Anode Furnace Secondary Hood Capture Control System.

a. Prior to smelter restart after issuance of Significant Permit Revision No. 96410, the owner or operator shall install secondary hoods around each of the anode furnaces to improve the capture of fugitive emissions from the anode furnaces during charging, holding and processing, route the emissions to a new anode secondary hood baghouse for fabric filter control, and then to the annulus of the main stack. This is the Anode Secondary Hood system.

b. The Anode Secondary Hood System.

i. The Anode Secondary Hood System shall have an overall design evacuation rate for the total system of 150,000 ACFM hourly average.

ii. The anode secondary hood baghouse shall have a maximum design emission rate of 0.002 gr/scf.

iii. Each secondary hood shall be equipped with dampers that can close completely and operate with a range from 20 to 100% to modulate flows to the individual anode furnace.

iv. The Anode Secondary Hood System shall be operated to achieve balanced flows (± 15%) on the two operating anode furnaces when neither are charging. When one anode furnace is charging, the Anode Secondary Hood System shall be balanced so that the charging furnace achieves a minimum of 100,000 ACFM and the other operating furnace gets the balance.

c. The owner or operator shall establish a range of damper positions and total flow conditions based upon the anode secondary hood baghouse flow monitor that provides reasonable assurance that the Anode Secondary Hood system exhaust flow is within the design range. These ranges and flow conditions shall be verified during a performance test within 180 days of smelter restart and may be revised thereafter in the same fashion. The proposed ranges and flow conditions, stack test verifying evacuation rates compliant with subsections (D)(5)(b)(i) and (D)(5)(b)(iv) and proposed revision to Table 3 of Appendix 1 shall be submitted to the Department within 45 days of the stack test. If the Director concurs that the proposed damper position and flow ranges assure an exhaust flow compliant with subsections (D)(5)(b)(i) and (D)(5)(b)(iv), the Director shall issue a revised Table 3 of Appendix 1 reflecting the new approved Table 3 ranges. Until the first performance test, the owner or operator shall use ranges specified by the air pollution control designer in Table 3 of Attachment I of Significant Permit Revision 96410. The current flows shall be specified in Table 3 of Appendix 1 of the "Hayden Smelter Site-specific SIP attachment" to the Class I air quality permit for the smelter. Damper positions shall be logged and the logs kept for five years.

d. Operational requirements. The owner or operator shall operate the Anode Secondary Hoods in accordance with the approved Table 3 range or ranges at all times the anode furnaces are operating.

e. The owner or operator shall inspect the Anode Secondary Hood System during scheduled maintenance down turn to ensure that the dampers are working properly, the hoods and walls are in proper position and that there are no visible accretions of material in the mouth of the hoods that would preclude efficient operation. Records of these inspections shall be maintained for five years.

~~3~~6. Emissions from the anode furnace baghouse stack shall be routed to the Main Stack.

E. Main Stack Monitoring.

1. To determine compliance with subsection (C)(1) the owner or operator of the Hayden Smelter shall install, calibrate, maintain, and operate a CEMS for continuously monitoring and recording SO_2 concentrations and stack gas volumetric flow rates at the following locations.
   a. The exit of the acid plant;
   b. The exit of the secondary hood particulate control device after the High Surface Area (HSA) lime injection system;
   c. The exit of the flash furnace particulate control device after the HSA lime injection system;
   d. The tertiary ventilation system prior to mixing with any other exhaust streams; ~~and~~
   e. The anode furnace baghouse stack prior to mixing with any other exhaust streams~~.~~; and
   f. The exit of the Anode Secondary Hood Baghouse. This system shall be installed and a relative accuracy test audit (RATA) successfully completed within 180 days of the effective date provided in subsection (A)(3).
2. Except during periods of systems breakdown, repairs, maintenance, out-of-control periods, calibration checks, and zero and span adjustments, the owner or operator shall continuously monitor SO_2 concentrations and stack gas volumetric flow rates at each location in subsection (E)(1).
3. For purposes of this Section, continuous monitoring means the taking and recording of at least one measurement of SO_2 concentration and stack gas flow rate reading from the effluent of each affected stack, outlet, or other approved measurement location in each 15-minute period when the associated process units are operating. Fifteen-minute periods start at the beginning of each clock hour, and run consecutively. All CEMS required by subsection (E)(1) shall complete at least one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.
4. ~~If the owner or operator can demonstrate to the Director that measurement of stack gas volumetric flow rate in the outlet of any particular piece of SO2 control equipment would yield inaccurate results or would be technologically infeasible, then the Director may allow measurement of the flow rate at an alternative sampling point.~~

~~5~~4. The owner or operator shall demonstrate that the CEMS required by subsection (E)(1) meet all of the following requirements:

a. The SO_2 CEMS installed and operated under this Section meets the requirements of 40 CFR 60, Appendix B, Performance Specification 2 and Performance Specification 6. The CEMS on the anode furnace baghouse stack and tertiary ventilation system shall complete an initial Relative Accuracy Test Audit (RATA) in accordance with Performance Specification 2. The RATA runs shall be tied to when the anode furnace is in use and, for the tertiary system, when the converters are in operation and/or material is being transferred in the converter aisle. Asarco may petition the Department and EPA Region IX on the criteria for subsequent RATAs for the anode furnace baghouse stack or tertiary ventilation system CEMS. The petition shall include submittal of CEMS data during the year.

b. The SO_2 CEMS installed and operated under this Section meets the quality assurance requirements of 40 CFR 60, Appendix F.

c. The owner or operator shall notify the Director in writing at least 30 days in advance of the start of the relative accuracy test audit (RATA) performed on the CEMS.

d. The Director shall approve the location of all sampling points for monitoring SO_2 concentration and stack gas volumetric flow rates and the appropriate span values for the monitoring systems. This approval shall be in writing before installation and operation of the measurement instruments.

e. The measurement system installed and used under this subsection is subject to the manufacturer's recommended zero adjustment and calibration procedures at least once per operating day unless the manufacturer specifies or recommends calibration at shorter intervals, in which case the owner or operator shall follow those specifications or recommendations. The owner or operator shall make available a record of these procedures that clearly shows instrument readings before and after zero adjustment and calibration.

f. The owner or operator shall maintain on hand and ready for immediate installation sufficient spare parts or duplicate systems for the CEMS required by this Section to allow for the replacement within six hours of any monitoring equipment part that fails or malfunctions during operation.

~~6~~5. ~~The owner or operator of the Hayden Smelter may petition the Department to substitute annual stack testing for the tertiary ventilation or the anode furnace baghouse stack CEMS if the owner or operator demonstrates, for a period of two years, that either CEMS contribute(s) less than 5% individually of the total sulfur dioxide emissions. The Department must determine the demonstration adequate to approve the petition.~~ Annual stack testing shall use EPA Methods 1, 4, and 6C in 40 CFR 60 Appendix A or an alternate method approved by the Department and EPA Region IX. Annual stack testing shall commence no later than the one year after the date the continuous emission monitoring system was removed. The owner or operator shall submit a test protocol to the Department at least 30 days in advance

of testing. The protocol shall provide for three or more 24-hour runs unless the owner or operator justifies a different period and the Department approves such different period. Reports of testing shall be submitted to the Department no later than 60 days after testing or 30 days after receipt, whichever is later. The report shall provide an emissions rate, in the form of a pound per hour or pound per unit of production factor, that shall be used in the compliance demonstration in subsection (F)(1). Except as provided herein, the owner or operator shall otherwise comply with Section R18-2-312 in conducting such testing.

F. Fugitive Emissions Monitoring.

1. To determine compliance with subsection (C)(3) the owner or operator of the Hayden Smelter shall install, calibrate, maintain and operate a CEMS for continuously monitoring and recording SO_2 emissions and volumetric flows at the roofline of the following areas when the underlying process units are operating:
   a. Flash furnace roofline system, located on the penthouse and roof of the flash furnace building;
   b. Converter aisle roofline system, located at the north and south ends of the converter aisle, and
   c. Anode aisle roofline system, located over the anode furnaces.
2. These systems shall be installed and certified successfully completed within 180 days of the effective date provided in subsection (C)(3). The owner or operator shall notify the Director in writing at least 30 days in advance of the initial certification testing performed on the CEMS.
3. The CEMS shall meet the requirements of subsection (E)(4) except that everywhere those provisions specify a relative accuracy test audit (RATA) a cylinder gas audit (CGA) shall be used instead.
4. The owner or operator shall develop a roofline monitoring system operations and maintenance plan (Roofline Plan) that addresses the roofline monitoring system required by subsection (F)(1). The roofline Plan shall include the following elements:
   a. A diagram showing the location of each intake point and which intake points are directed to which CEMS;
   b. A protocol for how the intake points will be sampled by the CEMS;
   c. A description of each CEMS, its required Quality Assurance/Quality Control procedures and span;
   d. Manufacturer's or installer's recommended zero adjustment and calibration procedures, which must provide for instrument readings before and after zero adjustments and calibrations, to be implemented at least once per operating day on the CEMS and at a frequency set forth in the protocol for flow meters;
   e. A list of replacement parts that shall be maintained on hand and ready for immediate installation on the CEMs within 6 hours and to allow fabrication of new sample runs and installation within 10 days; and

f. Equations showing how mass emission rates will be calculated.

5. The owner or operator shall submit the roofline Plan to the Department and EPA Region IX at least 90 days prior to smelter restart. The owner or operator may submit other revisions at any time when necessary. All revisions shall be designed to achieve data collection at the roofline monitoring system consistent with the attainment demonstration in Final SIP Revision: 2023 Hayden Sulfur Dioxide Nonattainment Area for the 1971 and 2010 SO_2 NAAQS. Plans and plan revisions may be implemented upon submittal and shall remain in effect until superseded or until disapproved by the Department or EPA Region IX.

G. Emergency Shutdown Ventilation Flue Monitoring. The owner or operator shall install instrumentation on the Emergency Shutdown Ventilation Flue to detect and record all periods that the bypass is in operation. The owner or operator shall keep a log of all times of both damper positions and, when both dampers are open, whether the period is a planned or unplanned maintenance period. The owner or operator shall log any periods when one damper is open and the other damper is closed stating when the malfunctioning damper was repaired. For purposes of this rule, "planned maintenance" means any period where the owner or operator has shut down the associated emissions units and run the evacuation system until the inlet meter at the acid plant registers the equivalent of 53.5 lbs/hr or less before opening the emergency Shutdown Ventilation Flue. The inlet concentration shall be documented in the operating log.

~~F~~**H.** Compliance Demonstration Requirements.

1. For purposes of determining compliance with the emission limit in subsection (C)(1) the owner or operator shall calculate emissions for each operating day as follows:
   a. Sum the hourly pounds of SO_2 vented to each uncontrolled shutdown ventilation flue and through each monitoring point listed in subsection (E)(1) for the current operating day and the preceding 13-operating days to calculate the total pounds of SO_2 emissions over the 14-operating day averaging period, as applicable.
   b. Divide the total amount of SO_2 emissions calculated from subsection ~~(F)(1)(a)~~(H)(1)(a) by 336 to calculate the 14-operating day average SO_2 emissions.
   ~~c. If the calculation in subsection (F)(1)(b) exceeds 1069.1 pounds per hour, then the owner or operator shall sum the hourly pounds of SO2 vented to each uncontrolled shutdown ventilation flue and through each monitoring point listed in subsection (E)(1) for each hour of the current operating day and each hour of the preceding 13-operating days to ascertain if any hour exceeded 1,518 pounds per hour.~~
2. When no valid hour or hours of data have been recorded by a continuous monitoring system required by subsections (E)(1) and (E)(2) and the associated process unit is operating, the owner or operator shall calculate substitute data for each such period according to the following procedures:

a. For a missing data period less than or equal to 24 hours, substitute the average of the hourly SO_2 concentrations recorded by the system for the hour before and the hour after the missing data period.

b. For a missing data period greater than 24 hours, substitute the greater of:

i. The 90th percentile hourly SO_2 concentrations recorded by the system during the previous 720 quality-assured monitor operating hours.

ii. The average of the hourly SO_2 concentrations recorded by the system for the hour before and the four hours after the missing data period.

c. Notwithstanding subsections ~~(F)(3)(a)~~ (H)(3)(a) and ~~(F)(3)(b)~~ (H)(3)(b), the owner or operator may present any credible evidence as to the quantity or concentration of emissions during any period of missing data.

3. The owner or operator shall determine compliance with the requirements in subsection (D)(2) as follows:

a. Maintaining and operating the emissions capture and control equipment in accordance with the capture system and control device operations and maintenance plan required in subsection (D)(2) and recording operating parameters for capture and control equipment as required in subsection (D)(2)(b); and

~~b. Conducting a fugitive study in accordance with Appendix 14 starting not later than six months after completion of the Converter Retrofit Project authorized by Significant Permit Revision No. 60647. The fugitive study shall demonstrate, as set forth in Appendix 14, that fugitive emissions from the smelter are consistent with estimates used in the attainment demonstration in the Hayden 2010 Sulfur Dioxide National Ambient Air Quality Standards Nonattainment Area SIP.~~

4. The owner or operator shall include periods of startup, shutdown, malfunction, or other upset conditions when determining compliance with the emission limits in subsection (C).

5. The owner and operator shall demonstrate compliance with the limit in subsection (C)(2) in accordance with 40 CFR §§ 60.165 and 60.166 (as in effect on July 1, 2016 and not later editions).

6. Notwithstanding subsections (H)(2)(a) and (H)(2)(b), the owner or operator may present any credible evidence as to the quantity or concentration of emissions during any period of missing data.

7. For purposes of demonstrating compliance with the main stack limit in subsections (C)(1) and (H)(2)(a), the pounds of SO_2 in the emergency shutdown vent shall be calculated for unplanned use of the emergency shutdown ventilation system as the total volume of the emergency shutdown system at the maximum expected SO_2 concentrations in each segment and 10 percent of that amount for planned shutdowns when the evacuation system is run until SO_2 emissions shown on the combined CEMS system are less than 53.5 lb/hr. Future changes to the design volume of the emergency shutdown system or to

the maximum SO_2 concentrations used in the calculation shall be submitted to the Department with a written justification for the change and revised calculations showing the newly calculated planned and unplanned shutdown emissions. This justification may be included as part of a required permit or permit revision. The change shall not be made until approved by the Director. A copy of the current calculations and planned and unplanned shutdown emissions values shall be included in Table 4.

I. Fugitive Limit Compliance Demonstration Requirements.

1. Compliance with the fugitive emission limits in subsection (C)(3) shall be demonstrated as follows:
   a. Each valid hour of calculated emissions from the flash furnace roofline system in subsection (F)(1)(a) shall be compared to the limit in subsection (C)(3) to demonstrate compliance.
   b. Each valid hour of calculated emissions from the converter aisle roofline system in subsection (F)(1)(b) shall be compared to the limit in subsection (C)(3) to demonstrate compliance.
   c. Each valid hour of calculated emissions from the anode aisle roofline system in subsection (F)(1)(c) shall be compared to the limit in subsection (C)(3)
   d. The owner or operator shall maintain 95% or more valid hours for each system listed in subsection (F)(1).
   e. The owner or operator shall include periods of startup, shutdown, malfunction, or other upset condition when determining compliance with the limits in subsection (C)(3).
2. Conducting a fugitive study in accordance with Appendix 14 starting not later than six months after completion of the Converter Retrofit Project authorized by Significant Permit Revision No. 60647. The fugitive study shall demonstrate, as set forth in Appendix 14, that fugitive emissions from the smelter are consistent with estimates used in the attainment demonstration in the Final SIP Revision: 2023 Hayden Sulfur Dioxide Nonattainment Area for the 1971 and 2010 SO_2 NAAQS.

J. For the purposes of demonstrating compliance with the limits in subsection (C), all CEMS listed in subsections (C), (E), and (F) shall use the following data validity requirements:

1. Except as provided under subsection (J)(3) for a full operating hour (any clock hour with 60 minutes of unit operation), at least four valid data points are required to calculate the hourly average, i.e., one data point in each of the 15-minute quadrants of the hour.
2. Except as provided under subsection (J)(3) for a partial operating hour (any clock hour with less than 60 minutes of unit operation), at least one valid data point in each 15-minute quadrant of the hour in which the unit operates is required to calculate the hourly average.
3. For any operating hour in which required maintenance or quality-assurance activities are performed:
   a. If the unit operates in two or more quadrants of the hour, a minimum of two valid data points, separated by at least 15 minutes, is required to calculate the hourly average; or

b. If the unit operates in only one quadrant of the hour, at least one valid data point is required to calculate the hourly average.

4. If a daily calibration error check is failed during any operating hour, all data for that hour shall be invalidated, unless a subsequent calibration error test is passed in the same hour and the requirements of subsection (J)(3) are met, based solely on valid data recorded after the successful celebration.
5. For each full or partial operating hour, all valid data points shall be used to calculate the hourly average.
6. Data recorded during periods of continuous monitoring system breakdown, repair, maintenance, out of control periods, calibration checks, and zero and span adjustments shall not be included in the data averages computed under subsections (H) and (I).
7. Either arithmetic or integrated averaging of all data may be used to calculate the hourly average. The data may be recorded in reduced or non-reduced form.

~~G~~**K.** Recordkeeping.

1. The owner or operator shall maintain a record of each operation and maintenance plan required under subsection ~~(D)(2)~~ (D)(1).
2. The owner or operator shall maintain the following records for at least five years:
   a. All measurements from the continuous monitoring system required by ~~subsection~~ subsections (E)(1) and (F)(1), including the date, place, and time of sampling or measurement; parameters sampled or measured; and results. All measurements will be calculated daily.
   b. All records of quality assurance and quality control activities for emissions measuring systems required by ~~subsection~~ subsections (E)(1) and (F)(1).
   c. All records of calibration checks, adjustments, maintenance, and repairs conducted on the continuous monitoring systems required by subsection (E); including records of all compliance calculations required by subsection (F).
   d. All records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of concentrate drying, smelting, converting, anode refining and casting emission units; any malfunction of the associated air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device required by ~~subsection~~ subsections (E)(1) or (F)(1) is inoperative or not operating correctly.
   e. All records of planned and unplanned shutdown ventilation flue utilization events and calculations used to determine emissions from shutdown ventilation flue utilization events if the owner or operator chooses to use the alternative compliance determination method.
   f. All records of major maintenance activities and inspections conducted on emission units, capture system, air pollution control equipment, and CEMS, including those set forth in the operations and maintenance plan required by subsection (D)(2).

g. All records of operating days and production records required for calculations in subsection ~~(F)~~(I).

h. All records of fugitive emissions studies and study protocols conducted in accordance with Appendix 14.

i. All records of reports and notifications required by subsection ~~(H)~~(L).

~~H~~**L.** Reporting.

1. The owner or operator shall notify the Director in writing at least 30 days in advance of the start of relative accuracy test audit (RATA) procedures performed on the continuous monitoring systems required by subsection (E)(1).
2. Within 30 days after the end of each calendar quarter, the owner or operator shall submit a data assessment report to the Director in accordance with 40 CFR Part 60, Appendix F for the continuous monitoring systems required by ~~subsection~~ subsections (E) and (F).
3. The owner or operator shall submit an excess emissions and monitoring systems performance report or summary report form in accordance with 40 CFR § 60.7(c) to the Director quarterly for the continuous monitoring systems required by subsection (E)(1). Excess emissions means any 14-operating day average as calculated in subsection ~~(F)~~(H) in excess of the emission limit in subsection (C)(1), any period in which the capture and control system was operating outside of its parameters specified in the capture system and control device operation and maintenance plan in subsection (D)(2). ~~For any 14-operating-day period exceeding 1069.1 pounds per hour that the owner or operator claims does not exceed the limit in subsection (C)(1) because all hours in the operating period are below 1,518 pounds per hour, the owner or operator shall submit the CEMS data for each hour during that period.~~ All reports shall be postmarked by the 30th day following the end of each calendar quarter time period.
4. The owner or operator shall provide the following to the Director:
   a. The owner or operator shall notify the Director of commencement of construction of any equipment necessary to comply with the operational or emission limits.
   b. The owner or operator shall submit semiannual progress reports on construction of any such equipment postmarked by July 30 for the preceding January-June period and January 30 for the preceding July-December period.
   c. The owner or operator shall submit notification of initial startup of any such equipment within 15 business days of such startup.
5. The owner or operator shall notify the Director of any control equipment malfunctions that cause an exceedance of an applicable limit within two working days within discovery.

~~I~~**M.** Preconstruction review. This Section is determined to be Reasonably Available Control Technology (RACT) for SO_2 emissions from the operations subject to subsection (C) for purposes of minor source NSR requirement addressed in R18-2-334.

A14. Appendix 14

Procedures for Sulfur Dioxide and Lead Fugitive Emissions Studies for the Hayden Smelter

A14.1. Applicability

This Appendix applies to the owner or operator of the primary copper smelter located in Hayden, Arizona at latitude 33º0'15"N and longitude 110º46'31"W.

A14.2. Study Objectives

The owner or operator shall conduct fugitive emissions studies to derive a measurement or accurate estimate of total fugitive sulfur dioxide and lead emissions from the Hayden smelter during operations, including planned and unplanned start-up and shutdown periods and malfunctions, for the processes identified in A14.3 below. The studies shall include uncaptured fugitive sulfur dioxide emissions from the smelter processing units, but not emissions due solely to the use of fuel for space heating or steam generation, burners at anode casting, or slag pouring at the slag dump. The studies shall evaluate the extent to which correlations may exist between fugitive sulfur dioxide, lead, and particulate matter (PM/PM/PM) emissions, and shall develop such correlations as feasible.

The studies shall also be used to help validate that the operating conditions or ranges specified in the capture and control device maintenance and operations plans required in R18-2-B1301(D)(2) and R18-2-B1302(D)(2) are consistent with operating conditions demonstrating attainment of the 2008 Lead National Ambient Air Quality Standards (NAAQS) in ~~the Hayden 2008 Lead NAAQS Nonattainment Area State Implementation Plan (SIP) and the 2010 Sulfur Dioxide NAAQS in the Hayden 2010 Sulfur Dioxide NAAQS Nonattainment Area SIP~~ the State Implementation Plan Revision: 2024 Hayden Lead (Pb) Nonattainment Area for 2008 Pb NAAQS and the Final State Implementation Plan Revision: 2023 Hayden Sulfur Dioxide Nonattainment Area for the 1971 and 2010 SO_2 NAAQS.

A14.3. Processes Evaluated

From the fugitive emissions studies, the owner or operator shall develop an emission factor or accurate estimate of fugitive emissions for sulfur dioxide and lead during operations, including planned and unplanned start-up and shutdown periods and malfunctions, produced by each of the following smelting processes:

i. Flash furnace building, including flash furnace and dryer operations
ii. Converter aisle, including converter and related operations
iii. Anode furnace aisle, including oxidizing, poling and related operations

A14.4. Averaging Periods

The emission estimate shall include the average pounds per hour emission factor for the fugitive lead and sulfur dioxide emissions from each step in the smelting process identified in A14.3. The estimate shall include all time periods, including planned and unplanned start-up and shutdown periods and malfunctions.

A14.5. Methods and Study Protocols

A14.5.1. Sulfur Dioxide Fugitive Emissions Studies

~~The owner or operator shall submit to the Department and EPA Region IX for review and approval study protocols at least six months prior to conducting fugitive emission studies. Study protocols must be approved by the Department and EPA Region IX prior to commencement of fugitive emissions studies. Study protocols shall specify the method(s) used to meet the study objectives as described in A14.2, including during all recurring operating scenarios from all processes identified in A14.3.~~

The fugitive emissions studies for Sulfur Dioxide shall be completed according to the updated Fugitive Emissions Study Protocol submitted to the EPA on January 20, 2017 and approved by the EPA on May 31, 2017. The owner or operator may submit modifications to the protocol six months prior to each study for EPA approval and Department comment. Upon EPA approval, the modified protocol shall take effect. Study protocols shall specify the method(s) used to meet the study objectives as described in A14.2, including during all recurring operating scenarios from all processes identified in A14.3.

Each fugitive emissions measurement system shall include validation of adequate velocity for flow measurements (i.e., the expected exhaust velocity is within the measurement range of the instrument), and have a sufficient number of flow and temperature sensors to ensure calculation of representative exhaust flows through each roof monitor vent. The number of such sensors and their locations for each monitoring system shall account for the physical configuration of the roof monitor vent, the locations of emitting activities relative to the roof monitor vent, and heat generated by the equipment served by the roof monitor vent.

The fugitive emissions studies shall include operation and process information to help understand the emission impacts of startup, shutdown, malfunctions, and significant changes in process operations. This shall include, for example, dates, times and duration of these events, cause of malfunctions, and descriptions of process changes.

After the completion of each fugitive emissions study, the owner or operator shall modify study methods based on data and lessons learned from previous studies, and submit such modified methods in the proceeding study protocols prior to conducting future emissions studies.

A14.5.2. Lead Fugitive Emissions Studies

The fugitive emissions studies for Lead shall be completed according to the updated fugitive Emissions Study Protocol submitted to the EPA on January 20, 2017 and approved by the EPA on May 31, 2017. The owner or operator may submit modifications to the protocol six months prior to each study for EPA approval and Department comment. Upon EPA approval, the modified protocol shall take effect. Study

protocols shall specify the method(s) used to meet the study objectives as de-scribed in A14.2, including during all recurring operating scenarios from all processes identified in A14.3.

Each fugitive emissions measurement system shall include validation of adequate velocity for flow measurements (i.e., the expected exhaust velocity is within the measurement range of the instru-ment), and have a sufficient number of flow and temperature sensors to ensure calculation of representative exhaust flows through each roof monitor vent. The number of such sensors and their locations for each monitoring system shall account for the physical configuration of the roof monitor vent, the locations of emitting activities relative to the roof monitor vent, and heat gener-ated by the equipment served by the roof monitor vent.

The fugitive emissions studies shall include operation and process information to help understand the emission impacts of startup, shutdown, malfunctions, and significant changes in process opera-tions. This shall include, for example, dates, times and duration of these events, cause of mal-functions, and descriptions of process changes.

After the completion of each fugitive emissions study, the owner or operator shall modify study methods based on data and lessons learned from previous studies, and submit such modified methods in the proceeding study protocols prior to conducting future emissions studies.

A14.6. Study Duration, Frequency, and Submission Schedule

A14.6.1. Sulfur Dioxide Fugitive Emissions Studies

The first fugitive emissions study must commence not later than six months after the completion of ~~the Converter Retrofit Project~~ all project improvements authorized by Significant Permit Revision No. ~~60647~~ 96410. The second study commencement date shall occur within the same calendar quarter, but five years later from the date of commencement of the first study. The owner or operator shall submit the results of each fugitive emissions study in a report to the Department and EPA Region IX for review and approval not later than six months after completing a study. The data collection portion of the first and second fugitive emissions studies shall be conducted for a period of 12 months to assess the content and quantity of fugitive sulfur dioxide and lead emissions.

A14.6.2. Lead Fugitive Emissions Studies

The first fugitive emissions study must commence within six months after restart of the smelter following the 2019 shutdown or three months after EPA approval of a modified protocol, whichever is later. The second study commencement date shall occur within the same calendar quarter, but five years after the date of commencement of the first study. The owner or operator shall submit the results of each fugitive emissions study in a report to the Department and EPA Region IX for review and approval not later than six months after completing a study. The data collection portion of the first and second fugitive emissions studies shall be conducted for a period of 12 months to assess the content and quantity of fugitive lead emissions.

A14.7. Study Reports and Subsequent Studies

At minimum, fugitive emission study reports submitted pursuant to A14.6 must include:

i. Resultant emission factors used to determine fugitive emissions of sulfur dioxide and lead.

ii. Resultant average fugitive lead emissions for each process identified in A14.3.

iii. Resultant peak one-hour fugitive sulfur dioxide emissions for each process identified in A14.3.

iv. Seasonal differences, if any.

v. Comparisons of results from past studies, if any.

vi. Descriptions and identification of volumetric flow monitoring provisions in R18-2-B1301(D)(2)(a) and R18-2-B1302(D)(2)(a) and operational limits R18-2-B1301(D)(2)(b) and R18-2-B1302(D)(2)(b) that are associated with fugitive emissions.

vii. An analysis of whether the results from a study demonstrate that the volumetric flow monitoring provisions in R18-2-B1301(D)(2)(a) and R18-2-B1302(D)(2)(a) and the operational limits in R18-2-B1301(D)(2)(b) and R18-2-B1302(D)(2)(b) continuously ensure that actual fugitive sulfur dioxide and lead emissions are consistent with the modeled emission rates used in the attainment demonstrations in the ~~Hayden 2008 Lead NAAQS Nonattainment Area SIP and the Hayden 2010 Sulfur Dioxide NAAQS Nonattainment Area SIP~~ State Implementation Plan Revision: 2024 Hayden Lead (Pb) Nonattainment Area for 2008 Pb NAAQS and the Final State Implementation Plan Revision: 2023 Hayden Sulfur Dioxide Nonattainment Area for the 1971 and 2010 SO_2 NAAQS. The analysis must also identify subsequent fugitive emissions studies, if any, needed to remedy inaccurate operational limits and volumetric flow monitoring provisions and to ensure attainment of the 2008 Lead NAAQS and 2010 Sulfur Dioxide NAAQS. The scope, duration, and frequency of any subsequent fugitive emissions studies must also be identified. This provision and the report's conclusion neither require nor prohibit future fugitive emission studies.

viii. An analysis of whether supplemental modeling is needed to ~~demonstrate that resultant fugitive emissions from a study provide attainment of the 2008 Lead NAAQS and 2010 Sulfur Dioxide NAAQS~~ evaluate whether the 2010 Sulfur Dioxide NAAQS and/or 2008 Lead NAAQS will be attained at the emissions rates determined by the study.

ix. A summary of methods as followed per approved study protocols.

A14.7.1. Lead Specific

For lead fugitive emissions, a study shall also

i. Evaluate the effectiveness of MiniVol samplers in providing high quality, replicable data.

ii. Compare the MiniVol sampler data to estimates derived from lb/ton emission factors or other process parameters or surrogates.

iii. Evaluate the accuracy and cost effectiveness of various monitoring approaches.

iv. Recommend either a new lb/ton concentrate emission factor or a SIP revision to incorporate an improved monitoring methodology.

If the lead fugitive emissions study concludes that the lb/ton concentrate emission factor should be retained, permittee shall submit a justification for why an improved monitoring methodology (e.g., MiniVols) is not feasible and a justification for the selected lb/ton concentrate factor and how it may be revised to maintain accuracy and representativeness. If the study concludes that a new methodology should be proposed, the owner or operator shall submit a petition to the Department to revise the SIP within 90 days after submitting the report unless either EPA or the Department provides comments upon the report, in which case the deadline is 60 days after the receipt of the final comments but no earlier than 90 days after the report submittal.

A14.8. Revisions to Operations and Maintenance Plan

If an analysis conducted in accordance with A14.7(vi) demonstrates that fugitive emissions associated with volumetric flow monitoring provisions in R18-2-B1301(D)(2)(a) and R18-2-B1302(D)(2)(a) and operational limits in R18-2-B1301(D)(2)(b) and R18-2-B1302(D)(2)(b) may exceed the modeled emission rates used in the ~~Hayden 2008 Lead NAAQS Nonattainment Area SIP attainment demonstration and/or the Hayden 2010 Sulfur Dioxide NAAQS Nonattainment Area SIP attainment demonstration~~ State Implementation Plan Revision: 2024 Hayden Lead (Pb) Nonattainment Area for 2008 Pb NAAQS or the Final State Implementation Plan Revision: 2023 Hayden Sulfur Dioxide Nonattainment Area for the 1971 and 2010 SO_2 NAAQS, and result in an increased likelihood of a NAAQS exceedance based on modeling required under A14.9, then the owner or operator shall submit to the Department for approval, not later than six months after completing a study, recommended changes to operational limits and volumetric flow monitoring provisions as an operations and maintenance plan revision pursuant to R18-2-B1301(D)(2)(e) and R18-2-B1302(D)(2)(e) that would achieve necessary fugitive emissions levels to demonstrate attainment of the NAAQS at the same level of assurance as in the attainment demonstrations. Until receiving approval of the plan revision, the owner or operator shall operate and maintain the volumetric flow monitoring provisions and the operational limits in accordance with the plan as initially submitted pursuant to R18-2-B1301(D)(2)(e) and R18-2-B1302(D)(2)(e). Additionally, the owner and operator shall submit new attainment demonstrations pursuant to A14.9, making appropriate demonstrations of attainment at adjusted fugitive emissions levels.

Similarly, if an analysis conducted in accordance with A14.7(vi) demonstrates that fugitive emissions associated with the volumetric flow monitoring provisions in R18-2-B1301(D)(2)(a) and R18-2-B1302(D)(2)(a) and operational limits in R18-2-B1301(D)(2)(b) and R18-2-B1302(D)(2)(b) may exceed the modeled emission rates used in the ~~Hayden 2008 Lead NAAQS Nonattainment Area SIP attainment demonstration and/or the Hayden 2010 Sulfur Dioxide NAAQS Nonattainment Area SIP~~

~~attainment demonstration~~ State Implementation Plan Revision: 2024 Hayden Lead (Pb) Nonattainment Area for 2008 Pb NAAQS or the Final State Implementation Plan Revision: 2023 Hayden Sulfur Dioxide Nonattainment Area for the 1971 and 2010 SO_2 NAAQS, and result in an increased likelihood of a NAAQS exceedance based on modeling required under A14.9, then the Department shall submit appropriate changes to the operational limits and volumetric flow monitoring provisions, and any revised attainment demonstration pursuant to A14.9, if applicable, to EPA Region IX as a SIP revision not later than 12 months after completion of a fugitive emissions study.

A14.9. Supplemental Modeling

If an analysis conducted in accordance with A14.7(vii) demonstrates that fugitive emissions associated with volumetric flow monitoring provisions in R18-2-B1301(D)(2)(a) and R18-2-B1302(D)(2)(a) and operational limits in R18-2-B1301(D)(2)(b) and R18-2-B1302(D)(2)(b) are greater than the modeled emission rates used in the ~~Hayden 2008 Lead NAAQS Nonattainment Area SIP attainment demonstration and/or the Hayden 2010 Sulfur Dioxide NAAQS Nonattainment Area SIP attainment demonstration~~ State Implementation Plan Revision: 2024 Hayden Lead (Pb) Nonattainment Area for 2008 Pb NAAQS or the Final State Implementation Plan Revision: 2023 Hayden Sulfur Dioxide Nonattainment Area for the 1971 and 2010 SO_2 NAAQS, the owner or operator shall remodel to ~~demonstrate~~ evaluate whether the 2010 Sulfur Dioxide NAAQS and/or 2008 Lead NAAQS will be attained as such higher rates. The owner or operator shall submit such modeling to the Department and EPA Region IX for review and approval not later than six months after completing a fugitive emissions study.

If the revised modeling demonstrates that the 2010 Sulfur Dioxide NAAQS and/or 2008 Lead NAAQS will be attained, the Department shall submit such modeling demonstration and revised fugitive emissions assumptions as a SIP revision to EPA Region IX not later than 12 months after completion of a fugitive emissions study. Alternatively, the owner or operator shall propose additional emission control requirements to revise the SIP, or any combination of revised control measures and modeled attainment, to demonstrate attainment of the 2010 Sulfur Dioxide NAAQS and/or 2008 Lead NAAQS.

Appendix B: Procedural Requirements and Authority – SIP

- **Exhibit B-I: Delegation of Authority**
- **Exhibit B-II: Authorizing Statutes**
- **Exhibit B-III: Public Notice and Affidavit of Publication**
- **Exhibit B-IV: Public Hearing Agenda**
- **Exhibit B-V: Public Hearing Sign-in Sheet**
- **Exhibit B-VI: Public Hearing Officer Certification**
- **Exhibit B-VII: Public Hearing Transcript**
- **Exhibit B-VIII: Compilation of Comments and State Responses**

Exhibit B-I: Delegation of Authority

ADEQ Arizona Department of Environmental Quality

Memorandum

Date: May 14, 2025
To: Daniel Czecholinski, Division Director, ADEQ Air Quality Division
From: Karen Peters, Director
Subject: Air Quality Division Delegation of Authority

Under A.R.S. §49-104 (D) (2), I authorize you, Daniel Czecholinski, Division Director, Air Quality Division, Arizona Department of Environmental Quality, to perform any act, including execution of any pertinent documents, which I, as Director of the Arizona Department of Environmental Quality, am authorized or required to do by law with respect to A.R.S Title 49, Chapters 1 and 3, and any other acts related to air quality, including personnel actions within your division.

This delegation is effective immediately and shall remain in effect until it is revoked or upon your separation from the Arizona Department of Environmental Quality. This delegation replaces any other delegations to the Air Quality Division Director that may be in effect. You may further delegate this authority in the best interest of the agency, however, those delegations must be in writing and you must forward a copy of any further delegations to me. I ratify all acts previously performed by you as Air Quality Division Director concerning the duties and functions in this delegation memorandum.

Karen Peters
Director

5/14/25
Date

Exhibit B-II: Authorizing Statutes

49-104. Powers and duties of the department and director

A. The department shall:

1. Formulate policies, plans and programs to implement this title to protect the environment.

2. Stimulate and encourage all local, state, regional and federal governmental agencies and all private persons and enterprises that have similar and related objectives and purposes, cooperate with those agencies, persons and enterprises and correlate department plans, programs and operations with those of the agencies, persons and enterprises.

3. Conduct research on its own initiative or at the request of the governor, the legislature or state or local agencies pertaining to any department objectives.

4. Provide information and advice on request of any local, state or federal agencies and private persons and business enterprises on matters within the scope of the department.

5. Consult with and make recommendations to the governor and the legislature on all matters concerning department objectives.

6. Promote and coordinate the management of air resources to ensure their protection, enhancement and balanced utilization consistent with the environmental policy of this state.

7. Promote and coordinate the protection and enhancement of the quality of water resources consistent with the environmental policy of this state.

8. Encourage industrial, commercial, residential and community development that maximizes environmental benefits and minimizes the effects of less desirable environmental conditions.

9. Ensure the preservation and enhancement of natural beauty and man-made scenic qualities.

10. Provide for the prevention and abatement of all water and air pollution including that related to particulates, gases, dust, vapors, noise, radiation, odor, nutrients and heated liquids in accordance with article 3 of this chapter and chapters 2 and 3 of this title.

11. Promote and recommend methods for the recovery, recycling and reuse or, if recycling is not possible, the disposal of solid wastes consistent with sound health, scenic and environmental quality policies. The department shall report annually on its revenues and expenditures relating to the solid and hazardous waste programs overseen or administered by the department.

12. Prevent pollution through regulating the storage, handling and transportation of solids, liquids and gases that may cause or contribute to pollution.

13. Promote the restoration and reclamation of degraded or despoiled areas and natural resources.

14. Participate in the state civil defense program and develop the necessary organization and facilities to meet wartime or other disasters.

15. Cooperate with the Arizona-Mexico commission in the governor's office and with researchers at universities in this state to collect data and conduct projects in the United States and Mexico on issues that are within the scope of the department's duties and that relate to quality of life, trade and economic development in this state in a manner that will help the Arizona-Mexico commission to assess and enhance the economic competitiveness of this state and of the Arizona-Mexico region.

16. Unless specifically authorized by the legislature, ensure that state laws, rules, standards, permits, variances and orders are adopted and construed to be consistent with and not more stringent than the corresponding federal law that addresses the same subject matter. This paragraph does not adversely affect standards adopted by an Indian tribe under federal law.

17. Provide administrative and staff support for the oil and gas conservation commission.

B. The department, through the director, shall:

1. Contract for the services of outside advisers, consultants and aides reasonably necessary or desirable to enable the department to adequately perform its duties.

2. Contract and incur obligations reasonably necessary or desirable within the general scope of department activities and operations to enable the department to adequately perform its duties.

3. Use any medium of communication, publication and exhibition when disseminating information, advertising and publicity in any field of its purposes, objectives or duties.

4. Adopt procedural rules that are necessary to implement the authority granted under this title but that are not inconsistent with other provisions of this title.

5. Contract with other agencies, including laboratories, in furthering any department program.

6. Use monies, facilities or services to provide matching contributions under federal or other programs that further the objectives and programs of the department.

7. Accept gifts, grants, matching monies or direct payments from public or private agencies or private persons and enterprises for department services and publications and to conduct programs that are consistent with the general purposes and objectives of this chapter. Monies received pursuant to this paragraph shall be deposited in the department fund corresponding to the service, publication or program provided.

8. Provide for the examination of any premises if the director has reasonable cause to believe that a violation of any environmental law or rule exists or is being committed on the premises. The director shall give the owner or operator the opportunity for its representative to accompany the director on an examination of those premises. Within forty-five days after the date of the examination, the department shall provide to the owner or operator a copy of any report produced as a result of any examination of the premises.

9. Supervise sanitary engineering facilities and projects in this state, authority for which is vested in the department, and own or lease land on which sanitary engineering facilities are located, and operate the facilities, if the director determines that owning, leasing or operating is necessary for the public health, safety or welfare.

10. Adopt and enforce rules relating to approving design documents for constructing, improving and operating sanitary engineering and other facilities for disposing of solid, liquid or gaseous deleterious matter.

11. Define and prescribe reasonably necessary rules regarding the water supply, sewage disposal and garbage collection and disposal for subdivisions. The rules shall:

(a) Provide for minimum sanitary facilities to be installed in the subdivision and may require that water systems plan for future needs and be of adequate size and capacity to deliver specified minimum quantities of drinking water and to treat all sewage.

(b) Provide that the design documents showing or describing the water supply, sewage disposal and garbage collection facilities be submitted with a fee to the department for review and that no lots in any subdivision be offered for sale before compliance with the standards and rules has been demonstrated by approval of the design documents by the department.

12. Prescribe reasonably necessary measures to prevent pollution of water used in public or semipublic swimming pools and bathing places and to prevent deleterious conditions at those places. The rules shall prescribe minimum standards for the design of and for sanitary conditions at any public or semipublic swimming pool or bathing place and provide for abatement as public nuisances of premises and facilities that do not comply with the minimum standards. The rules shall be developed in cooperation with the director of the department of health services and shall be consistent with the rules adopted by the director of the department of health services pursuant to section 36-136, subsection I, paragraph 10.

13. Prescribe reasonable rules regarding sewage collection, treatment, disposal and reclamation systems to prevent the transmission of sewage borne or insect borne diseases. The rules shall:

(a) Prescribe minimum standards for the design of sewage collection systems and treatment, disposal and reclamation systems and for operating the systems.

(b) Provide for inspecting the premises, systems and installations and for abating as a public nuisance any collection system, process, treatment plant, disposal system or reclamation system that does not comply with the minimum standards.

(c) Require that design documents for all sewage collection systems, sewage collection system extensions, treatment plants, processes, devices, equipment, disposal systems, on-site wastewater treatment facilities and reclamation systems be submitted with a fee for review to the department and may require that the design documents anticipate and provide for future sewage treatment needs.

(d) Require that construction, reconstruction, installation or initiation of any sewage collection system, sewage collection system extension, treatment plant, process, device, equipment, disposal system, on-site wastewater treatment facility or reclamation system conform with applicable requirements.

14. Prescribe reasonably necessary rules regarding excreta storage, handling, treatment, transportation and disposal. The rules may:

(a) Prescribe minimum standards for human excreta storage, handling, treatment, transportation and disposal and shall provide for inspection of premises, processes and vehicles and for abating as public nuisances any premises, processes or vehicles that do not comply with the minimum standards.

(b) Provide that vehicles transporting human excreta from privies, septic tanks, cesspools and other treatment processes be licensed by the department subject to compliance with the rules. The department may require payment of a fee as a condition of licensure. The department shall establish by rule a fee as a condition of licensure, including a maximum fee. The fees shall be deposited, pursuant to sections 35-146 and 35-147, in the solid waste fee fund established by section 49-881.

15. Perform the responsibilities of implementing and maintaining a data automation management system to support the reporting requirements of title III of the superfund amendments and reauthorization act of 1986 (P.L. 99-499) and article 2 of this chapter.

16. Approve remediation levels pursuant to article 4 of this chapter.

17. Establish or revise fees by rule pursuant to the authority granted under title 44, chapter 9, articles 8 and 9 and chapters 4 and 5 of this title for the department to adequately perform its duties. All fees shall be fairly assessed and impose the least burden and cost to the parties subject to the fees. In establishing or revising fees, the department shall base the fees on the direct and indirect costs of the department's relevant duties, including employee salaries and benefits, professional and outside services, equipment, in-state travel and other necessary operational expenses directly related to issuing licenses as defined in title 41, chapter 6 and enforcing the requirements of the applicable regulatory program.

18. Appoint a person with a background in oil and gas conservation to act on behalf of the oil and gas conservation commission and administer and enforce the applicable provisions of title 27, chapter 4 relating to the oil and gas conservation commission.

C. The department may:

1. Charge fees to cover the costs of all permits and inspections it performs to ensure compliance with rules adopted under section 49-203 except that state agencies are exempt from paying the fees.

2. Monies collected pursuant to this subsection shall be deposited, pursuant to sections 35-146 and 35-147, in the water quality fee fund established by section 49-210.

3. Contract with private consultants for the purposes of assisting the department in reviewing applications for licenses, permits or other authorizations to determine whether an applicant meets the criteria for issuance of the license, permit or other authorization. If the department contracts with a consultant under this paragraph, an applicant may request that the department expedite the application review by requesting that the department use the services of the consultant and by agreeing to pay the department the costs of the consultant's services. Notwithstanding any other law, monies paid by applicants for expedited reviews pursuant to this paragraph are appropriated to the department for use in paying consultants for services.

D. The director may:

1. If the director has reasonable cause to believe that a violation of any environmental law or rule exists or is being committed, inspect any person or property in transit through this state and any vehicle in which the person or property is being transported and detain or disinfect the person, property or vehicle as reasonably necessary to protect the environment if a violation exists.

2. Authorize in writing any qualified officer or employee in the department to perform any act that the director is authorized or required to do by law.

49-404. State implementation plan

A. The director shall maintain a state implementation plan that provides for implementation, maintenance and enforcement of national ambient air quality standards and protection of visibility as required by the clean air act.

B. The director may adopt rules that describe procedures for adoption of revisions to the state implementation plan.

C. The state implementation plan and all revisions adopted before September 30, 1992 remain in effect according to their terms, except to the extent otherwise provided by the clean air act, inconsistent with any provision of the clean air act, or revised by the administrator. No control requirement in effect, or required to be adopted by an order, settlement agreement or plan in effect, before the enactment of the clean air act in any area which is a nonattainment or maintenance area for any air pollutant may be modified after enactment in any manner unless the modification insures equivalent or greater emission reductions of the air pollutant. The director shall evaluate and adopt revisions to the plan in conformity with federal regulations and guidelines promulgated by the administrator for those purposes until the rules required by subsection B are effective.

49-406. Nonattainment area plan

A. For any ozone, carbon monoxide or particulate nonattainment or maintenance area the governor shall certify the metropolitan planning organization designated to conduct the continuing, cooperative and comprehensive transportation planning process for that area under 23 United States Code section 134 as the agency responsible for the development of a nonattainment or maintenance area plan for that area.

B. For any ozone, carbon monoxide or particulate nonattainment or maintenance area for which no metropolitan planning organization exists, the department shall be certified as the agency responsible for development of a nonattainment or maintenance area plan for that area.

C. For any ozone, carbon monoxide or particulate nonattainment or maintenance area, the department, the planning agency certified pursuant to subsection A of this section on behalf of elected officials of affected local government, the county air pollution control department or district, and the department of transportation shall, by November 15, 1992, and from time to time as necessary, jointly review and update planning procedures or develop new procedures.

D. In preparing the procedures described in subsection C of this section, the department, the planning agency certified pursuant to subsection A of this section on behalf of elected officials of affected local government, the county air pollution control department or district, and the department of transportation shall determine which elements of each revised implementation plan will be developed, adopted, and implemented, through means including enforcement, by the state and which by local governments or regional agencies, or any combination of local governments, regional agencies or the state.

E. The department, the planning agency certified pursuant to subsection A of this section on behalf of elected officials of affected local government, the county air pollution control department or district, and the department of transportation shall enter into a memorandum of agreement for the purpose of coordinating the implementation of the procedures described in subsection C and D of this section.

F. At a minimum, the memorandum of agreement shall contain:

1. The relevant responsibilities and authorities of each of the coordinating agencies.

2. As appropriate, procedures, schedules and responsibilities for development of nonattainment or maintenance area plans or plan revisions and for determining reasonable further progress.

3. Assurances for adequate plan implementation.

4. Procedures and responsibilities for tracking plan implementation.

5. Responsibilities for preparing demographic projections including land use, housing, and employment.

6. Coordination with transportation programs.

7. Procedures and responsibilities for adoption of control measures and emissions limitations.

8. Responsibilities for collecting air quality, transportation and emissions data.

9. Responsibility for conducting air quality modeling.

10. Responsibility for administering and enforcing stationary source controls.

11. Provisions for the timely and periodic sharing of all data and information among the signatories relating to:

(a) Demographics.

(b) Transportation.

(c) Emissions inventories.

(d) Assumptions used in developing the model.

(e) Results of modeling done in support of the plan.

(f) Monitoring data.

G. Each agency that commits to implement any emission limitation or other control measure, means or technique contained in the implementation plan shall describe that commitment in a resolution adopted by the appropriate governing body of the agency. The resolution shall specify the following:

1. Its authority for implementing the limitation or measure as provided in statute, ordinance or rule.

2. A program for the enforcement of the limitation or measure.

3. The level of personnel and funding allocated to the implementation of the measure.

H. The state, in accordance with the rules adopted pursuant to section 49-404, and the governing body of the metropolitan planning organization shall adopt each nonattainment or maintenance area plan developed by a certified metropolitan planning organization. The adopted nonattainment or maintenance area plan shall be transmitted to the department for inclusion in the state implementation plan provided for under section 49-404.

I. After adoption of a nonattainment or maintenance area plan, if on the basis of the reasonable further progress determination described in subsection F of this section or other information, the control officer determines that any person has failed to implement an emission limitation or other control measure, means or technique as described in the resolution adopted pursuant to subsection G of this section, the control officer shall issue a written finding to the person, and shall provide an opportunity to confer. If the control officer subsequently determines that the failure has not been corrected, the county attorney, at the request of the control officer, shall file an action in superior court for a preliminary injunction, a permanent injunction, or any other relief provided by law.

J. After adoption of a nonattainment or maintenance area plan, if, on the basis of the reasonable further progress determination described in subsection F of this section or other information, the director determines that any person has failed to implement an emission limitation or other control measure, means or technique as described in the resolution adopted pursuant to subsection G of this section, and that the control officer has failed to act pursuant to subsection I of this section, the director shall issue a written finding to the person and shall provide an opportunity to confer. If the director subsequently determines that the failure has not been corrected, the attorney general, at the request of the director, shall file an action in superior court for a preliminary injunction, a permanent injunction, or any other relief provided by law.

K. Notwithstanding subsections A and B of this section, in any metropolitan area with a metropolitan statistical area population of less than two hundred fifty thousand persons, the governor shall designate an agency that meets the criteria of section 174 of the clean air act and that is recommended by the city that causes the metropolitan area to exist and the affected county. That agency shall prepare and adopt the nonattainment or maintenance area plan. If the governor does not designate an agency, the department shall be certified as the agency responsible for the development of a nonattainment or maintenance area plan for that area.

49-425. Rules; hearing

A. The director shall adopt such rules as the director determines are necessary and feasible to reduce the release into the atmosphere of air contaminants originating within the territorial limits of the state or any portion thereof and shall adopt, modify and amend reasonable standards for the quality of and emissions into the ambient air of the state for the prevention, control and abatement of air pollution. Additional standards shall be established for particulate matter emissions, sulfur dioxide emissions and other air contaminant emissions determined to be necessary and feasible for the prevention, control and abatement of air pollution. In fixing such ambient air quality standards, emission standards or standards of performance, the director shall give consideration but shall not be limited to the relevant factors prescribed by the clean air act.

B. No rule may be enacted or amended except after the director first holds a public hearing after thirty days' notice of such hearing. The proposed rule, or any proposed amendment of a rule, shall be made available to the public at the time of notice of such hearing.

C. The department shall enforce the rules adopted by the director.

D. All rules enacted pursuant to this section shall be made available to the public at a reasonable charge on request.

Exhibit B-III: Public Notice and Affidavit of Publication

LocaliQ
Arizona
GANNETT

PO Box 632099, Cincinnati, OH 45263-2099

AFFIDAVIT OF PUBLICATION

Az Dept Eviron Qual
AZ Dept. of Environmental Quality
1110 W Washington ST # 160
Phoenix AZ 85007-2957

STATE OF WISCONSIN, COUNTY OF BROWN

The Arizona Republic, a newspaper published in the city of Phoenix and general circulation in the counties of Maricopa, Coconino, Pima and Pinal, State of Arizona, and personal knowledge of the facts herein state and that the notice hereto annexed was Published in said newspapers in the issue:

PNI Arizona_Republic 09/12/2025, 09/15/2025
PNI azcentral.com 09/12/2025, 09/15/2025

and that the fees charged are legal.
Sworn to and subscribed before on 09/15/2025

Legal Clerk

Notary, State of WI, County of Brown

9.19.29

My commission expires

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State of Wisconsin

AIR QUALITY DIVISION
HAYDEN SULFUR DIOXIDE AND LEAD, NOTICE OF PROPOSED RULEMAKING AND STATE IMPLEMENTATION PLAN (SIP) REVISIONS
PUBLIC COMMENT PERIOD AND HEARING

The Air Quality Division of the Arizona Department of Environmental Quality (ADEQ) welcomes comments on the proposed: SIP Revision: Rules Incorporating Hayden Smelter Permit Conditions to Supplement Arizona's 2023 Sulfur Dioxide (SO2) SIP; SIP Revision: Rules Incorporating Hayden Smelter Permit Conditions to Supplement Arizona's 2024 Lead (Pb) SIP; and rulemaking to amend the Arizona Administrative Code (A.A.C) Title 18, Chapter 2, Article 13 (State Implementation Plan Rules for Specific Locations) to codify the permitting conditions included in the 2023 Hayden sulfur dioxide State Implementation Plan (SIP) revision and the 2024 Hayden lead SIP revision. Doing so will facilitate EPA's approval of the SIP revisions.

Comment period: Pursuant to A.R.S. §§ 49-404 and 49-425, ADEQ opens a 30-day public comment period on September 12, 2025 on the proposed: SIP Revision: Rules Incorporating Hayden Smelter Permit Conditions to Supplement Arizona's 2023 SO2 SIP; SIP Revision: Rules Incorporating Hayden Smelter Permit Conditions to Supplement Arizona's 2024 Pb SIP; and rulemaking to amend A.A.C Title 18, Chapter 2, Article 13. The public comment period will end at 5 p.m. MST on October 14, 2025.

Public Hearing: ADEQ will hold a public hearing at 10:30 a.m. MST on October 14, 2025, to receive verbal comments and answer questions concerning the proposed SIP revisions and rulemaking Interested parties may attend:

• Online via GoToWebinar by registering at: https://attendee.gotowebinar.com/register/4027323525405662554
After registering, you will receive a confirmation email containing information about joining the webinar.

• Or by Phone (audio only) by calling: 1 (213) 932-4212 | Webinar Code: 700-144-787.
Please note that calling this number is a listen only option. You will NOT be able to speak. Audio PINs are provided to those who register for the webinar and log in using their computers. With this PIN, they will have the option to unmute themselves.

Copies for Public Review: During the 30-day comment period, the SIP Revision: Rules Incorporating Hayden Smelter Permit Conditions to Supplement Arizona's 2023 SO2 SIP; SIP Revision: Rules Incorporating Hayden Smelter Permit Conditions to Supplement Arizona's 2024 Pb SIP; and Notice of Proposed Rulemaking, will be available online at https://azdeq.gov/rulemaking/siprules_permitterms. These documents are also available for review at the ADEQ Records Center, 1110 W. Washington St., Phoenix, AZ 85007, 602-771-4380. Please call for hours of operation and to schedule an appointment or consult https://azdeq.gov/records

Instructions for Public Comments: Comments may be mailed to ADEQ, Air Quality Improvement Planning Section, 1110 W. Washington St., Phoenix, AZ 85007 or emailed to airplanning@azdeq.gov.
Comments and questions may also be made during the public hearing.

Close of Comment Period: Comments on the SIP revisions and proposed rulemaking must be received by ADEQ no later than 5 p.m. MST on October 14, 2025, or submitted at the public hearing on that date.

Additional Information: For more Information, visit https://azdeq.gov/rulemaking/siprules_permitterms.

ADEQ will take reasonable measures to provide access to department services to individuals with limited ability to speak, write or understand English and/or to those with disabilities. Requests for language translation, ASL interpretation, CART captioning services or disability accommodations must be made at least 48 hours in advance by contacting the Title VI Nondiscrimination Coordinator, Leonard Drago, at 602-771-2288 or Drago.Leonard@azdeq.gov. For a TTY or other device, Telecommunications Relay Services are available by calling 711.

ADEQ tomará las medidas razonables para proveer acceso a los servicios del departamento a personas con capacidad limitada para hablar, escribir o entender inglés y/o para personas con discapacidades. Las solicitudes de servicios de traducción de idiomas, interpretación ASL (lengua de signos americano), subtitulado de CART, o adaptaciones por discapacidad deben realizarse con al menos 48 horas de anticipación comunicándose con el Coordinador de Anti-Discriminación del Título VI al 602-771-2288 o Drago.Leonard@azdeq.gov. Para un TTY u otro dispositivo, los servicios de retransmisión de telecomunicaciones están disponible llamando al 711.

Pub: Sept 12, 15, 2025

Exhibit B-IV: Public Hearing Agenda

ADEQ Arizona Department of Environmental Quality

MEETING AGENDA

Hayden Sulfur Dioxide and Lead, Proposed Rulemaking and State Implementation Plan (SIP) Revisions Public Hearing

Arizona Department of Environmental Quality

October 14, 2025
10 a.m. MST.

Virtual Meeting Only
Please register for the January 13, 2023 public hearing at:
https://attendee.gotowebinar.com/register/4027323525405662554

After registering at the link above, you will receive a confirmation email containing information about how to join the webinar. Additional information, including how to access the virtual public hearing, can be found by viewing the public notice at https://azdeq.gov/notices or by contacting Lexi Ahmad at ahmad.alexandra@azdeq.gov.

You may also call in and listen to the meeting using your phone, but please **NOTE** that phone-only access does **NOT** provide the option for the participant to speak.

Call: (213) 932-4212
Webinar Access Code: 700-144-787

Objective: To provide a public hearing on ADEQ's proposed *SIP Revision: Rules Incorporating Hayden Smelter Permit Conditions to Supplement Arizona's 2023 SO_2 SIP*; *SIP Revision: Rules Incorporating Hayden Smelter Permit Conditions to Supplement Arizona's 2024 Pb SIP*; and rulemaking to amend A.A.C Title 18, Chapter 2, Article 13.

1. Welcome and Introductions
2. Purpose of the Oral Proceeding
3. Procedure for Making Public Comment
4. Brief Overview of the Proposal
5. Opportunity to Ask Questions
6. Oral Comment Period
7. Adjournment of Oral Proceeding

Email comments to ahmad.alexandra@azdeq.gov.

ADEQ will take reasonable measures to provide access to department services to individuals with limited ability to speak, write or understand English and/or to those with disabilities. Requests for language translation, ASL interpretation, CART captioning services or disability accommodations must be made at least 48 hours in advance by contacting the Title VI Nondiscrimination Coordinator, Leonard Drago, at 602-771-2288 or Drago.Leonard@azdeq.gov. For a TTY or other device, Telecommunications Relay Services are available by calling 711.

ADEQ tomará las medidas razonables para proveer acceso a los servicios del departamento a personas con capacidad limitada para hablar, escribir o entender inglés y/o para personas con discapacidades. Las solicitudes de servicios de traducción de idiomas, interpretación ASL (lengua de signos americano), subtitulado de CART, o adaptaciones por discapacidad deben realizarse con al menos 48 horas de anticipación comunicándose con el Coordinador de Anti-Discriminación del Título VI al 602-771-2288 o Drago.Leonard@azdeq.gov. Para un TTY u otro dispositivo, los servicios de retransmisión de telecomunicaciones están disponible llamando al 711.

Exhibit B-V: Public Hearing Sign-in Sheet

Duration	# Registered	# Attended
47 minutes	15	8

Last Name	First Name	Email Address
Meetings	ADEQ	adeqmeetings@azdeq.gov
	William Soland	soland.william@azdeq.gov
	Kelly Poole	poole.kelly@azdeq.gov
	Lexi Ahmad	Ahmad.Alexandra@azdeq.gov
	Sierra Apillanes	apillanes.sierra@azdeq.gov
	Zac Dorn	Dorn.zachary@azdeq.gov

Last Name	First Name	Email Address
Browning	Jeremy	jeremy@cornerstonepublicaffairs.com
Dancho	Danielle	ddancho@hbc.law
Das	Anjali	anjali.das@asarco.com
Stewart	James	jastewart@asarco.com
Stimson	Stephanie	stephanie.stimson@sgs.com
Walker	David	dgwalker@usbr.gov
bautista	berenice	berenice@cornerstonepublicaffairs.com

dahn	danyell	danyell.dahn@gmail.com
Friedman	Paul	paul.friedman@libertyutilities.com
HENDERSON	MATTHEW	matthew.henderson@libertyutilities.com
Kridler	Clark	clark.kridler@pima.gov
Ornellas	Lawrence	lawrence.ornellas@calenergy.com
Reidhead	Samuel	sreidhead@asarco.com
Roros	Andreanna	acroros@arizona.edu
Steuter	Don	dsteuter@hotmail.com

Exhibit B-VI: Public Hearing Officer Certification

ADEQ Arizona Department of Environmental Quality

Air Quality Division

Public Hearing Presiding Officer Certification

I, Sierra Herrera Theut, the designated Presiding Officer, do hereby certify that the public hearing held by the Arizona Department of Environmental Quality was conducted on October 14, 2025, online in Arizona, in accordance with public notice requirements by publication in the Arizona Administrative Register, and other locations beginning September 12, 2025. Furthermore, I do hereby certify that the public hearing was recorded from the opening of the public record through concluding remarks and adjournment, and the transcript provided contains a full, true, and correct record of the above-referenced public hearing.

Dated this 14th day of October.

Sierra Herrera Theut

Sierra Herrera Theut

Exhibit B-VII: Public Hearing Transcript

0:01

Thank you for coming. I now open this hearing on the Hayden sulfur dioxide and lead proposed rulemaking and state implementation plan revisions.

0:10

This proceeding is being recorded and will be preserved for the record. Today is October 14th, 2025, and the time is 1030 a.m.

0:20

This hearing is being held virtually using GoToWebinar software.

0:24

My name is Sierra Herrera-Toyt and I've been appointed by the director of the Arizona Department of Environmental Quality to preside at this proceeding.

0:33

The purpose of this oral proceeding is to provide the public an opportunity to hear a summary of the Hayden sulfur dioxide and lead proposed rulemaking and state implementation plan revisions, ask questions, or provide oral comments if they choose to do so.

0:48

The department's representative for today's hearing is Lexi Ahmed of the Air Quality Division's Air Quality Improvement Planning Section.

0:59

Public notice of the comment period and hearing was published in the Arizona Republic on September 12th and September 15th, 2025.

1:07

Copies of the notice of the Hayden sulfur dioxide lead, proposed rulemaking, and stay implementation plan revisions were made available on ADEQ's website at the ADEQ Record Center and the Globe Public Library starting September 12th, 2025 and will remain available until the close of the comment period, which is today, October 14th, 2025.

1:31

If you wish to make a verbal comment, please raise your hand using the GoToWebinar software and you will be called on during this proceeding.

1:40

You may also submit written comments by mail to Lexi Ahmed at Air Quality Division, Air Quality Improvement Planning Section, Arizona Department of Environmental Quality, 1110 West Washington Street, Phoenix, Arizona 85007, or by email to airplanning at azdeq.gov.

2:03

Attendees will also have the option of providing oral commenting using the GoToWebinar software.

2:09

Mailed comments must be postmarked by today, October 14, 2025.

2:16

Anything entered into the chat feature of GoToWebinar will not be considered for part of the record.

2:23

Comments during the formal comment period are required by law to be considered by the Department when preparing the final submission to the Governor's Regulatory Review Council and to the U.S. Environmental Protection Agency.

2:36

ADEQ will include a responsiveness summary for written and oral comments received during the formal comment period.

2:44

This agenda for this hearing is as follows.

2:47

First, Lexi Ahmed will provide a brief overview of the proposal.

2:53

Then I will conduct the oral comment portion.

2:55

At that time, I will call on speakers in the order that the comments were received.

3:00

And please be aware that any comments at today's hearing that you want the department to formally consider must be given either in writing or on the record during this oral proceeding. At this time Lexi Ahmed will give a brief overview of the proposal.

3:16

Thanks Sierra. Hello and thank you for coming.

3:19

This public hearing is regarding the Hayden sulfur dioxide and lead proposed rulemaking and state implementation plan revisions.

3:26

The Arizona Department of Environmental Quality is proposing to amend the Arizona Administrative Code Title 18 Chapter 2, Article 13, Rules B1301, B1301.01, and B1302 to codify the permitting conditions included in the 2023 Hayden Sulfur Dioxide State Implementation Plant Revision and the 2024 Hayden Lead State Implementation Plant Revision.

3:52

The current site-specific rules establishing limits on lead and sulfur dioxide emissions from the Hayden smelter do not include the key permit terms set forth in the relevant revised permits.

4:04

Codifying the permit conditions into state rule will facilitate the U.S.

4:08

Environmental Protection Agency's approval of both the Hayden-led and Hayden sulfur dioxide state implementation plan revisions.

4:16

ADEQ is committed to securing EPA's approval of both of these state implementation plan revisions in order to protect human health and the environment and to lift sanctions on the Hayden sulfur dioxide non-attainment area.

4:29

In September 2014, EPA re-designated the Hayden-led area from unclassifiable to non-attainment for the 2008 Primary National Ambient Air Quality Standards, or NACs.

4:40

On March 3rd, 2017, ADEQ submitted a CIP revision to demonstrate attainment of the 2008-led NACs by the statutory attainment date of October 3rd, 2019.

4:52

EPA approved the plan and associated control measures in 2018.

4:56

On January 31, 2022, EPA published a finding of failure to attain the 2008 lead NACs by the October 3, 2019, attainment date.

5:07

ADEQ subsequently submitted a lead non-attainment supervision in September 2024.

5:13

In 2017, ADEQ submitted the final supervision, 2017 Hayden sulfur dioxide non-attainment area for the 2010 sulfur dioxide NACs.

5:24

In 2020, EPA issued both a limited approval, limited disapproval, and a partial approval, partial disapproval of the 2017 SIPP revision.

5:34

These actions triggered an 18 month sanctions clock for the area for the imposition of two to one emissions offset sanctions for sulfur dioxide, which were imposed in May of 2022.

5:45

And six months later, in November 2022, EPA imposed highway funding sanctions that apply to the approval by the Secretary of Transportation of any projects or the awarding by the Secretary of any grants under Title 23 U.S. Code.

6:02

In January 2022, EPA found that the Hayden SO2 non-attainment area failed to attain the 10 one-hour SO2 primary NACs by the applicable attainment date of October 4, 2018.

6:15

ADEQ subsequently submitted the final supervision 2023 Hayden sulfur dioxide non-attainment area for the 1971 and 2010 SO2 NACs in October 2023.

6:28

Previously, ADEQ has relied on the interpretation of Arizona Administrative Code Rule 18.2.306.01 to allow permitted facilities to adopt voluntary limits in order to ensure compliance with a NAICS, Regional Hays Program, or other purpose under the Clean Air Act.

6:49

ADEQ incorporated these voluntary limits as enforceable permit conditions for lead and SO2, and submitted the permits to EPA for inclusion in the Arizona SIP.

6:59

However, based on the specific language of this rule 18-2-306-.01, EPA recently informed ADEQ that they would no longer be accepting ADEQ's interpretation of the rule.

7:14

Therefore, ADEQ commenced a rulemaking in November 2024 to address EPA's concern with voluntary limits.

7:23

ADEQ does not anticipate that that rulemaking will be complete and approved by EPA within the timeframe necessary to obtain approval of both the Hayden-led and SO2 SIPP revisions.

7:35

Therefore, ADEQ is proposing to incorporate ASARCO's current permit conditions into the Arizona Administrative Code to bolster the approvability of the subsequent lead and SO2 SIPP revisions.

7:47

ADEQ will submit the rules to the U.S.

7:50

Environmental Protection Agency with a request to approve them as a revision to the Arizona State Implementation Plan.

7:57

In conclusion, these rule amendments are necessary to secure EPA's approval of both the lead and sulfur dioxide state implementation plan revisions in order to protect human health and the environment and to lift sanctions on the Hayden sulfur dioxide non-attainment area.

8:11

Thank you.

8:15

This concludes the overview portion of this proceeding.

8:19

If you wish to ask a question or make a comment, please press the raise hand icon in the toolbar.

8:25

We will call on any raised hands during this time and unmute your line.

8:30

Alternatively, you can type your comment into the chat and we will read it out.

8:35

Are there any questions before we move to the oral comment period?

9:10

Seeing no questions, this concludes the question and answer portion of this proceeding for the proposed Hayden SO2 and lead proposed rulemaking and state implementation plan revisions.

9:21

I now open this proceeding for oral comments.

10:20

ADEQ will remain on this call to accept comments until 11 o 'clock, so if you have any questions please press the raise hand icon in the toolbar and we will call on you and unmute your line.

14:48

Again, this is the public hearing for the Hayden sulfur dioxide and lead proposed rulemaking and state implementation plan revisions.

14:56

ADEQ will remain on this call to accept the comments until 11 a.m.

15:00

If you have a comment, please raise your hand using the raise your hand icon in the tool war. Sierra, I see a comment from Danielle Dawn.

15:18

I don't I think you may have joined late Danielle and I just want to run through the summary of the rulemaking one more time for you because we did go through that but I see that you joined late and I just want to make sure you get the information.

15:30

I do hear I see that you couldn't hear any of the speaking but I'm wondering if you can hear us now and if so let me know so I can go through the rulemaking summary one more time. Okay, perfect. I just saw your comment. Perfect.

15:48

Okay, so this is the public hearing regarding the Hayden sulfur dioxide and lead proposed rulemaking and state implementation plan revisions.

15:58

The Arizona Department of Environmental Quality has proposed to amend Arizona Administrative Code, Title 18, Chapter 2, Article 13, Rules B1301, B1301.01, and B1302 to codify the permitting conditions included in the 2023 Hayden Sulfur Dioxide State Implementation Plan Revision and the 2024 Hayden Lead State Implementation Plan Revision.

16:26

The current site-specific rules establishing limits on lead and sulfur dioxide emissions from ASARCO's Hayden-Smelter do not include the key permit conditions set forth in the relevant revised permit.

16:40

So, codifying the permit conditions into state rule will facilitate the U.S.

16:45

Environmental Protection Agency's approval of both the Hayden-led and Hayden-sulfur dioxide state implementation plan revisions.

16:52

ADEQ is committed to securing EPA's approval of both of those state implementation plan revisions in order to protect public health and the environment and to lift sanctions on the Hayden sulfur dioxide non-attainment area.

17:05

And in September 2014, EPA redesignated the Hayden-led area from unclassifiable to non-attainment for the 2008 Primary National Ambient Air Quality Standards, or NACs.

17:18

On March 3rd, 2017, ADEQ submitted a CIP revision to demonstrate attainment of the 2008-led NACs by the statutory attainment date of October 3rd, 2019.

17:30

EPA approved the plan and associated control measures in 2018.

17:35

On January 31st, 2022, EPA published a finding of failure to attain the 2008 lead NACs by the October 3rd, 2019 attainment date.

17:46

ADEQ subsequently submitted a lead non-attainment SIP revision in September of 2024.

17:52

In 2017, ADEQ submitted the final SIP revision 2017 Hayden sulfur dioxide non-attainment area for the 2010 SO2 NACs.

18:04

In 2020, EPA issued both a limited approval, limited disapproval, and a partial approval, partial disapproval of the 2017 SIP revision.

18:14

These actions triggered an 18-month sanctions clock for the area for the imposition of 2-to-1 emissions offset sanctions, which were imposed in May of 2022, and six months later in November 2022, EPA imposed highway funding sanctions as well that apply to the approval by the Secretary of Transportation of any projects or the awarding by the Secretary of any grants.

18:40

In January 2022, EPA found that the Hayden SO2 non-attainment area failed to attain the 2010 one-hour SO2 primary NACs by the applicable attainment date of October 4th, 2018.

18:54

ADEQ subsequently submitted the final SIP revision, 2023, Hayden sulfur dioxide non-attainment area for the 1971 and 2010 SO2 NACs in October 2023.

19:08

Previously, ADEQ has relied on the interpretation of Arizona Administrative Code Rule 18.2.306 6.01 to allow permitted facilities to adopt voluntary limits in order to ensure compliance with the NAICS Regional Hays Program or for another purpose under the Clean Air Act.

19:28

Subsequently, ADEQ incorporated these voluntary limits as enforceable permit conditions for lead and SO2 and submitted the permits to EPA for inclusion into the Arizona SIP.

19:40

However, based the specific language of this rule, EPA recently informed ADEQ that it would no longer be accepting ADEQ's interpretation.

19:49

Therefore, ADEQ has commenced a rulemaking in November 2024 to address these general concerns with the voluntary limits.

19:57

ADEQ does not anticipate that that rulemaking will be complete and approved by EPA within the time frame necessary to obtain approval of both the ADEQ is proposing to incorporate ASARCO's current permit conditions into the Arizona Administrative Code to bolster the approvability of the Hayden lead and SO2 SIPP revisions.

20:21

ADEQ will submit these rules to the United States Environmental Protection Agency with a request to approve them as a revision to the Arizona State Implementation Plan.

20:30

In conclusion, these rule amendments are necessary to secure EPA's approval of both the lead and sulfur dioxide state implementation plan revisions in order to protect human health and the environment and to lift sanctions on the Hayden sulfur dioxide non-attainment area.

21:06

There is a comment in the chat from Danielle or a question asking if this is being recorded.

21:11

And yes, this hearing is being recorded.

21:16

And can you send me everything you just read?

21:19

Do we normally post a public hearing script online Sierra or is it just included with our final rulemaking package?

21:29

Yes, the transcript will be included in our final rulemaking package.

21:34

Great.

22:12

I see there is another comment in the chat or question from Danielle saying, what does this mean for the reopening of the smelter?

22:18

And unfortunately that is beyond the scope of this rulemaking.

22:21

This rulemaking is just to codify existing permit conditions for the smelter into state rule so that we can have our state implementation plans approved for both the Hayden lead and sulfur dioxide non-attainment areas.

24:56

Again, this is the public hearing for the Hayden sulfur dioxide and lead proposed rulemaking and state implementation plan revisions.

25:05

ADEQ will remain on this call to accept comments until 11 a.m.

25:09

If you have a comment or question, please raise your hand and we will unmute you. I see another question.

25:40

Oh, sorry. No, you got it. Okay, great.

25:43

I see another question from Danielle Don, saying that they are struggling to understand the process of the smelter being reopened and are concerned that it will be done in a piecemeal fashion with no public understanding or oversight.

25:56

They are inquiring about who helps the public understand if not ADEQ at the public hearing.

26:02

No worries about your microphone. I'm reading your questions for you so they'll be on the record.

26:08

I understand your question, unfortunately, the scope of the rulemaking isn't about the actual reopening of the smelter.

26:17

The scope of this rulemaking is simply to put existing conditions that already apply to the Hayden smelter into state rules so that we have an enforceable mechanism to rely on in our state implementation plans that we have submitted for the lead and SO2 non-attainment areas.

26:33

There are going to be plenty of public opportunities for anything regarding these areas, any permitting changes that are being made.

26:43

If you keep up with the ADEQ website, I can link the public notices link for you to your question that you put in the chat.

26:55

Does that help answer your question?

27:06

So you have a follow-up question, Danielle, and it is if this is the situation where the conversation can be continued before changes are made.

27:12

And I think you're referring to the reopening of the smelter overall.

27:17

And in that case, yes.

27:18

And that's why I'm going to link the public notices link from our website.

27:25

So you can keep track of when things are published about the reopening of the smelter, any permitting changes, et cetera.

27:59

I just responded to your question about, is this a situation where the conversation can be continued?

28:05

there is a link to our public notices web page.

28:09

If you can keep track of that, that would be great.

28:13

I do see that you left another comment that it sounds like the reopening of the smelter will be permitted piece by piece.

28:20

Again, I can't speak to the permitting process of the Hayden smelter as this is just for the codification of the conditions that are currently on the smelter into state rule.

28:33

However, hopefully, there's something in the future that you can leave a public comment on more related to your question today.

29:24

As you can see, we have Danielle Dawn asking for names.

29:28

My name is Lexi Ahmed, and this is Sierra Herrera-Toyt, who is the public hearing officer for this rulemaking.

29:34

However, I am the rulewriter on this specific project.

30:13

We'll also share in the chat our air planning email so that you can send any written questions, comments to that inbox.

30:36

As for your records, Danielle, I have provided our names and this general inbox under the question where you asked, can I have your names too? Thanks.

31:57

If you have not already submitted written comments, you may submit them at this time.

32:02

Again, the public comment period for this proposal ends today, October 14th, 2025.

32:08

Again, This is the public hearing for the Hayden sulfur dioxide and lead proposed rule making and state implementation plan revisions Thank you for attending. The time is now 1103 a.m. I now close this oral proceeding

Exhibit B-VIII: Compilation of Comments and State Responses

Comment 1: ADEQ received a comment that expressed concerns about what this rulemaking means for the reopening of the Hayden Smelter.

Response to Comment 1: ADEQ appreciates this comment. ADEQ emphasizes that this rulemaking is intended to codify existing permit conditions and to create enforceable fugitive emissions limitations that will be protective of the relevant National Ambient Air Quality Standard (NAAQS), for the purpose of securing U.S. Environmental Protection Agency (EPA) approval of both the State Implementation Plan Revision: 2024 Hayden Lead (Pb) Nonattainment Area for 2008 Pb NAAQS and State Implementation Plan Revision: 2023 Hayden Sulfur Dioxide Nonattainment Area for the 1971 and 2010 SO_2 NAAQS. These rules, therefore, do not contain any new information about or guidance on the reopening of the Hayden Smelter. Accordingly, this comment falls outside of the scope of the rulemaking.

ADEQ recommends that stakeholders refer to https://azdeq.gov/PublicNotices for relevant upcoming public comment opportunities.

ADEQ encourages stakeholders to reach out to airpermits@azdeq.gov with any further questions about the reopening of the Hayden Smelter.

Comment 2: ADEQ received a comment that expressed concerns about the Hayden Smelter being reopened and permitted in a piecemeal fashion with no public understanding or oversight.

Response to Comment 2: ADEQ appreciates this comment. However, ADEQ disagrees with the commenter's assertion that the SIP planning process or permitting processes are piecemeal without public involvement.

As described above in item 7 of this preamble, ADEQ has provided opportunity for the public to review and comment on both its SIP revisions and significant permit revisions (SPR), consistent with Arizona Revised Statutes (A.R.S.) and ADEQ's administrative rules. Further, ADEQ notes that Arizona Administrative Code (A.A.C.) R18-2-330(A) requires ADEQ to provide public notice, an opportunity for public comment, and an opportunity for a hearing before taking any of the following actions: the issuance or denial of a permit or permit renewal; the issuance or denial of a significant permit revision; the revocation and reissuance or reopening of a permit; the grant of any conditional orders pursuant to A.A.C. R18-2-328; or the issuance or denial of a registration for the construction of a source. ADEQ thus recommends that stakeholders refer to https://azdeq.gov/PublicNotices for relevant upcoming public comment opportunities related to the permitting of the Hayden Smelter.

ADEQ also encourages stakeholders to reach out to airpermits@azdeq.gov with any further questions about the reopening of the Hayden Smelter.

ADEQ notes that this rulemaking is necessary to address EPA's concerns regarding the federal enforceability of the permit limits included in SIPs and adopted pursuant to A.A.C. R18-2-306.01. It is intended to codify existing permit conditions and to create enforceable fugitive emissions limitations that will be protective of the relevant National Ambient Air Quality Standard (NAAQS), for the purpose of securing EPA approval of both the State Implementation Plan Revision: 2024 Hayden Lead (Pb) Nonattainment Area for 2008 Pb NAAQS and State Implementation Plan Revision: 2023 Hayden Sulfur Dioxide Nonattainment Area for the 1971 and 2010 SO_2 NAAQS. These SIP revisions, and associated SPRs, are necessary to bring the Hayden Pb and SO_2 nonattainment areas back into attainment of these NAAQS. These rules do not contain any

new information about or guidance on the reopening of the Hayden Smelter.

Comment 3: ADEQ received a comment stating that the commenter would like the conversation around the reopening of the Hayden Smelter to be continued before any changes are made.

Response to Comment 3: ADEQ appreciates this comment. However, continuing this particular conversation is not possible, due to the requirements set forth by the proposed consent decree in Center for Biological Diversity and Sierra Club v. Regan, No. 4:24-cv-01900-HSG (N.D. Cal.). In that case, the Center for Biological Diversity and the Sierra Club filed suit against Michael S. Regan, in his official capacity as the Administrator of EPA, alleging that EPA failed to execute its nondiscretionary duty to promulgate a FIP for the Hayden SO_2 nonattainment area. On November 1, 2024, the U.S. District Court for the Northern District of California proposed a consent decree, providing that on or before August 28, 2026, the appropriate EPA official is to sign a notice of final rulemaking promulgating under CAA section 110(c), 42 U.S.C .§ 7410(c), a Federal Implementation Plan (FIP) for the Hayden, Arizona SO_2 nonattainment area.

To avoid the implementation of a FIP for the Hayden SO_2 nonattainment area, ADEQ must submit a complete plan to EPA, and EPA must approve this plan as meeting applicable requirements. Though ADEQ submitted the Final SIP Revision: 2023 Hayden Sulfur Dioxide Nonattainment Area for the 1971 and 2010 SO_2 NAAQS in October of 2023, EPA expressed concerns about ADEQ's current authority to issue voluntary permit conditions outside of the plain language of A.A.C. R18-2-306.01, as described in the preamble of this document. Accordingly, ADEQ commenced this rulemaking to incorporate voluntary permit conditions for the Hayden Smelter into state rule to address EPA's concerns.

The agency is therefore proceeding with this rulemaking to supplement both the State Implementation Plan Revision: 2024 Hayden Lead (Pb) Nonattainment Area for 2008 Pb NAAQS and the State Implementation Plan Revision: 2023 Hayden Sulfur Dioxide Nonattainment Area for the 1971 and 2010 SO_2 NAAQS to bolster their approvability. Receiving approval of the State Implementation Plan Revision: 2023 Hayden Sulfur Dioxide Nonattainment Area for the 1971 and 2010 SO_2 NAAQS as soon as practicable is necessary to prevent the implementation of a FIP.

Comment 4: ADEQ received a comment that again expressed concerns about the smelter being reopened and permitted piece by piece.

Response to Comment 4: ADEQ appreciates this comment. As described above in item 7 of this preamble, ADEQ has provided opportunity for the public to review and comment on both its SIP revisions and significant permit revisions (SPR), consistent with Arizona Revised Statutes (A.R.S.) and ADEQ's administrative rules. Further, ADEQ notes that Arizona Administrative Code (A.A.C.) R18-2-330(A) requires ADEQ to provide public notice, an opportunity for public comment, and an opportunity for a hearing before taking any of the following actions: the issuance or denial of a permit or permit renewal; the issuance or denial of a significant permit revision; the revocation and reissuance or reopening of a permit; the grant of any conditional orders pursuant to A.A.C. R18-2-328; or the issuance or denial of a registration for the construction of a source. ADEQ thus recommends that stakeholders refer to https://azdeq.gov/PublicNotices for relevant upcoming public comment opportunities related to the permitting of the Hayden Smelter.

ADEQ encourages stakeholders to reach out to airpermits@azdeq.gov with any further questions about the reopening of

the Hayden Smelter.

Comment 5: ADEQ received a comment expressing that ADEQ should change the reference in R18-2-B1302(B)(7) from "Permit No. 96410" to "Significant Permit Revision No. 96410" for clarification, precision, and consistency with the rest of the rule language.

Response to Comment 5: ADEQ appreciates this comment and has changed the reference to "Permit No. 96410" to "Significant Permit Revision No. 96410" for clarity, precision, and consistency with the rest of the rule language.

Comment 6: ADEQ received a comment expressing that R18-2-B1302(C)(3) should be amended to include an additional subsection, R18-2-B1302(C)(3)(e), that provides, "Unless and until the Department issues a significant permit revision replacing the applicable fugitive emissions limits in (a), (b), and (c) of this subsection with another set of limits provided in the table in (d) of this subsection, the limits in (a), (b), and (c) shall remain the applicable fugitive emissions limits."

Response to Comment 6: ADEQ appreciates this suggestion. ADEQ has included an additional subsection, R18-2-B1302(C)(3)(e), after the alternative limits table, that states: "Unless and until the Department issues a significant permit revision replacing the applicable fugitive emissions limits in subsections (C)(3)(a), (b), and (c) with another set of limits provided in the table in subsection (C)(3)(d), the limits in subsections (C)(3)(a), (b), and (c) shall remain the applicable fugitive emissions limits." ADEQ has included this suggested subsection as it improves the clarity of the rule.

Appendix C: Blue Sky Modeling, LLC Memorandum

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President

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August 19, 2025

Eric Hiser
Hiser Burggraff Curtis
5080 N 40th Street, Suite 245
Phoenix, AZ 85018

Re: Additional SO_2 Rebalancing Modeling for ASARCO LLC – Hayden Smelter

Dear Eric:

On August 8, 2025, Blue Sky Modeling, LLC (BSM) submitted to you a letter summarizing the results of 1-hr Sulfur Dioxide (SO_2) modeling for ASARCO LLC's Hayden smelter in support of the State Implementation Plan (SIP) for the Hayden SO_2 Nonattainment Area (NAA), specifically to "rebalance" SO_2 emissions amongst the fugitive emissions from the Anode Furnace (AF), Converter Aisle (CA), and Flash Furnace (FF). Then, in an August 12, 2025 virtual meeting you and ASARCO had with EPA, EPA requested additional rebalancing modeling. This letter summarizes the results of that modeling.

The SO_2 SIP modeling (from October 2022) had the AF at 9 lb/hr, the CA at 10 lb/hr, and the FF at 38.5 lb/hr. Per our phone conversation on August 13, 2025, your recommendation for this rebalancing modeling was to increase the AF and CA emissions by increments of 1 lb/hr (from 10 lb/hr to 12 lb/hr for the AF and from 11 lb/hr to 13 lb/hr for the CA), and to determine the maximum FF emission rate that demonstrated compliance with the 1-hr SO_2 National Ambient Air Quality Standard (NAAQS) of 196 µg/m^3.

Accordingly, BSM used the recent SO_2 rebalancing modeling for ASARCO's Hayden smelter and ran several different scenarios with varied CA, AF, and FF emissions (all other sources and emissions remained unchanged). The analysis shows that fugitive emissions at the Hayden smelter may be rebalanced along the proposed lines without causing an exceedance of the 1-hr SO_2 NAAQS:

Table 1. AF Emissions Varied, CA Emissions Held Constant

Scenario	Emission Rate (lb/hr)			H4H 1-hr SO_2 Concentration with background (µg/m^3)
	AF	CA	FF	
AF 10-12 lb/hr, CA held at 10 lb/hr	10	10	37	195.76918
	11	10	35.5	195.28684
	12	10	34	194.80451
AF 10-12 lb/hr, CA held at 11 lb/hr	10	11	35	194.82484
	11	11	34	195.77450
	12	11	32.5	195.31926
AF 10-12 lb/hr, CA held at 12 lb/hr	10	12	33.5	195.31250
	11	12	32	194.89166
	12	12	30.5	194.71967

Table 2. CA Emissions Varied, AF Emissions Held Constant

Scenario	Emission Rate (lb/hr)			H4H 1-hr SO_2 Concentration with background ($\mu g/m^3$)
	AF	CA	FF	
CA 11-13 lb/hr, AF held at 9 lb/hr	9	11	36.5	195.30717
	9	12	35	195.79483
	9	13	33	194.85049
CA 11-13 lb/hr, AF held at 10 lb/hr	10	11	35	194.82484
	10	12	33.5	195.31250
	10	13	32	195.84505
CA 11-13 lb/hr, AF held at 11 lb/hr	11	11	34	195.77450
	11	12	32	194.89166
	11	13	30.5	195.67306
Aug. 8, 2025 case	12	13	29.1	195.77727

In addition to the modeling presented as part of the August 2025 modeling exercise, Blue Sky Modeling has previously submitted two other passing models, shown in Table 3.

Table 3. Additional Model Runs

Scenario	Emission Rate (lb/hr)			H4H 1-hr SO_2 Concentration with background ($\mu g/m^3$)
	AF	CA	FF	
Oct. 3, 2023 SIP	9	10	38.5	195.97
Aug. 8, 2025 Model	12	13	29.1	195.77727

This modeling indicates that ASARCO could increase emissions at either the AF or CA, or both, up to 3 lb/hour with corresponding reductions at the FF area and still demonstrate compliance. Any lesser reduction would similarly be acceptable from a modeling perspective and would require a lesser reduction in the FF fugitive emission rate.

If you have any questions or need anything else, please contact me at bjones@blueskymodeling.com or at 410.499.9918.

Best regards,

William B. Jones
President