

**IN THE UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT**

ASARCO LLC,

Petitioner,

v.

UNITED STATES
ENVIRONMENTAL
PROTECTION AGENCY,
MARTHA GUZMAN, Regional
Administrator, United States
Environmental Protection Agency,
Region 9,

Respondents.

PETITION FOR REVIEW

and

CORPORATE DISCLOSURE
STATEMENT

Petition for Review

Pursuant to section 307(b)(1) of the federal Clean Air Act (“**Act**”), 42 U.S.C. § 7607(b)(1), and Rule 15(a) of the Federal Rules of Appellate Procedure, ASARCO LLC (“**Asarco**”), appearing through the undersigned counsel, hereby petitions the Court for review of the final rule entitled “Finding of Failure to Attain the 2008 Lead and 2010 Sulfur Dioxide Standards; Arizona; Hayden and Miami Nonattainment Areas,” 87 Fed. Reg. 4805 (January 31, 2022) (**Exhibit 1**) (“**Final Rule**”).

As Asarco would show in its briefing before the Court, the Final Rule is materially deficient on several grounds, and therefore arbitrary, capricious and otherwise not in accordance with applicable law. These grounds are included in Asarco's comments on the proposed version of the rule, 86 Fed. Reg. 24829 (May 10, 2021) (**Exhibit 2**) ("**Asarco's Comments**"), and based in material part on the responses to Asarco's comments that Respondent United States Environmental Protection Agency ("**EPA**") has included in the docket of the Final Rule (**Exhibit 3**) ("**EPA's Responses**").

Without limiting the scope of Asarco's petition, and in advance of Asarco's briefing, the Final Rule's determination that the area of Hayden, Arizona is in nonattainment of the National Ambient Air Quality Standards ("**NAAQS**") for sulfur dioxide ("**SO₂**") and lead relies on ambient air quality data ("**Data**") the quality control and quality assurance ("**QC/QA**") of which is without adequate foundation in the administrative record.

In several instances, EPA's Responses cite to standard operating procedures ("**SOPs**"), quality assurance program plans ("**QAPPs**"), and naked assertions in summary reports by the Arizona Department of Environmental Quality ("**ADEQ**"), in lieu of actual evidence that the Data were generated pursuant to the SOPs and QAPPs and EPA's own rules governing the QC/QA of such data. For example, the following documents, required by the SOPs, QAPPs and QC/QA rules, are not

included in the record: (1) certificates demonstrating that the reference gases, materials and devices used to conduct flow and precision checks, inform required calibrations and adjustments, and conduct performance evaluations of the monitors that were relied upon to determine concentrations of SO₂ and lead in the ambient air of the Hayden area were, in fact, traceable to then-applicable National Institute of Standards and Technology certified standards; and (2) evidence, consisting of field sheets and electronic logbooks, that ADEQ staff or contractors actually performed the flow and precision checks, calibrations and adjustments, and performance evaluations of the monitors as required by the rules.

Asarco itself made a public records request to ADEQ for all documentation of ADEQ's compliance with the QC/QA rules that governed ADEQ's generation of the Data (**Exhibit 4**), and uploaded the entirety of ADEQ's document production into the rulemaking docket as part of Asarco's Comments. Documents required by the QC/QA rules, such as the certificates, field sheets and logbooks described above, were missing from the production. The missing documents were cited in Asarco's Comments. In response, EPA could have secured the missing documents from ADEQ, reviewed them for consistency with the applicable rules, and uploaded them into the docket for public review; but EPA did not do so. The reason EPA gives is that "[i]t would not be feasible for EPA to review all of the numerous QA documents associated with a particular monitoring site and pollutant

as part of our evaluation” underlying the Final Rule. EPA’s Responses at 6. This reasoning is faulty and insufficient. The Final Rule has the potential to result in the imposition of tens of millions of dollars of pollutant capture-and-control obligations on Asarco and a cutoff of federal highway funds for the Hayden area, pursuant to section 179 of the Act, 42 U.S.C. § 7509. Against this potential, EPA’s failure to secure the missing documents and review them for consistency with the applicable QC/QA rules, and election instead simply to trust that the documents exist and are consistent with the rules, was inappropriate. Correspondingly, EPA’s failure to secure the missing documents and make them available in the docket deprived Asarco of adequate opportunity to comment on the sufficiency of the Data underlying the Final Rule.

Asarco’s Comments also noted that EPA’s own audits of the manner in which ADEQ generated the Data identified numerous deficiencies in ADEQ’s QC/QA practices that, by EPA’s own admissions, called into question whether the Data were representative of ambient air quality in the Hayden Area. For example, EPA found that ADEQ was not implementing required procedures to “assure retention of all critical records” and monitoring records “were not being managed as required.” Rulemaking Docket, Doc. B-14. EPA itself included the audit reports in the docket of the proposed rulemaking; whereas, EPA’s Responses, at 65-67, make light of those deficiencies, essentially saying, after all, they do not

matter. Additionally, EPA found that “[i]n several cases the data validation process did not result in appropriate data invalidation, and improperly validated data were uploaded to the EPA’s Air Quality System (AQS) database,” which is the repository of data used for NAAQS attainment-status determinations, Doc. B-14; whereas, EPA’s Responses, at 68-70, assert that this finding did not pertain specifically to the Data relied upon in the Final Rule. This *post-hoc* assertion is not supported by a citation to a document in the administrative record, let alone a document that establishes the finding did not pertain to, or affect the validity of, the Data relied upon in the Final Rule.

For these and other reasons, upon which Asarco would elaborate in its appellate brief, Asarco would request that the Court vacate the Final Rule and direct EPA to conduct a supplemental rulemaking accordingly.

Corporate Disclosure Statement

Pursuant to Federal Rule of Appellate Procedure 26.1(d)(1), Asarco certifies that it is wholly owned by Americas Mining Corporation, which in turn is wholly owned by Grupo Mexico, S.A.B. de C.V (“**Grupo Mexico**”), which is publicly traded in Mexico. No corporation owns 10% or more of Grupo Mexico.

RESPECTFULLY SUBMITTED this 31st day of March, 2022.

By: s/ George Tsiolis

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CERTIFICATE OF SERVICE

I hereby certify that, on March 31, 2022, I electronically filed the above Petition for Review and Corporate Disclosure Statement with the Clerk of the Court for the United States Court of Appeals for the Ninth Circuit using the appellate electronic filing system, and caused the above Petition for Review and Corporate Disclosure Statement to be served via Federal Express on the following person:

Martha Guzman
Regional Administrator
U.S EPA Region 9
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EXHIBIT 1

**U.S. EPA Final Rule
Concerning Which Judicial Review is Sought**



available as listed in the ADDRESSES section of this document. FAA Order JO 7400.11F lists Class A, B, C, D, and E airspace areas, air traffic service routes, and reporting points.

The Rule

The FAA is amending 14 CFR part 71 by establishing Class E airspace extending upward from 700 feet above the surface of the earth at Monticello Airport, Monticello, UT.

The Class E airspace is established extending upward from 700 feet above ground level within a 6.5-mile radius of the airport. This airspace is designed to contain the new Area Navigation (RNAV) approaches into the airport and instrument departures from the airport. The airspace supports the airport's transition from visual flight rules to IFR operations.

FAA Order JO 7400.11, Airspace Designations and Reporting Points, is published yearly and effective on September 15.

Regulatory Notices and Analyses

The FAA has determined that this regulation only involves an established body of technical regulations for which frequent and routine amendments are necessary to keep them operationally current, is non-controversial, and unlikely to result in adverse or negative comments. It, therefore: (1) Is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and (3) does not warrant preparation of a regulatory evaluation as the anticipated impact is so minimal. Since this is a routine matter that will only affect air traffic procedures and air navigation, it is certified that this rule, when promulgated, would not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

Environmental Review

The FAA has determined that this action qualifies for categorical exclusion under the National Environmental Policy Act in accordance with FAA Order 1050.1F, "Environmental Impacts: Policies and Procedures," paragraph 5-6.5a. This airspace action is not expected to cause any potentially significant environmental impacts, and no extraordinary circumstances exist that warrant the preparation of an environmental assessment.

List of Subjects in 14 CFR Part 71

Airspace, Incorporation by reference, Navigation (air).

Adoption of the Amendment

In consideration of the foregoing, the Federal Aviation Administration amends 14 CFR part 71 as follows:

PART 71—DESIGNATION OF CLASS A, B, C, D, AND E AIRSPACE AREAS; AIR TRAFFIC SERVICE ROUTES; AND REPORTING POINTS

■ 1. The authority citation for 14 CFR part 71 continues to read as follows:

Authority: 49 U.S.C. 106(f), 106(g), 40103, 40113, 40120; E.O. 10854, 24 FR 9565, 3 CFR, 1959-1963 Comp., p. 389.

§ 71.1 [Amended]

■ 2. The incorporation by reference in 14 CFR 71.1 of FAA Order JO 7400.11F, Airspace Designations and Reporting Points, dated August 10, 2021, and effective September 15, 2021, is amended as follows:

Paragraph 6005 Class E Airspace Areas Extending Upward From 700 Feet or More Above the Surface of the Earth.

* * * * *

ANM UT E5 Monticello, UT [New]

Monticello Airport, UT
(Lat. 37°55'57" N, long. 109°20'28" W)

That airspace extending upward from 700 feet above the surface within a 6.5-mile radius of the airport.

Issued in Des Moines, Washington, on January 18, 2022.

B.G. Chew,
Acting Group Manager, Operations Support Group, Western Service Center.

[FR Doc. 2022-01904 Filed 1-28-22; 8:45 am]

BILLING CODE 4910-13-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA-R09-OAR-2021-0078; FRL-8726-02-R9]

Finding of Failure To Attain the 2008 Lead and 2010 Sulfur Dioxide Standards; Arizona; Hayden and Miami Nonattainment Areas

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: The Environmental Protection Agency (EPA) is determining that the Hayden lead (Pb) nonattainment area (NAA) failed to attain the 2008 Pb primary and secondary national ambient

air quality standards (NAAQS or "standards") by the applicable attainment date of October 3, 2019. The EPA is also determining that the Hayden and Miami sulfur dioxide (SO₂) NAAs failed to attain the 2010 1-hour SO₂ primary NAAQS by the applicable attainment date of October 4, 2018. As a result of these determinations, the State of Arizona is required to submit by January 31, 2023, revisions to the Arizona State implementation plan (SIP) that, among other elements, provide for expeditious attainment of the Pb NAAQS in the Hayden Pb NAA and the SO₂ NAAQS in the Hayden and Miami SO₂ NAAs by January 31, 2027.

DATES: This rule is effective March 2, 2022.

ADDRESSES: The EPA has established a docket for this action under Docket ID No. EPA-R09-OAR-2021-0078. All documents in the docket are listed on the <https://www.regulations.gov> website. Although listed in the index, some information is not publicly available, e.g., confidential business information (CBI) or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the internet and will be publicly available only in hard copy form. Publicly available docket materials are available through <https://www.regulations.gov>, or please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section for additional availability information. If you need assistance in a language other than English or if you are a person with disabilities who needs a reasonable accommodation at no cost to you, please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section. **FOR FURTHER INFORMATION CONTACT:** Ben Leers, Air Planning Office (AIR-2), EPA Region IX, (415) 947-4279, Leers.Ben@epa.gov.

SUPPLEMENTARY INFORMATION: Throughout this document, "we," "us," and "our" refer to the EPA.

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I. Background

On May 10, 2021, the EPA proposed to determine that the Hayden Pb NAA failed to attain the 2008 Pb primary and secondary NAAQS¹ by the applicable

¹ The EPA first established primary and secondary Pb standards in 1978 at 1.5 micrograms
Continued

attainment date of October 3, 2019, based upon monitored air quality data from November 2015 to December 2018.² In the May 10, 2021 action, the EPA also proposed to determine that the Hayden and Miami SO₂ NAAs failed to attain the 2010 1-hour SO₂ primary NAAQS³ by the applicable attainment date of October 4, 2018, based upon monitored air quality data from January 2015 to December 2017. The Hayden Pb and SO₂ NAAs include parts of Gila and Pinal counties and exclude the parts of Indian country within the areas. The Miami SO₂ NAA includes parts of Gila County and excludes parts of Indian country within the area.⁴

The proposed rule provided background information on the effects of exposure related to elevated levels of Pb and SO₂, the promulgation of the 2008 Pb and 2010 SO₂ NAAQS, and the designation of the Hayden and Miami areas under the Clean Air Act (CAA) for the 2008 Pb and 2010 SO₂ NAAQS.⁵

In the May 10, 2021 proposed rule, we also described the EPA's obligation under CAA section 179(c)(1) to determine whether an area's air quality meets the 2008 Pb and 2010 SO₂ NAAQS, the EPA regulations establishing the specific methods and procedures to determine whether an area has attained the 2008 Pb and 2010 SO₂ NAAQS, and the Pb and SO₂ monitoring networks operated by the Arizona Department of Environmental Quality (ADEQ) in the Hayden and Miami areas.⁶ We also documented our

per cubic meter ($\mu\text{g}/\text{m}^3$) as a quarterly average. 43 FR 46246 (October 5, 1978). Based on updated health and scientific data in 2008, the EPA revised the Federal Pb standards to 0.15 $\mu\text{g}/\text{m}^3$ and revised the averaging time for the standards. 73 FR 66964 (November 12, 2008). The EPA established primary and secondary standards at the same level for the 2008 Pb NAAQS. Primary standards provide public health protection, including protecting the health of "sensitive" populations such as asthmatics, children, and the elderly. Secondary standards provide public welfare protection, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings. Because the primary and secondary Pb standards are the same, we refer to them hereafter in this document using the singular "Pb standard" or "Pb NAAQS."

² 86 FR 24829.

³ The EPA first established primary SO₂ standards in 1971 at 0.14 parts per million (ppm) over a 24-hour averaging period and 0.3 ppm over an annual averaging period. 36 FR 8186 (April 30, 1971). In June 2010, the EPA revised the NAAQS for SO₂ to provide increased protection of public health, providing for revocation of the 1971 primary annual and 24-hour SO₂ standards for most areas of the country following area designations under the new NAAQS. 40 CFR 50.4(e). The 2010 NAAQS is 75 parts per billion (equivalent to 0.075 parts per million) over a 1-hour averaging period. 75 FR 35520 (June 22, 2010).

⁴ For exact descriptions of the Hayden and Miami SO₂ NAAs, refer to 40 CFR 81.303.

⁵ 86 FR 24829, 24829–24830.

⁶ 86 FR 24830–24832.

previous review of Arizona's monitoring networks and annual network plans, Arizona's annual certifications of ambient air monitoring data, our 2018 technical systems audit of ADEQ, and our evaluation of monitored Pb and SO₂ data against relevant data completeness requirements to determine validity for comparison against the 2008 Pb and 2010 SO₂ NAAQS, respectively.⁷

Under EPA regulations in 40 CFR 50.16 and in accordance with 40 CFR part 50, appendix R, the 2008 Pb NAAQS is met in an area when the design value is less than or equal to 0.15 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) at each eligible monitoring site in the area. The Pb design value at each eligible monitoring site is the maximum valid 3-month arithmetic mean Pb concentration calculated over three years. Under EPA regulations in 40 CFR 50.17 and in accordance with 40 CFR part 50, appendix T, the 2010 1-hour annual SO₂ standard is met when the design value is less than or equal to 75 parts per billion (ppb). The SO₂ design value is calculated by computing the three-year average of the annual 99th percentile daily maximum 1-hour average concentrations.⁸

In the proposed rule, to evaluate whether the Hayden NAA attained the 2008 Pb NAAQS by the October 3, 2019 attainment date, we determined the 2016–2018 design value at each Pb monitoring site in the Hayden NAA using monitored data from November 2015 to December 2018.⁹ We determined that both Pb monitoring sites in the Hayden NAA produced valid design values for the 2016–2018 data period. Based on these valid design values, we found that both sites did not meet the 2008 Pb NAAQS of 0.15 $\mu\text{g}/\text{m}^3$ by the October 3, 2019 attainment date. The Hayden Pb 2018 annual design value site, *i.e.*, the site with the highest design value based on monitored data from November 2015 to December 2018, is the Hillcrest site with a 2018 Pb design value of 0.31 $\mu\text{g}/\text{m}^3$.

To evaluate whether the Hayden and Miami NAAs attained the 2010 SO₂ NAAQS by the October 4, 2018 attainment date, we determined the 2015–2017 design value at each SO₂ monitoring site in the Hayden and

⁷ 86 FR 24832–24833.

⁸ As defined in 40 CFR part 50, appendix T, section 1(c), daily maximum 1-hour values refer to the maximum 1-hour SO₂ concentration values measured from midnight to midnight that are used in the NAAQS computations.

⁹ 86 FR 24829, 24833. In accordance with appendix R to 40 CFR part 50, compliance with the Pb NAAQS is determined based on data from 36 consecutive valid 3-month periods (*i.e.*, 38 months, or a 3-year calendar period and the preceding November and December).

Miami NAAs using monitored data from January 2015 to December 2017.¹⁰ We determined that the one SO₂ monitoring site in the Hayden NAA and two of the three SO₂ monitoring sites in the Miami NAA produced valid design values for the 2015–2017 data period. Based on these valid design values, we found that each SO₂ monitoring site producing a valid 2015–2017 design value in the Hayden and Miami NAAs did not meet the 2010 SO₂ NAAQS of 75 ppb by the October 4, 2018 attainment date. The Hayden SO₂ 2017 annual design value site, *i.e.*, the site with the highest design value based on monitored data from January 2015 to December 2017, is the Hayden Old Jail site with a 2017 SO₂ design value of 295 ppb. The Miami SO₂ 2017 design value site is the Miami Jones Ranch site with a 2017 SO₂ design value of 221 ppb.

For the Hayden Pb NAA to attain the 2008 Pb NAAQS by October 3, 2019, the 2018 Pb design value at each eligible monitoring site in the Hayden NAA must be equal to or less than 0.15 $\mu\text{g}/\text{m}^3$. Because at least one site had a 2018 Pb design value greater than 0.15 $\mu\text{g}/\text{m}^3$, we proposed to determine that the Hayden Pb NAA failed to attain the 2008 Pb NAAQS by the October 3, 2019 attainment date. Similarly, for the Hayden and Miami SO₂ NAAs to attain the 2010 SO₂ NAAQS by October 4, 2018, the 2017 SO₂ design value at each eligible monitoring site in the Hayden and Miami NAAs must be equal to or less than 75 ppb. Because at least one site in both the Hayden and Miami NAAs had a 2017 SO₂ design value greater than 75 ppb, we proposed to determine that the Hayden and Miami SO₂ NAAs failed to attain the 2010 SO₂ NAAQS by the October 4, 2018 attainment date. The May 10, 2021 proposed rule described the CAA requirements that would apply if the EPA were to finalize the proposed findings of failure to attain the 2008 Pb and 2010 SO₂ NAAQS.¹¹

Lastly, we also described in the proposed rule that the dominant source of Pb and SO₂ emissions in the Hayden Pb and SO₂ NAAs is the Asarco LLC ("Asarco") Hayden Smelter, and the dominant source of SO₂ emissions in the Miami SO₂ NAA is the Freeport-McMoRan Miami Inc. (FMMI) Miami Smelter. Due to the unique nature of these two facilities, which are the only batch process primary copper smelters in the country, we requested comment on what additional measures could be feasibly implemented at these facilities under CAA section 179(d)(2) in light of

¹⁰ 86 FR 24834.

¹¹ *Id.*

technological achievability, costs, and any non-air quality and other air quality-related health and environmental impacts.

II. Public Comments and Responses

The May 10, 2021 proposed rule provided a 30-day public comment period that closed on June 9, 2021. During this period, seven comment letters were submitted to the EPA in response to the proposed rule. One comment letter was submitted by an anonymous commenter. This comment letter consisted of a pre-publication version of the May 10, 2021 proposed rulemaking and contained no commentary on the proposed action. The six remaining comment letters were submitted by the Arizona Center for Law in the Public Interest (ACLPI), ADEQ, Asarco, FMFI, an additional representative of Asarco, and a private citizen. This section summarizes five of the six substantive comment letters submitted in response to the May 10, 2021 proposal and includes EPA's response to each of these comment letters. The additional comment letter submitted by Asarco's representative consists of more detailed technical comments concerning data quality and validity. We respond to these comments in a separate document available in the docket for this rulemaking.

Comment 1: ACLPI supports the EPA's proposed findings of failure to attain the 2008 Pb and 2010 SO₂ NAAQS in the May 10, 2021 proposed rulemaking and urges the EPA to finalize them as soon as possible so as not to delay implementation of additional control measures necessary to reach attainment of health-based standards for these areas. In response to the EPA's request for comment on additional measures that could be feasibly implemented at the Asarco Hayden Smelter under CAA section 179(d)(2), ACLPI recommends control measures focusing on sources of lead-bearing particles, including the following: (1) Sulfide minerals from crushed ore or concentrate, (2) flash furnace dust, and (3) lead and zinc sulfates likely originating from converter dust. In support of its recommendations, ACLPI cites and encloses with its comment letter a report prepared by James Anderson, Professor Emeritus at the School for Engineering of Matter, Transport and Energy at Arizona State University, entitled *Assessment of the origins of lead-bearing airborne particulates at Hayden, Arizona by electron micro-analysis*.

Response 1: We appreciate the additional information supplied by

ACLPI concerning specific sources of lead-bearing particles at the Asarco Hayden facility. We note that the submitted study was conducted in 2017, prior to full implementation of controls for the Hayden Pb NAA, which was required by 2018.¹² For example, Asarco was required to implement new primary, secondary, and tertiary hooding systems for the converter aisle and a new ventilation system for matte tapping and slag skimming for the flash furnace by July 2018.¹³ Accordingly, the data from the 2017 study may not accurately represent the contributions of the facility, including the converter aisle and flash furnace sources, following the implementation of these controls. Furthermore, the study does not address the technological feasibility or cost of any potential controls, which must also be considered in establishing control requirements under 179(d)(2). Therefore, we do not believe this study provides a sufficient basis for us to prescribe specific control measures for the Hayden area SIP revisions under CAA section 179(d)(2) at this time.

Additionally, we note that the EPA has proposed a residual risk and technology review (RTR) for the national emission standards for hazardous air pollutants for primary copper smelting major sources, codified at 40 CFR part 63, subpart QQQ.¹⁴ This proposed rule includes reviews of health risks associated with hazardous air pollutant (HAP) emissions from primary copper smelting major sources and developments in practices, processes, and control technologies under CAA sections 112(f)(2)(A) and 112(d)(6). Based on the findings of these reviews, the EPA has proposed revised and new emissions standards for primary copper smelting major sources. The only two primary copper smelting major sources in the United States and, consequently, the only two sources that are subject to the current major source emissions standards in subpart QQQ and that would become subject to the revised standards proposed in the primary copper smelting RTR, if finalized, are the Asarco Hayden and FMFI Miami smelters. The revised and new emissions standards in the proposed RTR address anode refining furnace point source emissions of particulate matter (PM) (as a surrogate for non-mercury HAP-metals), roofline emissions of PM from anode refining

furnaces and smelting furnaces, and point source emissions of mercury from dryers, converters, anode refining furnaces, and smelting furnaces. In the RTR, PM is regulated as a surrogate for non-mercury metal HAP, including Pb. Given that the RTR rulemaking process for these sources is ongoing, we believe it would not be appropriate to require specific additional measures under 179(d)(2) at this time, because such measures could potentially be inconsistent with measures that may ultimately be required under the RTR rulemaking.

While we are not taking final action to prescribe additional measures for the Hayden Pb and SO₂ SIP revisions required under CAA section 179(d)(2) at this time, we encourage ADEQ to consider ACLPI's recommendations and the findings of the Arizona State University report enclosed in ACLPI's comment when determining appropriate measures to be included in the SIP revisions required pursuant to section 179(d)(1) as a result of this action.

Comment 2: ADEQ notes that the Asarco Hayden Smelter has not been operational since October 2019. ADEQ also notes that the EPA's proposed finding of failure to attain considers SO₂ monitoring data gathered prior to the completion of upgrades to the Asarco Hayden Smelter and FMFI Miami Smelter. ADEQ suggests that if the EPA finalizes its proposed determination in the fall of 2021, a new attainment date in late 2026 would be appropriate because it would be consistent with the timeframe established in CAA sections 172(a)(2) and 179(d)(3) and would allow ADEQ to collaborate with Asarco and FMFI to develop new attainment plans fulfilling all applicable requirements.

Response 2: We recognize that the Asarco Hayden Smelter has been inoperational since October 2019 and that the proposed findings of failure to attain were based on monitoring data gathered prior to the completion of upgrades to both smelters. However, CAA section 179(c)(1) requires the EPA to determine whether a nonattainment area has attained the NAAQS based on the area's air quality as of the attainment date. As described in the proposed rule, in accordance with appendix R to 40 CFR part 50, the Pb design value is determined based on monitoring data from the most recent three calendar years and two previous months. The Pb design value as of the October 3, 2019 attainment date is therefore determined based on air quality monitoring data from November 1, 2015 to December 31, 2018. As also described in the proposed rule, in accordance with appendix T to 40 CFR part 50, the SO₂ design value is

¹² See, e.g., 83 FR 31087, 31096 (July 3, 2018), "Table 6--Control Implementation Schedule and Emission Reductions," showing implementation deadlines of July 2018 for multiple controls for the Hayden Pb NAA.

¹³ Id.

¹⁴ 87 FR 1616 (January 11, 2022).

based on monitoring data from the most recent three calendar years. The SO₂ design value as of the October 4, 2018 attainment date is therefore determined based on air quality monitoring data from January 1, 2015 to December 31, 2017. The CAA does not provide the EPA with discretion to consider air quality monitoring data collected after the attainment date in making determinations of attainment or failure to attain under section 179(c)(1).

Under CAA section 179(d)(3), the new maximum attainment date for each nonattainment area is the date by which attainment can be achieved as expeditiously as practicable, but no later than five years after the EPA publishes a document in the **Federal Register** determining that the nonattainment area failed to attain the relevant NAAQS (in this case, five years from the date this final rule publishes in the **Federal Register**). To be approved by the EPA, NAA SIP submittals need to ensure that the affected NAAs reach attainment as expeditiously as practicable.

Comment 3: Asarco notes that the Asarco Hayden Smelter has not been operational since October 2019 and that the Pb and SO₂ monitoring data relied upon in the EPA's proposed finding of failure to attain almost entirely predate emissions capture and control improvements installed at the Asarco Hayden Smelter between 2018 and 2020. Asarco details these improvements and states that the EPA should defer action on the proposed finding of failure to attain to allow time for the Asarco Hayden Smelter to resume steady state operation and for monitored Pb and SO₂ data to demonstrate the efficacy of these improvements. Asarco states that the 179(d) proceedings triggered by the finding of failure to attain would create a legal possibility of the imposition on Asarco of hundreds of millions of dollars in additional emissions capture and control obligations and that the financial uncertainty that this would cause could very well spell the permanent end of the Hayden smelter. Asarco argues that the EPA's request for comment on additional measures that could be feasibly implemented at the Asarco Hayden Smelter under CAA section 179(d)(2) is premature in advance of a final finding of failure to attain under CAA section 179(c) and is irrelevant to a determination of whether a finding of failure to attain is warranted. Asarco also argues that the EPA is required to undertake notice and comment rulemaking in response to a SIP revision submitted under CAA section 179(d)(1) before making a final determination of whether additional

emissions capture or control requirements at the Hayden smelter are necessary.

Response 3: We acknowledge that the monitoring data relied upon in the proposed action largely predate the emissions capture and control improvements installed at the Asarco Hayden Smelter between 2018 and 2020 and that the smelter has not been operational since October 2019. We note, however, that SIP-approved rules R18-2-B1302 ("Limits on SO₂ Emissions from the Hayden Smelter") and R18-2-B1301 ("Limits on Lead Emissions from the Hayden Smelter") required compliance no later than July 1, 2018, and other Pb controls at the Hayden Smelter were required to be implemented by July 13, 2018.¹⁵ Therefore, it appears that the upgrades and optimization projects that Asarco describes as being finalized in late 2018 through 2020 were in addition to those upgrades that were required in the SIP for the purpose of bringing the area into attainment of the SO₂ and Pb NAAQS. This suggests that the current SIP-approved control measures may not have been adequate to provide for attainment and that a SIP revision is therefore needed to make the additional control upgrades performed in late 2018 through 2020 (and any other measures needed to provide for attainment) permanent and enforceable.

Moreover, as discussed in our response to ADEQ's comment in this document (response 2), the EPA is required to determine whether a nonattainment area attained the NAAQS based on the area's air quality as of the attainment date. The CAA does not provide the EPA with discretion to consider air quality monitoring data collected after the attainment date in making determinations of attainment or failure to attain under section 179(c)(1). Therefore, even if we were to delay our determinations of whether the Hayden Pb and SO₂ NAAs attained the NAAQS by the respective attainment dates until the Asarco Hayden Smelter resumes steady state operation, we would not be able to consider monitoring data reflecting the improvements installed at the Asarco Hayden Smelter after those attainment dates. Such data could, however, be considered in future actions, such as a determination under the EPA's clean data policy (discussed in response 4 in this document) or a determination of whether the Hayden Pb and SO₂ NAAs attained the respective NAAQS by the new

attainment date triggered by this finding. Furthermore, the new Pb and SO₂ plans that will be due within one year after publication of this action in the **Federal Register** must each include "a comprehensive, accurate, current inventory of actual emissions."¹⁶ These updated inventories must necessarily reflect the controls installed at the Hayden smelter in 2018–2020 and will serve as the foundation for modeling and other analyses in the new plans.

We believe Asarco has mischaracterized the implications of the proposed findings. Contrary to Asarco's suggestion, the development of new attainment plans will not necessarily result in requirements for new emissions controls. If the new plans demonstrate that all applicable Pb and SO₂ attainment-related CAA requirements are satisfied with existing controls (including those installed in 2018–2020), then further controls related to attainment of the Pb and SO₂ NAAQS would not be required. Furthermore, as noted in the proposal, the EPA has already disapproved portions of the 2010 SO₂ attainment plan for the Hayden nonattainment area.¹⁷ Specifically, the EPA disapproved the attainment demonstration and other elements tied to this demonstration.¹⁸ Accordingly, the State would need to submit a revised attainment demonstration and related elements for the Hayden SO₂ NAA, and the EPA would need to propose to approve that future SIP, in order to avoid application of mandatory sanctions under CAA sections 179(a) and 179(b) and 40 CFR 52.31. As also explained in the proposal, the EPA anticipates that Arizona's submission of a new, approvable SO₂ attainment plan in response to a final finding of failure to attain would also satisfy these existing obligations.

We disagree that our request for comment on additional measures that could be feasibly implemented at the Asarco Hayden Smelter under CAA section 179(d)(2) was premature in advance of a finding of failure to attain under CAA section 179(c)(2). Because such a finding automatically triggers a one-year deadline for submittal of a revised SIP meeting the requirements of 179(d)(2), it would be reasonable for the EPA to prescribe specific measures under 179(d)(2) in conjunction with a final action under 179(c)(2) so that the State has adequate notice of the need to include these measures while developing its SIP. However, in this

¹⁵ 83 FR 31087, 31096 (July 3, 2018), "Table 6—Control Implementation Schedule and Emission Reductions."

¹⁶ CAA section 172(c)(3).

¹⁷ 85 FR 71547 (November 10, 2020).

¹⁸ Id.

particular case, we are not taking final action to prescribe additional measures for the Hayden Pb and SO₂ SIP revisions under CAA section 179(d)(2) at this time.

Comment 4: FMMI states that the monitoring data relied upon in the EPA's proposed finding of failure to attain do not reflect extensive upgrades to emission control and capture systems implemented at the FMMI Miami Smelter in January 2018. FMMI states that the EPA's proposed finding of failure to attain does not address air quality dispersion modeling or a demonstration that the control strategy in the SIP has been fully implemented. FMMI argues that a more appropriate context for the EPA's request for comment on additional measures that could be feasibly implemented at the FMMI Miami Smelter would be to recognize the following: (1) The upgrades to emission control and capture systems implemented at the FMMI Miami Smelter, (2) ADEQ's dispersion modeling demonstrating attainment of the 2010 1-hour SO₂ NAAQS, and (3) subsequent monitoring data indicating that emission reductions are providing for attainment of the 2010 1-hour SO₂ NAAQS. FMMI cites the EPA's "Guidance for 1-Hour SO₂ Nonattainment Area SIP Submissions" ("SO₂ SIP Guidance"),¹⁹ which states:

The EPA believes that, where a control strategy has recently taken effect and the state can determine based on recent monitoring data or other relevant information that the control strategy will result in attainment once 3 years of data that reflect those controls are available, the required plan revisions can be accomplished in a very streamlined manner. The EPA expects that the submittal to the EPA could simply provide a determination that: (1) All monitors in the affected area have at least 1 calendar year of clean air quality data, (2) the approved SIP has been fully implemented for the area, and (3) emission sources have complied with their SIP requirements.

FMMI notes that, despite implementation of the required capture and control upgrades by January 2018, "there were still several instances of recorded daily maximum 1-hour SO₂ concentrations above the standard in calendar year 2018." FMMI explains that, in response to these exceedances, it "implemented several measures to improve capture and minimize fugitive SO₂ emissions." FMMI further states that the two monitors in the Miami NAA recorded a total of three

exceedances of the 1-hour SO₂ NAAQS in 2020, all of which "were attributed to a specific event or issue at the Miami Smelter that was subsequently resolved," and that since January 1, 2021, there have been no exceedances of the 1-hour SO₂ NAAQS recorded at either of these monitors. On this basis, FMMI argues that, because (1) the monitors in the Miami SO₂ NAA have at least one calendar year of clean data, (2) the approved Miami SO₂ NAA SIP has been fully implemented, and (3) the FMMI Miami Smelter is in compliance with its source-specific SIP requirements, the SIP revision required under CAA section 179(d)(1) following a finding of failure to attain under section 179(c)(2) need only affirm the previously approved SIP and establish a new attainment date that reflects three full years of implementation. FMMI also states that certain SIP requirements, including contingency measures, can be suspended if the monitors in the Miami SO₂ NAA have at least one calendar year of data indicating that the area is attaining the standard.

Response 4: As discussed in response 2 of this document, the EPA is required to determine whether a nonattainment area attained the NAAQS based on the area's air quality as of the attainment date, and the CAA does not provide the EPA with discretion to consider air quality monitoring data collected after the attainment date in making determinations of attainment or failure to attain under section 179(c)(1). We acknowledge that the monitoring data relied upon in the proposed action therefore do not fully reflect upgrades to emission control and capture systems implemented at the FMMI Miami Smelter as of January 2018 because some of those upgrades occurred after the area's attainment date. However, we note that the construction schedule set forth in the approved implementation plan indicated that FMMI planned to complete many of the required upgrades in 2016–2017, so the monitoring data in 2016–2017 would have reflected some of these upgrades.²⁰

While FMMI states that the EPA's proposed finding of failure to attain does not address air quality dispersion modeling or a demonstration that the control strategy in the SIP has been fully implemented, FMMI also acknowledges that monitoring data from January 1, 2015 to December 31, 2017 do not demonstrate attainment of the SO₂ NAAQS in the Miami NAA by the

attainment date. As described in the EPA's SO₂ SIP Guidance, we are not able to make a determination of attainment for an area if the monitors in the area do not yield a design value that meets the NAAQS prior to the applicable attainment date. In the proposed rule, we found that two regulatory air monitors in the Miami NAA produced complete, valid 1-hour SO₂ design values for the 2015–2017 data period. Because complete and valid monitoring data were available to determine that the Miami NAA failed to attain the SO₂ NAAQS by the attainment date, we do not find it necessary or appropriate to consider air quality dispersion modeling or a demonstration that the control strategy in the SIP has been fully implemented in our attainment determination. We acknowledge FMMI's comment that recognizing upgrades to the smelter, dispersion modeling demonstrating attainment, and monitoring data demonstrating progress toward attainment would provide a more appropriate context for our request for comment on additional measures that could be feasibly implemented at the FMMI Miami Smelter. We note that we are not taking final action to prescribe additional measures for the Miami SO₂ SIP revision under CAA section 179(d)(2) at this time.

As noted by FMMI, the SO₂ SIP Guidance indicates that, following a finding of failure to attain, in appropriate circumstances the EPA may approve a revised plan that affirms the previously approved control strategy but establishes a new attainment date. In particular, the SO₂ SIP Guidance indicates that this approach may be appropriate if the state can determine, based on recent monitoring data or other relevant information, that the control strategy in the existing SIP will result in attainment once three years of data reflecting those controls are available.²¹ We recognize the progress that the Miami SO₂ NAA has made toward attainment of the 2010 SO₂ NAAQS since emissions control and capture improvements were implemented at the FMMI Miami Smelter in January 2018. However, as FMMI acknowledges in its comment, monitors in the Miami area recorded multiple exceedances of the SO₂ NAAQS in 2018–2020, even after full implementation of the improvements required under the SIP. We appreciate that, since 2018, FMMI has implemented additional improvements to emissions capture at the Miami Smelter to address those exceedances. However, because those

¹⁹ Memorandum dated April 23, 2014, from Stephen D. Page, Director, Office of Air Quality Planning and Standards, EPA, to EPA Regional Air Directors, Regions 1–10, Subject: "Guidance for 1-Hour SO₂ Nonattainment Area SIP Submissions," 11.

²⁰ "Arizona State Implementation Plan Revision: Miami Sulfur Dioxide Nonattainment Area for the 2010 SO₂ NAAQS," 84 (March 8, 2017), Table 5–4.

²¹ SO₂ SIP Guidance, 11.

improvements were implemented after the attainment date, they were evidently not required under the existing SIP. This suggests that the control strategy in the existing SIP is, in fact, not sufficient to provide for attainment of the NAAQS and that substantive revisions to the requirements of the SIP may be needed.

Finally, we do not agree with the commenter's assertion that certain SIP requirements, including contingency measures, can be suspended based on one calendar year of monitoring data indicating no hourly exceedances of the NAAQS level. The commenter appears to be referring to the EPA's clean data policy, which is discussed in the SO₂ SIP Guidance.²² However, contrary to the commenter's suggestion, a single year of clean monitoring data is not a sufficient basis for the EPA to suspend attainment-related SIP requirements under the SO₂ clean data policy. Rather, ADEQ would need to demonstrate that the area has three consecutive calendar years of air quality monitoring data which show that the area is meeting the standard and provide either (1) modeling of the most recent three years of actual emissions for the area or (2) a demonstration that the affected monitor(s) is located in the area of maximum concentration.²³ We also note that a clean data finding would only suspend the requirements for the State to submit SIP revisions to address certain attainment-related requirements. Such a finding would not affect existing requirements that already apply under the SIP. Such requirements can only be altered by a SIP revision meeting the requirements of CAA section 110(l). Therefore, contrary to the commenter's suggestion, a clean data finding would not alter the States' or sources' ongoing obligations to implement the contingency measures in the previously approved SIP for the Miami NAA that will be triggered by the findings in this action.

Comment 5: One commenter, a private citizen, argues that, due to the unique nature of the Asarco Hayden Smelter and FMMI Miami Smelter, the time allotted for each smelter to retrofit its equipment before the attainment date is capricious and arbitrary. The commenter states that the EPA's finding of failure to attain should consider improvements made at both smelters, the challenges posed to both smelters as a result of the EPA's tightened Pb and SO₂ NAAQS, and the short time frame allotted for both smelters to retrofit their equipment before the applicable attainment dates. Finally, citing CAA

sections 110 and 172, the commenter argues that the EPA should seek revisions to the SIP and extend the attainment dates in order to prove the retrofitted smelters have fulfilled requirements under 172(c).²⁴

Response 5: We disagree that the time allotted for each smelter to retrofit its equipment before the attainment date is capricious and arbitrary. CAA section 192(a) provides that the attainment date for newly designated Pb and SO₂ nonattainment areas is "as expeditiously as practicable but no later than 5 years from the date of the nonattainment designation."²⁵ Thus, the October 4, 2018 attainment date for the Hayden and Miami SO₂ NAAs and the October 3, 2019 attainment date for Hayden Pb NAA were the latest possible dates permitted by statute. While we acknowledge that the monitoring data relied upon in the proposed action do not reflect all of the emissions control and capture improvements that have been made to date at the Hayden Asarco Smelter and FMMI Miami Smelter, as discussed in response 2 of this document, the EPA is required to determine whether a nonattainment area attained the NAAQS based on the area's air quality as of the attainment date. The EPA does not have the discretion to consider air quality monitoring data collected after the attainment date in making determinations of attainment or failure to attain under CAA section 179(c)(1).

We do not agree with the commenter's suggestion that we should take action under CAA sections 110(h), (j) or (k) in relation to the Hayden Pb, Hayden SO₂, or Miami SO₂ NAAs. CAA subsections 110(h), 42 U.S.C. 7410(h), ("Publication of comprehensive document for each State setting forth requirements of applicable implementation plan") and 110(j), 42 U.S.C. 7410(j) ("Technological systems of continuous emission reduction on new or modified stationary sources; compliance with performance standards") have no particular relevance to attainment plans, and we believe the references to these sections may have been in error. If the commenter is suggesting that the EPA seek revisions to the SIP and extend attainment dates under its authority to issue a SIP call under CAA section 110(k)(5), we do not believe such a SIP call is necessary or

²⁴ We interpret the commenter's reference to "42 U.S.C. 7410 (h)(k)(j) and U.S.C. 7502 (2)(a)" to refer to CAA sections 110(h), (j), and (k) (42 U.S.C. 7410(h), (j), and (k)), and 172(a)(2) (42 U.S.C. 7502(a)(2)).

²⁵ Pursuant to CAA sections 172(a)(2)(D) and 192(a), the attainment date extension provision under section 172(a)(2)(A) does not apply to the Pb or SO₂ NAAQS.

appropriate for the Hayden Pb, Hayden SO₂, or Miami SO₂ NAAs at this time. The findings in this action trigger new attainment dates²⁶ and requirements for SIP revisions under CAA section 179(d), and the newly required SIP revisions must meet the requirements of CAA sections 110 and 172, including the provisions of section 172(c), 42 U.S.C. 7502(c) referenced by the commenter.²⁷

III. Environmental Justice Considerations

Executive Order 12898 (59 FR 7629, February 16, 1994) requires that Federal agencies, to the greatest extent practicable and permitted by law, identify and address disproportionately high and adverse human health or environmental effects of their actions on minority and low-income populations. Additionally, Executive Order 13985 (86 FR 7009, January 25, 2021) directs Federal Government agencies to assess whether, and to what extent, their programs and policies perpetuate systemic barriers to opportunities and benefits for people of color and other underserved groups, and Executive Order 14008 (86 FR 7619, February 1, 2021) directs Federal agencies to develop programs, policies, and activities to address the disproportionate health, environmental, economic, and climate impacts on disadvantaged communities. To identify environmental burdens and susceptible populations in underserved communities in the Hayden Pb, Hayden SO₂, and Miami SO₂ NAAs, and to examine the implications of the proposed findings of failure to attain the 2008 Pb and 2010 SO₂ NAAQS on these communities, we performed a screening-level analysis using the EPA's environmental justice (EJ) screening and mapping tool ("EJSCREEN").²⁸ Our screening-level analysis indicates that communities in the NAAs affected by this action, particularly in the neighborhoods surrounding the Asarco

²⁶ As noted in the proposal, under CAA section 179(d)(3), the new attainment date for each nonattainment area is the date by which attainment can be achieved as expeditiously as practicable, but no later than five years after the EPA publishes a final action in the **Federal Register** determining that the nonattainment area failed to attain the applicable Pb or SO₂ standard.

²⁷ CAA section 179(d)(2).

²⁸ EJSCREEN provides a nationally consistent dataset and approach for combining environmental and demographic indicators. EJSCREEN is available at <https://www.epa.gov/ejscreen/what-ejscreen>. The EPA used EJSCREEN to obtain environmental and demographic indicators representing the Hayden and Miami nonattainment areas as well as for buffer areas of approximately 1-, 2-, and 3-mile radii centered around the Asarco Hayden and FMMI Miami smelters. These indicators are included in the file titled "EJSCREEN summary.xlsx" available in the rulemaking docket for this action.

²² Id. at 51–60.

²³ Id. at 57–58.

Hayden and FMMI Miami smelters, score highly compared to the national average for the EJSCREEN “Demographic Index,” which is the average of an area’s percent minority and percent low income populations, *i.e.*, the two demographic indicators explicitly named in Executive Order 12898.²⁹ These neighborhoods also score highly compared to the national average for the “population with less than high school education” and “population over age 64” indicators. Additionally, these neighborhoods score highly compared to the national average for numerous EJ Index indicators, including the Pb paint EJ Index and wastewater discharge EJ Index.

As discussed in the EPA’s EJ technical guidance, people of color and low-income populations often experience greater exposure and disease burdens than the general population, which can increase their susceptibility to adverse health effects from environmental stressors.³⁰ Underserved communities can also experience reduced access to health care, nutritional, and fitness resources, further increasing their susceptibility. In addition to the demographic and environmental indicators identified in our screening level analysis, the proximity of underserved communities to the Asarco Hayden and FMMI Miami smelters (and exposure to Pb and SO₂ emissions from these facilities) contribute to the potential EJ concerns faced by communities in the affected nonattainment areas.

This final action triggers the implementation of contingency measures and requires the State of Arizona to develop updated SIP revisions providing for attainment of the 2008 Pb NAAQS in Hayden and attainment of the 2010 SO₂ NAAQS in Hayden and Miami. The implementation of contingency measures and development of required

²⁹ EJSCREEN reports environmental indicators (*e.g.*, air toxics cancer risk, Pb paint exposure, and traffic proximity and volume) and demographic indicators (*e.g.*, people of color, low income, and linguistically isolated populations). Depending on the indicator, a community that scores highly for an indicator may have a higher percentage of its population within a demographic group or a higher average exposure or proximity to an environmental health hazard compared to the state, region, or national average. EJSCREEN also reports EJ indexes, which are combinations of a single environmental indicator with the EJSCREEN Demographic Index. For additional information about environmental and demographic indicators and EJ indexes reported by EJSCREEN, see EPA, “EJSCREEN Environmental Justice Mapping and Screening Tool—EJSCREEN Technical Documentation,” section 2 (September 2019).

³⁰ EPA, “Technical Guidance for Assessing Environmental Justice in Regulatory Analysis,” section 4 (June 2016).

SIP revisions will result in air quality improvements and human health benefits for Hayden- and Miami-area residents, including those in underserved communities. Conversely, failure to make the determinations in this final action could inhibit or delay the attainment of the 2008 Pb and 2010 SO₂ NAAQS in these areas, perpetuating the EJ concerns potentially faced by communities in these areas. Thus, we believe that finalizing our proposed action will help to reduce disproportionate health, environmental, economic, and climate impacts on disadvantaged communities in the Hayden and Miami areas and that this action will not have disproportionately high and adverse human health or environmental effects on minority populations, low-income populations and/or indigenous peoples, as specified in Executive Order 12898.

IV. Final Action

Under CAA section 179(c)(1), the EPA is taking final action to determine that the Hayden Pb NAA failed to attain the 2008 Pb primary and secondary NAAQS by the applicable attainment date of October 3, 2019. The EPA is also taking final action to determine that the Hayden and Miami SO₂ NAAs failed to attain the 2010 1-hour primary SO₂ NAAQS by the applicable attainment date of October 4, 2018. As a result of these determinations, the State of Arizona is required under CAA section 179(d) to submit revisions to the Arizona SIP for the Hayden Pb, Hayden SO₂, and Miami SO₂ NAAs that, among other elements, provide for attainment of the respective standards as expeditiously as practicable but no later than January 31, 2027. At this time, we are not prescribing additional measures for the Pb and SO₂ SIP revisions under CAA section 179(d)(2). The SIP revisions required under CAA section 179(d) are due for submittal to the EPA by January 31, 2023. This final action also triggers the implementation of contingency measures adopted in these areas under CAA section 172(c)(9).

V. Statutory and Executive Order Reviews

Additional information about these statutes and Executive orders can be found at <https://www2.epa.gov/laws-regulations/laws-and-executive-orders>.

A. Executive Order 12866: Regulatory Planning and Review, and Executive Order 13563: Improving Regulation and Regulatory Review

This action is not a significant regulatory action and therefore was not

submitted to the Office of Management and Budget for review.

B. Paperwork Reduction Act (PRA)

This action does not impose an information collection burden under the provisions of the PRA because it does not contain any information collection activities.

C. Regulatory Flexibility Act (RFA)

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA. This action will not impose any requirements on small entities. This final action requires the State to adopt and submit SIP revisions to satisfy CAA requirements and does not itself directly regulate any small entities.

D. Unfunded Mandates Reform Act (UMRA)

This action does not contain any unfunded mandate of \$100 million or more, as described in UMRA (2 U.S.C. 1531–1538) and does not significantly or uniquely affect small governments. This action itself imposes no enforceable duty on any state, local, or tribal governments, or the private sector. This action determines that the Hayden Pb NAA and the Hayden and Miami SO₂ NAAs failed to attain the NAAQS by the applicable attainment dates and triggers existing statutory timeframes for the State to submit SIP revisions. Such a determination in and of itself does not impose any Federal intergovernmental mandate.

E. Executive Order 13132: Federalism

This action does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the National Government and the states, or on the distribution of power and responsibilities among the various levels of government.

F. Executive Order 13175, Consultation and Coordination With Indian Tribal Governments

This action does not have tribal implications as specified in Executive Order 13175. The finding of failure to attain the Pb and SO₂ NAAQS does not apply to tribal areas, and the rule will not impose a burden on Indian reservation lands or other areas where the EPA or an Indian tribe has demonstrated that a tribe has jurisdiction within the Hayden Pb, Hayden SO₂ and Miami SO₂ nonattainment areas. Thus, this rule does not have tribal implications and will not impose substantial direct costs

on tribal governments or preempt tribal law as specified by Executive Order 13175. Nonetheless, the EPA notified the San Carlos Apache Tribe of the San Carlos Reservation, which borders the eastern boundary of the Hayden Pb and Hayden SO₂ NAAs, of this action.

G. Executive Order 13045, Protection of Children From Environmental Health Risks and Safety Risks

The EPA interprets Executive Order 13045 as applying only to those regulatory actions that concern environmental health or safety risks that the EPA has reason to believe may disproportionately affect children, per the definition of “covered regulatory action” in section 2–202 of the Executive order. This action is not subject to Executive Order 13045 because the effect of this action is to trigger additional planning requirements under the CAA. This action does not establish an environmental standard intended to mitigate health or safety risks.

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

This rule is not subject to Executive Order 13211 because it is not a significant regulatory action under Executive Order 12866.

I. National Technology Transfer and Advancement Act (NTTAA)

This rulemaking does not involve technical standards.

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

The EPA believes that this action does not have disproportionately high and adverse human health or environmental effects on minority populations, low-income populations and/or indigenous peoples, as specified in Executive Order 12898. The documentation for this decision is contained in section III of this document. The docket for this rulemaking action includes a summary of environmental justice indicators for communities in the Hayden and Miami areas obtained using the EPA’s EJSCREEN tool.

K. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the

Congress and to the Comptroller General of the United States. The EPA will submit a report containing this action and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a “major rule” as defined by 5 U.S.C. 804(2).

L. Petitions for Judicial Review

Under section 307(b)(1) of the CAA, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by April 1, 2022. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this action for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. This action may not be challenged later in proceedings to enforce its requirements (see section 307(b)(2)).

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Lead, Pollution, Sulfur dioxide.

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

Dated: January 21, 2022.

Martha Guzman Aceves,
Regional Administrator, Region IX.

For the reasons stated in the preamble, the EPA amends chapter I, title 40 of the Code of Federal Regulations as follows:

PART 52—APPROVAL AND PROMULGATION OF IMPLEMENTATION PLANS

■ 1. The authority citation for part 52 continues to read as follows:

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

Subpart D—Arizona

■ 2. Section 52.125 is amended by adding paragraph (h) to read as follows:

§ 52.125 Control strategy and regulations: Sulfur Oxides

* * * * *

(h) Effective March 2, 2022, the EPA has determined that the Hayden and Miami nonattainment areas failed to attain the 2010 1-hour primary sulfur dioxide (SO₂) national ambient air quality standards (NAAQS) by the

applicable attainment date of October 4, 2018. This determination triggers the requirements of CAA section 179(d) for the State of Arizona to submit a revision to the Arizona SIP for the Hayden and Miami nonattainment areas to the EPA by January 31, 2023. The SIP revision must, among other elements, provide for attainment of the 1-hour primary SO₂ NAAQS in the Hayden and Miami SO₂ NAAs as expeditiously as practicable but no later than January 31, 2027.

■ 3. Section 52.127 is added to read as follows:

§ 52.127 Control strategy and regulations: Lead.

(a) Effective March 2, 2022, the EPA has determined that the Hayden nonattainment area failed to attain the 2008 primary and secondary lead (Pb) national ambient air quality standards (NAAQS) by the applicable attainment date of October 3, 2019. This determination triggers the requirements of CAA section 179(d) for the State of Arizona to submit a revision to the Arizona SIP for the Hayden nonattainment area to the EPA by January 31, 2023. The SIP revision must, among other elements, provide for attainment of the 2008 Pb NAAQS in the Hayden Pb NAA as expeditiously as practicable but no later than January 31, 2027.

(b) [Reserved]

[FR Doc. 2022–01595 Filed 1–28–22; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 52 and 81

[EPA–R07–OAR–2021–0667; FRL–9105–02–R7]

Air Plan Approval; Missouri Redesignation Request and Associated Maintenance Plan for the Jackson County 2010 SO₂ 1-Hour NAAQS Nonattainment Area

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: On February 18, 2021, the State of Missouri submitted a request for the Environmental Protection Agency (EPA) to redesignate the Jackson County, Missouri, 2010 1-hour sulfur dioxide (SO₂) National Ambient Air Quality Standard (NAAQS) nonattainment area to attainment and approve a State Implementation Plan (SIP) revision containing a maintenance plan for the area. The State provided a supplement to the maintenance plan on

EXHIBIT 2

**ASARCO LLC's Comments
on the Proposed Version of the Rule**

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June 7, 2021

Via Rulemaking Docket and Federal Express

U.S. Environmental Protection Agency – Region 9
75 Hawthorne Street
San Francisco, California 94105
Docket ID No. EPA-R09-OAR-2021-0078

Re: ASARCO LLC’s Comments on Proposed “Finding of Failure to Attain the 2008 Lead and 2010 Sulfur Dioxide Standards; Arizona; Hayden and Miami Nonattainment Areas,” 86 Fed. Reg. 24829 (May 10, 2021) – Quality Control and Quality Assurance of Data on Which the Proposed Finding is Based

Dear U.S. Environmental Protection Agency (“**EPA**”):

I hereby submit to EPA, on behalf of my client, ASARCO LLC (“**Asarco**”), the following comments regarding the quality control and quality assurance of data on which the above-referenced proposed rulemaking is based (“**Data**”). The comments are informed, not only by the records presently in the docket of the proposed rulemaking (“**Docket Records**”), but also by:

- Records (**Attachment 1**, hereto) that Asarco obtained from the Arizona Department of Environmental Quality (“**ADEQ**”), in response to a public records request (**Attachment 2**, hereto) that Asarco made for all ADEQ records that document and establish that the air quality data that ADEQ submitted into the Air Quality System (“**AQS**”) or otherwise to EPA and that underlie the design values (“**Design Values**”) described in the proposed rulemaking were generated and submitted in a manner that satisfies the quality control and quality assurance (“**QC/QA**”) requirements of 40 C.F.R. Part 58 Appendix A, 40 C.F.R. Part 50 Appendix A-1, 40 C.F.R. Part 50 Appendix G, and the quality assurance project plans pursuant to which the air quality data were generated;

- ADEQ’s affirmation (**Attachment 3**, hereto) that the records that it produced in response to Asarco’s public records request (“**ADEQ’s Records**”) encompass all of the ADEQ records that are responsive to Asarco’s public records request, with the sole exception of e-mails; and

- Asarco’s comparison of the Docket Records, ADEQ’s Records, and QC/QA documentation therein to 40 C.F.R. Part 58 Appendix A and 40 C.F.R. Part 50 appendices A-1,

George A. Tsiolis
Attorney at Law

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June 7, 2021

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T, G and R (collectively, the “**QC/QA Rules**”) which establish the minimum QC/QA requirements that must be satisfied in order for ambient air quality data to be relied upon in National Ambient Air Quality Standards (“**NAAQS**”) attainment-status determinations.

A. COMMENTS REGARDING BOTH THE SO₂ DATA AND THE LEAD DATA

The Docket Records and ADEQ’s Records do not include documentation required by the QC/QA Rules and ADEQ’s quality assurance program plans (“**QAPPs**”) to ensure that sulfur dioxide (“**SO₂**”) data and lead (“**Pb**”) data are representative of actual ambient air quality and may be relied upon in NAAQS attainment-status determinations (“**Required Documentation**”).

1. The absence of Required Documentation from the rulemaking docket means: (i) a finding of failure to attain, as proposed in the rulemaking and for the reasons stated in the proposal, would be without adequate foundation in the rulemaking record; (ii) the public is presently deprived of an opportunity to comment regarding the representativeness of the SO₂ Data and Pb Data and, consequently, on the proposed finding of failure to attain, in violation of applicable rulemaking requirements; and (iii) EPA should, at a minimum, make available to the public, in the rulemaking docket, the missing Required Documentation, and extend the rulemaking comment period by an amount of time that is sufficient for the public to have a meaningful opportunity to review that Required Documentation and thereafter submit comments on the proposed rulemaking.

2. The following Required Documentation is not included in the Docket Records or ADEQ’s Records:

a. Hard-copy site logbooks, including, without limitation, contemporaneous records of flow checks, zero/span/precision checks, and calibrations/adjustments of the SO₂ analyzers and Pb samplers.

b. Electronic logbooks that meet EPA requirements for traceability and version control, including, without limitation, contemporaneous records of flow checks, zero/span/precision checks, and calibrations/adjustments of the SO₂ analyzers and Pb samplers.

c. Certificates that demonstrate reference gases, materials, and devices used to conduct the flow checks and zero/span/precision checks and inform the calibrations/adjustments were, in fact, traceable to a National Institute of Standards and Technology (“**NIST**”)-certified primary standard, such as a NIST-Certified Gas Manufacturer’s Internal Standard or a NIST-Traceable Reference Material.

d. Records of validation of the Data using systematic criteria in addition to critical and operational criteria.

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3. The absence of the above Required Documentation in the Docket Records or ADEQ's Records correlates to Finding #10 of EPA's April 25, 2019 report of the findings of its 2018 Technical System Audit of ADEQ's ambient air monitoring program ("**2019 TSA Report**"). Doc. B-14, Rulemaking Docket. In Finding #10, EPA concluded that, for the three-year period of time covered by the audit: (i) ADEQ was not implementing required procedures to "assure retention of all critical records"; (ii) ADEQ's air monitoring staff "were not fully aware of the ADEQ records management system requirements"; and (iii) monitoring records "were not being managed as required." Recommendation 8 of the 2019 TSA Report elaborates that ADEQ's ambient air quality monitoring records retention system "does not fully meet EPA requirements for traceability and version control." The vagueness of this statement reasonably creates a presumption that the traceability requirements of the QC/QA rules are not satisfied for the Data. There is nothing in the Docket Records or ADEQ's Records that rebuts the presumption.

4. The absence of the above Required Documentation in the Docket Records or ADEQ's Records also correlates to Finding #13 of the 2019 TSA Report. In Finding #13, EPA stated that ADEQ's validators "did not consider all systemic criteria or the adequacy of the data sets based on the systemic criteria" and that "consistent failures of any of these criteria may cause entire data sets to be suspect." According to Finding #13, this same deficiency was documented in EPA's 2015 Technical Systems Audit of ADEQ's ambient air monitoring program. This indicates the deficiency affects the reliability of all of the Data. In the absence of records that ADEQ did consider all applicable systemic criteria, the Data must be considered presumptively invalid and without documentary foundation that may rebut the presumption.

5. The obligation to document compliance with all applicable QC/QA Rules is stated in the rules as an affirmative obligation, the satisfaction of which must be demonstrated in order for the Data to be lawfully relied upon in a NAAQS attainment-status determination. Such a demonstration is not evident in the Docket Records or ADEQ's Records.

6. In proposing the finding of failure to attain, the proposed rulemaking relies on SO₂ and Pb design values, respectively derived from: (i) the annual 99th percentile of ambient daily maximum 1-hour average SO₂ concentrations for 2015, 2016, and 2017, 86 Fed. Reg. 24829, 24834/1-2, Table 2; and (ii) highest annual 3-month rolling average Pb concentrations for 2016, 2017 and 2018, 86 Fed. Reg. at 24833/2-3, Table 1. 40 C.F.R. Part 50 Appendix T and Appendix R provide that only data that are generated in a manner consistent with the QC/QA Rules may be used in design value calculations. The deficiencies described in Comments A.1 through A.5, above, indicate the Data were not generated in a manner consistent with the QC/QA Rules. Therefore, the proposed finding of failure to attain is without adequate foundation in the rulemaking record.

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7. The deficiencies described in Comments A.1 through A.5, above, indicate the Data were not generated in a manner consistent with the QC/QA Rules. Therefore, reliance on the Data to enter a final finding of failure to attain would be arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with law.

B. ADDITIONAL COMMENTS REGARDING THE SO₂ DATA

The Docket Records and ADEQ's Records do not demonstrate that the manner of the SO₂ Data's generation complied with the QC/QA Rules in 40 C.F.R. Part 58 Appendix A.

1. Appendix A states that the goal for acceptable measurement uncertainty for SO₂ is defined for precision as an upper 90% confidence limit for the coefficient of variation ("CV") of 10%. This goal is reiterated in ADEQ's 2014-approved "SO₂ Ambient Air Monitoring Network QAPP" ("SO₂ QAPP"). None of the documents comprising the Docket Records or ADEQ's Records demonstrates satisfaction of this goal for the Hayden Old Jail Site (AQS ID 04-007-1001) ("Site 1001") or the SO₂ Data generated at Site 1001. To the extent that ADEQ's "Data Evaluation and Concurrence Reports for Gaseous Pollutants," Report Code AMP ("AMP") 600, and "Data Quality Indicator Reports" for SO₂, AMP 256, recite precision values, confidence limit values, or other values related to precision, those values are without foundation in the Docket Records and ADEQ's Records, as indicated in Comments A.2, A.3 and A.4, above. (See item 3 of Attachment 4, hereto, for further detail.)

2. Appendix A states that the goal for acceptable measurement uncertainty for SO₂ is defined for bias as an upper 95% confidence limit for the absolute bias of 10%. This goal is reiterated in the SO₂ QAPP. None of the documents comprising the Docket Records or ADEQ's Records demonstrates satisfaction of this goal for Site 1001 or the SO₂ Data generated at Site 1001. To the extent that ADEQ's "Data Evaluation and Concurrence Reports for Gaseous Pollutants," AMP 600, and "Data Quality Indicator Reports" for SO₂, AMP 256, recite bias values or other values related to bias, those values are without foundation in the Docket Records and ADEQ's Records, as indicated in Comments A.2, A.3 and A.4, above. (See item 4 of Attachment 4, hereto, for further detail.)

3. As indicated in Comment A.2.c, above, the Docket Records and ADEQ's Records do not include certificates, required by Appendix A, that demonstrate reference gases, materials, and devices used to conduct flow checks and zero/span/precision checks and inform the calibrations/adjustments were NIST-traceable. This defect encompasses, but is not limited to, the test concentrations and flow measuring instruments employed to assess the validity of the SO₂ Data at Site 1001. Also, the Docket Records and ADEQ's records do not include certificates, required by Appendix A, that demonstrate test gas concentrations used for performance evaluations of the SO₂ monitor at Site 1001 were NIST-traceable. As such, these

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defects are also a violation of corresponding requirements of the SO₂ QAPP, including the QAPP's requirements of "field sheets," "NIST-traceable certifications," and other records that contemporaneously document compliance with those requirements. (See items 5, 6 and 14 of Attachment 4, hereto, for further detail.)

4. Without limiting the foregoing, with respect to the SO₂ Data generated at Site 1001 and concerning the requirements of 40 C.F.R. Part 58 Appendix A and corresponding requirements of the SO₂ QAPP:

a. The Docket Records and ADEQ's Records do not include "field sheets," electronic logbooks, or other records that contemporaneously document compliance with the rule that a one-point quality control ("**QC**") check must be performed at least once every two weeks on each automated monitor used to measure SO₂. (See item 7 of Attachment 4, hereto, for further detail.)

b. The Docket Records and ADEQ's Records do not include "field sheets," electronic logbooks, or other records that contemporaneously document compliance with the rule, effective beginning April 27, 2016, that each one-point QC check must be made by challenging the monitor with a QC check gas of known SO₂ concentration between the prescribed range of 0.005 and 0.08 parts per million. (See item 7.a of Attachment 4, hereto, for further detail.)

c. The Docket Records and ADEQ's Records do not include "field sheets," electronic logbooks, or other records that contemporaneously document compliance with the rule, effective prior to April 27, 2016, that each one-point QC check must be made by challenging the monitor with a QC check gas of known SO₂ concentration between the prescribed range of 0.01 and 0.10 parts per million. (See item 7.b of Attachment 4, hereto, for further detail.)

d. The Docket Records and ADEQ's Records do not include "field sheets," electronic logbooks, or other records that contemporaneously document compliance with the rule that SO₂ monitors must be operated in their normal sampling mode during the one-point QC check and the test atmosphere must pass through all filters, scrubbers, conditioners and other components used during normal ambient sampling and as much of the ambient inlet system as is practicable. (See item 8 of Attachment 4, hereto, for further detail.)

e. The Docket Records and ADEQ's Records do not include "field sheets," electronic logbooks, or other records that contemporaneously document compliance with the rule that the one-point QC check must be conducted before any calibration or span adjustment of the SO₂ monitor. (See item 9 of Attachment 4, hereto, for further detail.)

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f. The Docket Records and ADEQ's Records do not include "field sheets," electronic logbooks, or other records that contemporaneously document compliance with the rule that a performance evaluation must be conducted on each primary SO₂ monitor at least once a year. (See item 11 of Attachment 4, hereto, for further detail.)

g. The Docket Records and ADEQ's Records do not include "field sheets," electronic logbooks, or other records that contemporaneously document compliance with the rule that the performance evaluation should be conducted by a trained experienced technician other than the routine site operator. (See item 12 of Attachment 4, hereto, for further detail.)

h. The Docket Records and ADEQ's Records do not include "field sheets," electronic logbooks, or other records that contemporaneously document compliance with the rule that the performance evaluation must be made by challenging the monitor with audit gas standards of known concentration from at least three audit levels specified in 40 C.F.R. Part 58 Appendix A. (See item 13 of Attachment 4, hereto, for further detail.)

i. The Docket Records and ADEQ's Records do not include "field sheets," electronic logbooks, or other records that contemporaneously document compliance with the rule, effective beginning April 27, 2016, that (a) one point "must be within" two to three times the method detection limit of the instruments with the monitoring network, (b) the second point must be less than or equal to the 99th percentile of SO₂ data at the site, and (c) the third point should be around the primary SO₂ NAAQS or the highest 3-year SO₂ concentration at the site. (See item 13.a of Attachment 4, hereto, for further detail.)

j. The Docket Records and ADEQ's Records do not include "field sheets," electronic logbooks, or other records that contemporaneously document compliance with the rule, effective prior to April 27, 2016, that the audit levels should represent or bracket 80 percent of ambient concentrations measured by the monitor being evaluated. (See item 13.b of Attachment 4, hereto, for further detail.)

k. The Docket Records and ADEQ's Records do not include "field sheets," electronic logbooks, or other records that contemporaneously document compliance with the rule that the gas standards and equipment used for the performance evaluation must not be the same as the standards and equipment used for the one-point QC check, calibrations or span evaluations. (See item 15 of Attachment 4, hereto, for further detail.)

l. The Docket Records and ADEQ's Records do not include "field sheets," electronic logbooks, or other records that contemporaneously document compliance with the rule that the performance evaluation must be carried out by allowing the SO₂ monitor to analyze the

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audit gas test atmosphere in its normal sampling mode such that the test atmosphere passes through all filters, scrubbers, conditioners, and other sample inlet components used during normal ambient sampling and as much of the ambient air inlet system as is practicable. (See item 16 of Attachment 4, hereto, for further detail.)

5. Without limiting the foregoing, with respect to the SO₂ Data generated at Site 1001 and concerning the requirements of 40 C.F.R. Part 58 Appendix A and corresponding requirements of the SO₂ QAPP:

a. ADEQ's "1-Point QC Assessment and Annual PE Spreadsheet" for calendar year 2016, AMP 504, when compared to ADEQ's "Quick Look Report" for calendar year 2016, AMP 450, indicates that the annual performance evaluation did not satisfy the rule, effective April 27, 2016, that one assessment point "must be within" two to three times the method detection limit of the instruments with the monitoring network. (See item 13.a of Attachment 4, hereto, for further detail.)

b. ADEQ's "1-point QC Assessment and Annual PE Spreadsheet" for calendar year 2017, AMP 504, indicates that no annual performance evaluation was done of the Echotech monitor that was used to generate the January 2017 SO₂ Data. (See item 11 of Attachment 4, hereto, for further detail.)

c. ADEQ's "1-Point QC Assessment and Annual PE Spreadsheet" for calendar year 2017, AMP 504, when compared to ADEQ's "Quick Look Report" for calendar year 2017, AMP 450, indicates that, for the API analyzer, the annual performance evaluation did not satisfy the rule that one assessment point "must be within" two to three times the method detection limit of the instruments with the monitoring network. (See item 13.a of Attachment 4, hereto, for further detail.)

6. In proposing the finding of failure to attain, the proposed rulemaking relies on SO₂ design values derived from the annual 99th percentile of ambient daily maximum 1-hour average SO₂ concentrations for 2015, 2016, and 2017. 86 Fed. Reg. at 24834/1-2, Table 2. 40 C.F.R. Part 50 Appendix T provides that only SO₂ data that are generated in a manner consistent with the QC/QA Rules may be used in SO₂ design value calculations. The deficiencies described in Comments B.1 through B.5, above, indicate the SO₂ Data were not generated in a manner consistent with the QC/QA Rules. Therefore, the proposed finding of failure to attain is without adequate foundation in the rulemaking record.

7. The deficiencies described in Comments B.1 through B.5, above, indicate the SO₂ Data were not generated in a manner consistent with the QC/QA Rules. Therefore, reliance on

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the SO₂ Data to enter a final finding of failure to attain would be arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with law.

C. ADDITIONAL COMMENTS REGARDING THE LEAD DATA

The Docket Records and ADEQ's Records do not demonstrate that the manner of the Pb Data's generation complied with the QC/QA Rules in 40 C.F.R. Part 58 Appendix A.

1. Appendix A states that the goal for acceptable measurement uncertainty for Pb methods is defined for precision as an upper 90% confidence limit for the CV of 20%. This goal is reiterated in ADEQ's 2013-approved "Pb Ambient Air Monitoring Network QAPP" ("**Pb QAPP**"). None of the documents comprising the Docket Records or ADEQ's Records demonstrates satisfaction of this goal for the Globe Highway Site ("**Site 1002**") or the Hillcrest Site ("**Site 1003**") or the Pb Data generated based on readings and samples from Site 1002 and Site 1003. To the extent that ADEQ's "Data Quality Indicator Reports" for Pb, AMP 256, recite confidence limit values or other values related to precision, those values are without foundation in the Docket Records and ADEQ's Records, as indicated in Comments A.2, A.3 and A.4, above. (See item 18 of Attachment 4, hereto, for further detail.)

2. Appendix A states that the goal for acceptable measurement uncertainty for Pb methods is defined for bias as an upper 95% confidence limit for the absolute bias of 15%. This goal is reiterated in the Pb QAPP. None of the documents comprising the Docket Records or ADEQ's Records demonstrates satisfaction of this goal for Site 1002 or Site 1003 or the Pb Data generated based on readings and samples from Site 1002 and Site 1003. To the extent that ADEQ's "Data Concurrences and Evaluation Reports for Lead," AMP 600, and "Data Quality Indicator Reports" for Pb, AMP 256, recite bias values or other values related to bias, those values are without foundation in the Docket Records and ADEQ's Records, as indicated in Comments A.2, A.3 and A.4, above. To the extent that ADEQ's Assessment Spreadsheets, AMP 504, include information that could be used to develop bias values, that information is without foundation in the Docket Records and ADEQ's Records, as indicated in Comments A.2, A.3 and A.4, above. (See item 19 of Attachment 4, hereto, for further detail.)

3. As indicated in Comment A.2.c, above, the Docket Records and ADEQ's Records do not include certificates, required by Appendix A, that demonstrate reference gases, materials, and devices used to conduct flow checks and inform adjustments were NIST-traceable. This defect encompasses the flow measuring instruments employed to assess the flow-rate readings at the Pb sample collectors at Site 1002 and Site 1003, upon which the Pb Data are materially based. As such, this defect is also a violation of corresponding requirements of the Pb QAPP, including the QAPP's requirements of "field sheets," "NIST-traceable certifications," and other records that contemporaneously document compliance with those requirements. (See item 22 of Attachment 4, hereto, for further detail.)

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4. Without limiting the foregoing, with respect to the Pb Data generated based on readings and samples from Site 1002 and Site 1003 and concerning the requirements of 40 C.F.R. Part 58 Appendix A and corresponding requirements of the Pb QAPP:

a. The Docket Records and ADEQ's Records do not include "field sheets," electronic logbooks, or other records that contemporaneously document compliance with the rule that, for Pb high volume samplers, the minimum flow rate verification frequency is one verification every 90 days (quarter) with at least four in a year. (See item 20 of Attachment 4, hereto, for further detail.)

b. The Docket Records and ADEQ's Records do not include "field sheets," electronic logbooks, or other records that contemporaneously document compliance with the rule that, if the flow rate verification for Pb high volume samplers is made in conjunction with a flow rate adjustment, then it must be made prior to the flow rate adjustment. (See item 21 of Attachment 4, hereto, for further detail.)

c. The Docket Records and ADEQ's Records do not include a record of compliance with the rule that the percent differences between the audit and measured flow rates be reported to the AQS. (See item 23 of Attachment 4, hereto, for further detail.)

d. The Docket Records and ADEQ's Records do not include "field sheets," electronic logbooks, or other records that contemporaneously document compliance with the rule requiring a flow rate audit of the Pb high volume samplers to be conducted at least twice a year. (See Item 24 of Attachment 4, hereto, for further detail.)

e. The Docket Records and ADEQ's Records do not include "field sheets," electronic logbooks, or other records that contemporaneously document compliance with the rule that the flow rate standard used for the auditing must not be the same flow rate standard used for verifications or to calibrate the monitor. (See Item 25 of Attachment 4, hereto, for further detail.)

f. The Docket Records and ADEQ's Records do not include complete laboratory data packages that demonstrate the requirement to audit the Pb reference or equivalent method analytical procedure each calendar quarter was satisfied. (See Item 26 of Attachment 4, hereto, for further detail.)

g. The Docket Records and ADEQ's Records do not establish that the laboratory that analyzed the Pb samples from Site 1002 and Site 1003 satisfied the rule that the Pb method audit samples must be prepared using batches of reagents different from those used to

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calibrate the Pb analytical equipment being audited. (See Item 27 of Attachment 4, hereto, for further detail.)

h. The Docket Records and ADEQ's Records do not establish that the laboratory that analyzed the Pb samples from Site 1002 and Site 1003 satisfied the rule that the Pb method audit samples must be prepared in the following equivalent ambient Pb concentrations in $\mu\text{g}/\text{m}^3$: (i) 30-100% of Pb NAAQS; (ii) 200-300% of Pb NAAQS. (See Item 28 of Attachment 4, hereto, for further detail.)

i. The Docket Records and ADEQ's Records do not include complete laboratory data packages that demonstrate the requirement to analyze three audit samples in each of the two ranges each quarter samples are analyzed was satisfied. (See Item 29 of Attachment 4, hereto, for further detail.)

5. Without limiting the foregoing, with respect to the Pb Data generated based on readings and samples from Site 1002 and Site 1003 and concerning the requirements of 40 C.F.R. Part 58 Appendix A, corresponding requirements of the Pb QAPP, and requirements of 40 C.F.R. Part 50 Appendix R and Appendix G:

a. ADEQ's Assessment Spreadsheet for calendar year 2015, AMP 504, indicates that a quarterly flow rate verification was not conducted in 2015 for Site 1003. (See item 20 of Attachment 4, hereto, for further detail.)

b. ADEQ's "Data Quality Indicator Report" for calendar year 2015, AMP 256, and ADEQ's Assessment Spreadsheet for calendar year 2015, AMP 504, indicate that a flow rate audit was not conducted in 2015 for Site 1003. (See item 24 of Attachment 4, hereto, for further detail.)

c. As indicated in Comments 4.f and 4.i, above, the Docket Records and ADEQ's Records do not include complete laboratory data packages. It is unclear whether such laboratory data packages exist. Therefore, it is questionable whether the Pb Data are valid or enjoy a presumption of validity for purposes of Pb NAAQS attainment-status determinations.

d. Without limiting the foregoing, the Docket Records and ADEQ's records do not demonstrate the requirements of 40 C.F.R. Part 50 Appendix G were satisfied by the Pima County laboratory that analyzed the Pb samples from Site 1002 and Site 1003. This includes, without limitation, the absence in the Docket Records and ADEQ's records of certifications of NIST-traceability that are required by Appendix G, in relation to the Pb Data.

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e. Without limiting the foregoing, the summary-format “Sample Analysis Reports” produced by the Pima County laboratory that analyzed the Pb samples from Site 1002 and Site 1003 indicate a remarkable degree of Pb-content heterogeneity on each filter sample analyzed by the laboratory. This calls into question the reliability of the Pb Data for purposes of Pb NAAQS attainment-status determinations. Such Pb-content heterogeneity is indicated by the percent differences between the laboratory-determined equivalent ambient Pb concentrations of the initially-run analyses and subsequently-run analyses of two of three November 2018 Pb samples from Site 1002:

| | Analysis Date | µg/m ³ | Re-analysis Date | µg/m ³ |
|---------------|---------------|-------------------|------------------|-------------------|
| TSPD04 110418 | 12/12/18 | 0.004 | 1/25/19 | 0.040 |
| TSPD04 111618 | 12/12/18 | 0.038 | 1/25/19 | 0.004 |

These equate to a difference of 850% to 900% between the results of analyses of the same filter samples. There is no indication in the Docket Records or ADEQ’s Records of an assessment of the causes of such heterogeneity or its potential effect on the validity of the Pb Data for purposes of NAAQS attainment-status determinations.

f. Without limiting the foregoing, ADEQ’s “Data Concurrence and Evaluation Report for Lead” for calendar year 2017, AMP 600, states, for “Analysis Audit Summary,” a “Bias” of -12.53, without foundation. If “Analysis Audit Summary” is meant to refer to the requirement to audit the Pb reference or equivalent method analytical procedure each calendar quarter, then this bias value would appear to be in excess of the bias goal of $\pm \leq 10\%$ which is stated in the Pb QAPP.

g. Without limiting the foregoing, ADEQ’s “Data Concurrence and Evaluation Report for Lead” for calendar year 2018, AMP 600, states, for “Analysis Audit Summary,” a “Bias” of -10.30, without foundation. If “Analysis Audit Summary” is meant to refer to the requirement to audit the Pb reference or equivalent method analytical procedure each calendar quarter, then this bias value would appear to be in excess of the bias goal of $\pm \leq 10\%$ which is stated in the Pb QAPP.

6. In proposing the finding of failure to attain, the proposed rulemaking relies on Pb design value derived from highest annual 3-month rolling average Pb concentrations for 2016, 2017 and 2018. 86 Fed. Reg. at 24833/2-3, Table 1. 40 C.F.R. Part 50 Appendix R provide that only Pb data that are generated in a manner consistent with the QC/QA Rules may be used in Pb design value calculations. The deficiencies described in Comments C.1 through C.5, above, indicate the Pb Data were not generated in a manner consistent with the QC/QA Rules.

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Therefore, the proposed finding of failure to attain is without adequate foundation in the rulemaking record.

7. The deficiencies described in Comments C.1 through C.5, above, indicate the Pb Data were not generated in a manner consistent with the QC/QA Rules. Therefore, reliance on the Pb Data to enter a final finding of failure to attain would be arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with law.

D. ADDITIONAL COMMENTS BASED ON EPA'S TECHNICAL SYSTEMS AUDIT

The 2019 TSA Report discusses several QC/QA deficiencies of ADEQ's operation of Site 1001, Site 1002 and Site 1003 and the laboratory procedures employed in relation to Pb samples from Site 1002 and Site 1003.

1. The notice of proposed rulemaking is completely silent on the potential effects of the QC/QA deficiencies identified in the 2019 TSA Report on the validity of the Data for purposes of NAAQS attainment-status determinations.

2. EPA's failure to explain in the rulemaking record why QC/QA deficiencies identified in the 2019 TSA Report are not material to the validity of the Data for purposes of NAAQS attainment-status determinations and invite public comments regarding the explanation prior to finalizing the rulemaking would be arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with law.

3. EPA's failure to explain in the rulemaking record how QC/QA deficiencies identified in the 2019 TSA Report are material to the validity of the Data for purposes of NAAQS attainment-status determinations and invite public comments regarding the explanation prior to finalizing the rulemaking would be arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with law.

4. Asarco incorporates within these comments, as if they are Asarco's own, all of the findings in the 2019 TSA Report. If EPA takes final action on the rulemaking, then the notice of final rulemaking should categorically state whether or not any of the findings stated in the 2019 TSA report concerns, affects or calls into question the validity of the Data from Site 1001, Site 1002 or Site 1003; and, if not, then why not. A failure to do so would be arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with law.

5. Without limiting the foregoing, Asarco notes, in particular, the following findings in the 2019 TSA Report:

- a. Finding #10 and Finding #13, discussed in Comments A.3 and A.4, above.

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b. Finding #4, which states: (i) “[i]n several cases the data validation process did not result in appropriate data invalidation, and improperly validated data were uploaded to AQS”; and (ii) “[d]ata were uploaded as valid into AQS that should have been invalidated due to evidence of instrument malfunction.”

1) Included with this finding, as “[e]xamples,” are three instances when “[d]ata were uploaded as valid into AQS that should have been invalidated due to evidence of instrument malfunction.” The finding is vague as to whether the three “[e]xamples” constitute the universe of “several cases” to which the finding refers, or whether similar examples occurred in relation to Data from Site 1001, Site 1002 and/or Site 1003.

2) If EPA takes final action on the rulemaking, then the notice of final rulemaking should categorically state whether or not Finding #4 extends to Data from Site 1001, Site 1002 or Site 1003. A failure to do so would be arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with law.

c. Finding #6, which states: (i) “ADEQ made [SO₂] data quality decisions based on results from zero/span/precision checks that may have not had sufficient time to stabilize”; (ii) “stabilization times for automated checks were minimal and often insufficient”; and (iii) “daily checks” used to “make data validation decisions” were “[f]or the most part . . . taken without consideration of stability.”

1) Included with this finding is a statement that, “[b]ecause the daily checks often did not meet stability requirements, they do not meet EPA regulatory requirements for instrument evaluation and should not be used in the decision-making process.” This statement is vague as to the meaning of “the decision-making process.” If EPA takes final action on the rulemaking, then the notice of final rulemaking should categorically state whether or not “the decision-making process” refers to NAAQS attainment-status determinations. A failure to do so would be arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with law. (Asarco believes “the decision-making process” can mean nothing other than NAAQS attainment-status determinations.)

2) Included with this finding is also a statement that “[m]annual checks were verified by the Field Technician for stabilization at each audit point.” If EPA takes final action on the rulemaking, then the notice of final rulemaking should identify the hard-copy or electronic record that the verifications described in the statement actually occurred. As indicated in Comment A.2, above, such records would need to be contemporaneous with the verifications themselves.

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d. Finding #7, which states: (i) “ADEQ and IML [the laboratory to which ADEQ contracted out sample-filter gravimetric laboratory operations] did not adequately maintain and document custody of filters throughout the filter process; (ii) “pre-weighed filters from IML were received by the ADEQ without a signed custody document (pre-exposure CoC or equivalent)” even though chain-of-custody documentation “is required to follow filters from the pre-weight procedure to sample disposal”; and (iii) “custody between collection of exposed filters in the field and shipping to the contract laboratories was not fully documented.”

1) Included in the finding is a statement that “[c]hain of custody is essential for data defensibility.” Asarco agrees with this statement. If EPA takes final action on the rulemaking, then the notice of final rulemaking should state whether or not the chain-of-custody defects described in Finding #7 affect any of the Pb Data, including their reliability for purposes of NAAQS attainment-status determinations; and, if not, why not. A failure to do so would be arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with law.

2) If EPA enters a final finding of failure to attain the Pb NAAQS, as proposed in the notice of proposed rulemaking, then the notice of final rulemaking should explain why chain-of-custody practices of the kind found absent or deficient in Finding #7 are not relevant to Pb NAAQS attainment-status determinations or the finding of failure to attain the Pb NAAQS. A failure to do so would be arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with law.

e. Finding #12, which states “[v]alidation of contract laboratory-generated data from IML [the laboratory to which ADEQ contracted out sample-filter gravimetric laboratory operations] was not complete” because “ADEQ did not receive the CoC forms and corresponding raw data from IML.”

1) Included in this finding is a statement that “[t]he data validation process should include review of the CoC forms and raw data to ensure criteria were met.” If EPA takes final action on the rulemaking, then the notice of final rulemaking should explain which “criteria” cannot be demonstrated to have been met absent “review of the COC forms and raw data.” A failure to do so would be arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with law.

2) If EPA takes final action on the rulemaking, then the notice of final rulemaking should explain whether or not the deficiencies stated in Finding # 12 affect any of the Pb Data, including their reliability for purposes of NAAQS attainment-status determinations; and, if not, why not. A failure to do so would be arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with law.

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f. Finding #2, which states: (i) “EPA requires that QMPs,” which are agency-wide Quality Management Plans, “be prepared and implemented for ambient air monitoring programs; (ii) EPA approved ADEQ’s QMP in May 2016; (iii) the approved QMP “defines ADEQ’s quality systems in terms of the responsibilities of the agency-wide QA/QC Program Management (AQPM) function and workgroup; (iv) [t]he AQPM function was not being implemented”; and (v) “[t]asks required to be conducted by the AQPM at the agency-wide level, such as QA oversight, review of documents, review of audits and corrective actions, review of performance evaluations, and QA training, were not being conducted.”

1) If EPA takes final action on the rulemaking, then the notice of final rulemaking should explain whether or not the absence of an approved QMP prior to May 2016 makes the SO₂ Data and Pb Data generated prior to May 2016 unsuitable for purposes of NAAQS attainment-status determinations; and, if not, why not. A failure to do so would be arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with law.

2) If EPA takes final action on the rulemaking, then the notice of final rulemaking should explain whether the deficiencies stated in Finding #2 make the SO₂ Data and Pb Data unsuitable for purposes of NAAQS attainment-status determinations; and, if not, why not. A failure to do so would be arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with law.

3) In making the explanations requested in Comments D.5.f.1) and D.5.f.2), above, EPA should discuss, among the applicable rules, the provisions of 40 C.F.R. Part 58 Appendix A § 2.1 which pertain to QMPs; including, without limitation, the provision that states QMPs are necessary to “ensure that the monitoring results “[p]rovide data of adequate quality for the intended monitoring objectives,” “[c]omply with applicable standards,” and “[c]omply with statutory (and other legal) requirements.

* * * *

Asarco appreciates the opportunity to comment on the proposed rulemaking.

If you have any questions, please contact me at 602-319-4021 or gtsiolis@nj.rr.com.

Thank you.

George A. Tsiolis
Attorney at Law

U.S. EPA Region 9 – Docket ID No. EPA-R09-OAR-2021-0078

June 7, 2021

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Sincerely,



George A. Tsiolis
Attorney at Law
for ASARCO LLC

Attachments

- 1 – Records that ADEQ Produced in Response to Asarco’s Public Records Request *
- 2 – Asarco’s Public Records Request
- 3 – ADEQ’s Affirmation Concerning the Records that ADEQ Produced
- 4 – Asarco’s Administrative Completeness Review of ADEQ’s Records

* Electronic Records Submitted on Flash Drives via Federal Express

cc: Michelle Lammers, ASARCO LLC
James Stewart, ASARCO LLC
Amy Veek, ASARCO LLC
Eric Hiser, Jorden Hiser & Joy, PLC
Bill Jones, Blue Sky Modeling, LLC
Bobby Manley, Myramid Analytical Inc.

**ASARCO LLC's Comments on Proposed "Finding of Failure to Attain the 2008 Lead and 2010 Sulfur Dioxide Standards; Arizona; Hayden and Miami Nonattainment Areas,"
86 Fed. Reg. 24829 (May 10, 2021) – Docket ID No. EPA-R09-OAR-2021-0078**

Quality Control and Quality Assurance of Data on Which the Proposed Finding is Based

Attachment 1

Records that ADEQ Produced in Response to Asarco's Public Records Request *

*** Electronic Records Submitted on Flash Drives via Federal Express**

Files upload also attempted via docket at [regulations.gov](https://www.regulations.gov)

**ASARCO LLC's Comments on Proposed "Finding of Failure to Attain the 2008 Lead and 2010 Sulfur Dioxide Standards; Arizona; Hayden and Miami Nonattainment Areas,"
86 Fed. Reg. 24829 (May 10, 2021) – Docket ID No. EPA-R09-OAR-2021-0078**

Quality Control and Quality Assurance of Data on Which the Proposed Finding is Based

Attachment 2

Asarco's Public Records Request

GEORGE A. TSIOLIS
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May 19, 2021

Via Email (.pdf)

Cina Sheffield
Manager of Records Center
Arizona Department of Environmental Quality
1110 West Washington Street
Phoenix, Arizona 85007
sheffield.cina@azdeq.gov

Daniel Czecholinski
Director of Air Quality
Arizona Department of Environmental Quality
1110 West Washington Street
Phoenix, Arizona 85007
czecholinski.daniel@azdeq.gov

Re: Request for Public Records – Records Underlying Design Values

Dear Ms. Sheffield and Mr. Czecholinski:

Pursuant to A.R.S. §§ 39-121 through 39-121.02, ASARCO LLC (“**Asarco**”) respectfully requests the opportunity within the next several days to review the records of the Arizona Department of Environmental Quality (“**ADEQ**”) that relate to the air quality data employed in the development of the 2016-2018 lead design values for the Hayden lead nonattainment area and the 2015-2017 1-hour design values for the Hayden sulfur dioxide (“**SO₂**”) nonattainment area, which are provided in Table 1 and Table 2 of EPA’s May 10, 2021 proposed “Finding of Failure to Attain the 2008 Lead and 2010 Sulfur Dioxide Standards; Arizona; Hayden and Miami Nonattainment Areas,” 86 Fed. Reg. 24829 (**Attachment 1** hereto) (“**Design Values**”).

Asarco needs the opportunity to review the records requested herein and specified further below within the next several days, and by no later than May 26, 2021, in order

George A. Tsiolis
Attorney at Law

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for Asarco to have a fair opportunity to comment on the May 10, 2021 proposal, the comment period of which ends June 9, 2021.

Specifically, Asarco requests to review ADEQ's records that document and establish that the air quality data that ADEQ submitted into the Air Quality System ("**AQS**") or otherwise to the U.S. EPA and that underlie the Design Values ("**Relevant Air Quality Data**" or "**Data**") were generated and submitted in a manner that satisfies the quality control and quality assurance requirements of:

- 40 C.F.R. Part 58 Appendix A ("**Appendix A**");
- 40 C.F.R. Part 50 Appendix G, or the requirements of 40 C.F.R. §§ 53.3, 53.4, 53.5, 53.8, 53.9 and 53.14, for the measurement of lead concentrations;
- 40 C.F.R. Part 50 Appendix A-1 or Appendix A-2, or the requirements of 40 C.F.R. §§ 53.3, 53.4, 53.5, 53.8, 53.9 and 53.14, for the measurement of SO₂ concentrations; and
- The Quality Assurance Project Plans ("**QAPP**") pursuant to which the Relevant Air Quality Data were generated.

Without limiting the foregoing, Asarco requests to review ADEQ's records that document and establish that the Relevant Air Quality Data were generated and submitted in a manner that satisfies the regulatory requirements enumerated below. Asarco recognizes that two different iterations of the rules may have been applicable to the generation and submittal of the Data. Therefore, Asarco provides citations to the rules that became effective on April 27, 2016 (81 Fed. Reg. 17248) and their analogues that were formerly effective prior to that date.

General Requirements

1. The requirement that the QAPP, pursuant to which the Relevant Air Quality Data were generated, was in existence and compliant with Appendix A §§ 2.1, 2.1.1 and 2.1.2 [formerly Appendix A §§ 1.2, 2.1 and 2.1.1] prior to the generation of those Data. Appendix A § 2.1.2 [formerly Appendix A § 2.1.2].

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Attorney at Law

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2. The requirements that a technical systems audit be conducted at least every 3 years by U.S. EPA Region 9 and reported to the AQS in accordance with Appendix A § 2.5 [formerly Appendix A § 2.5].

Sulfur Dioxide Requirements

3. The rule that the goal for acceptable measurement uncertainty for SO₂ is defined for precision as an upper 90% confidence limit for the coefficient of variation (“**CV**”) of 10%. Appendix A § 2.3.1.5 [formerly Appendix A § 2.3.1.6].

4. The rule that the goal for acceptable measurement uncertainty for SO₂ is defined for bias as an upper 95% confidence limit for the absolute bias of 10%. Appendix A § 2.3.1.5 [formerly Appendix A § 2.3.1.6].

5. The requirement that gaseous pollutant concentration standards used to obtain test concentrations for SO₂ must be traceable to either a National Institute of Standards and Technology (“**NIST**”) Traceable Reference Material or a NIST-certified Gas Manufacturer’s Internal Standard, certified in accordance with one of the procedures cited in Appendix A § 2.6.1 [formerly Appendix A § 2.6.1].

6. The requirement that flow-rate measurements must be made by a flow measuring instrument that is NIST-traceable to an authoritative volume or other applicable standard and certified in accordance with the guidance cited in Appendix A § 2.6.3 [formerly Appendix A § 2.6.3].

7. The requirement that a one-point quality control (“**QC**”) check must be performed at least once every 2 weeks on each automated monitor used to measure SO₂ in accordance with Appendix A § 3.1.1(a) [formerly Appendix A § 3.2.1]; including, without limitation:

➤ The requirement, under the current rule (effective April 27, 2016), that each QC check be made by challenging the monitor with a QC check gas of known SO₂ concentration between the prescribed range of 0.005 and 0.08 parts per million; and

➤ The requirement, under the former rule (in effect prior to April 27, 2016), that each QC check be made by challenging the monitor with a QC gas check of

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known SO₂ concentration between the prescribed range of 0.01 and 0.10 parts per million.

8. The rule that SO₂ monitors must be operated in their normal sampling mode during the QC check and the test atmosphere must pass through all filters, scrubbers, conditioners and other components used during normal ambient sampling and as much of the ambient inlet system as is practicable. Appendix A § 3.1.1(b) [formerly Appendix A § 3.2.1.1].

9. The rule that the QC check must be conducted before any calibration or span adjustment to the SO₂ monitor. Appendix A § 3.1.1(b) [formerly Appendix A § 3.2.1.1].

10. The requirement to report the audit concentration of the QC gas and the corresponding measure concentration indicated by each SO₂ monitor tested in the QC check to the AQS. Appendix A § 3.1.1(d) [formerly Appendix A § 3.2.1.3].

11. The rule that a performance evaluation must be conducted on each primary SO₂ monitor once a year. Appendix A § 3.1.2 [formerly Appendix A § 3.2.2].

12. The rule that the performance evaluation should be conducted by a trained experienced technician other than the routine site operator. Appendix A § 3.1.2 [formerly Appendix A § 3.2.2].

13. The requirement that the performance evaluation should be made by challenging the monitor with audit gas standards of known concentration from at least three audit levels in accordance with Appendix A § 3.1.2.1 [formerly Appendix A § 3.2.2.1]; including, without limitation:

➤ The requirements, under the current rule (effective April 27, 2016), that: (i) one point must be within two to three times the method detection limit of the instruments with the monitoring network, (ii) the second point must be less than or equal to the 99th percentile of the SO₂ data at the site, and (iii) the third point should be around the primary SO₂ NAAQS or the highest 3-year SO₂ concentration at the site; and

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➤ The requirement, under the former rule (in effect prior to April 27, 2016), that the audit levels should represent or bracket 80 percent of ambient concentrations measured by the monitor being evaluated.

14. The rule that the standards from which the audit test gas concentrations are obtained and used for the performance evaluation must be traceable to either a NIST Traceable Reference Material or a NIST-certified Gas Manufacturer's Internal Standard, certified in accordance with one of the procedures cited in Appendix A § 2.6.1 [formerly Appendix A § 2.6.1]. Appendix A § 3.1.2.3 [formerly Appendix A § 3.2.2.3].

15. The rule that the gas standards and equipment used for the performance evaluation must not be the same as the standards and equipment used for the one-point QC check, calibrations or span evaluations. Appendix A § 3.1.2.3 [formerly Appendix A § 3.2.2.3].

16. The rule that the performance evaluation shall be carried out by allowing the SO₂ monitor to analyze the audit gas test atmosphere in its normal sampling mode such that the test atmosphere passes through all filters, scrubbers, conditioners, and other sample inlet components used during normal ambient sampling and as much of the ambient air inlet system as is practicable. Appendix A § 3.1.2.4 [formerly Appendix A § 3.2.2.4].

17. The requirement to report the evaluation concentrations of the audit gases and the corresponding measured concentration indicated or produced by each SO₂ monitor tested in the performance evaluation to the AQS. Appendix A § 3.1.2.6 [formerly Appendix A § 3.2.2.6].

Lead Requirements

18. The rule that the goal for acceptable measurement uncertainty for lead methods is defined for precision as an upper 90% confidence limit for the CV of 20%. Appendix A § 2.3.1.3 [formerly Appendix A § 2.3.1.4].

19. The rule that the goal for acceptable measurement uncertainty for lead methods is defined for bias as an upper 95% confidence limit for the absolute bias of 15%. Appendix A § 2.3.1.3 [formerly Appendix A § 2.3.1.4].

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Attorney at Law

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20. The rule that, for lead high volume samplers, the flow rate verification frequency is one verification every 90 days (quarter) with four in a year. Appendix A § 3.4.2 [formerly Appendix A §§ 3.3.4.1, 3.3.2].

21. The rule that, if the flow rate verification for lead high volume samplers is made in conjunction with a flow rate adjustment, it must be made prior to the flow rate adjustment. Appendix A § 3.4.1 [formerly Appendix A § 3.2.3].

22. The rule that, for the flow rate verification, flow-rate measurements must be made by a flow measuring instrument that is NIST-traceable to an authoritative volume or other applicable standard and certified in accordance with the guidance cited in Appendix A § 2.6.3 [formerly Appendix A § 2.6.3]. Appendix A § 3.4.1 [formerly Appendix A § 3.2.3].

23. The rule that the percent differences between the audit and measure flow rates be reported to the AQS. Appendix A § 3.4.1 [formerly Appendix A § 3.2.4].

24. The requirement to conduct a flow rate audit of the lead high volume samplers twice a year. Appendix A § 3.4.3 [formerly Appendix A § 3.3.4.1, 3.3.3].

25. The rule that the flow rate standard used for the auditing must not be the same flow rate standard used for verification or to calibrate the monitor. Appendix A § 3.4.3 [formerly Appendix A §§ 3.3.4.1, 3.3.3, 3.2.4].

26. The requirement to audit the lead reference or equivalent method analytical procedure each calendar quarter. Appendix A § 3.4.6 [formerly Appendix A § 3.3.4.2].

27. The rule that the lead method audit samples must be prepared using batches of reagents different from those used to calibrate the lead analytical equipment being audited. Appendix A § 3.4.6 [formerly Appendix A § 3.3.4.2].

28. The rule that the lead method audit samples must be prepared in the following equivalent ambient lead concentrations in $\mu\text{g}/\text{m}^3$: (i) 30-100% of lead NAAQS; (ii) 200-300% of lead NAAQS. Appendix A § 3.4.6 [formerly Appendix A § 3.3.4.2].

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29. The requirement to analyze three audit samples in each of the two ranges each quarter samples are analyzed. Appendix A § 3.4.6(b) [formerly Appendix A § 3.3.4.2(b)].

30. The requirement to report the audit concentrations (in µg lead per filter or strip) and the corresponding measured concentrations (in µg lead per filter or strip) to the AQS. Appendix A § 3.4.6(c) [formerly Appendix A § 3.3.4.2(c)].

* * * *

Without limiting the foregoing, Asarco also requests to review:

A. Any and all records of ADEQ’s correspondence with U.S. EPA concerning the utility of the Relevant Air Quality Data in light of the collocation requirements of Appendix A § 3.4.4 or other applicable collocation requirements; including, without limitation, the utility of the Data from the Hillcrest monitor (AQS ID 04-007-1003) in light of the collocation requirements;

B. The Data Certification Reports and Data Completion Reports that ADEQ submitted to U.S. EPA corresponding to the Relevant Air Quality Data, including, without limitation, those that were attached to ADEQ’s April 27, 2015; April 5, 2017; April 27, 2018; and May 1, 2019 certification and re-certification letters to U.S. EPA; and

C. The laboratory data packages that document the laboratory analyses that yielded the Relevant Air Quality Data pursuant to 40 C.F.R. Part 50 Appendix G, or the requirements of 40 C.F.R. §§ 53.3, 53.4, 53.5, 53.8, 53.9 and 53.14, for the measurement of lead concentrations.

* * * *

As used in this request, the word “records” has the meaning ascribed to it by A.R.S. §§ 39-121 through 39-121.02 and includes, but is not limited to, printed records as well as electronic records such as e-mails, e-mail attachments, and completed electronic or online forms.

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As used in this request, the word “or” should be construed as both conjunctive and disjunctive, so that a series of kinds of records joined by the word “or” shall refer to any, all or any combination of them.

Asarco would like every record responsive to this request to be provided or made available to Asarco in printed format or electronic format.

Asarco agrees in advance to pay up to three thousand dollars (\$3,000) for ADEQ’s time reasonably spent searching for the records responsive to this request, reviewing the records for disclosure, and duplicating the records responsive to this request in order to provide or make them available to Asarco as requested above.

If you have any questions about this request, please let me know at (602) 319-4021.

Thank you.

Sincerely,



George A. Tsiolis
Attorney at Law
Counsel for ASARCO LLC

Attachment 1

Proposed “Finding of Failure to Attain the 2008 Lead and 2010 Sulfur Dioxide Standards; Arizona; Hayden and Miami Nonattainment Areas,” 86 Fed. Reg. 24829 (May 10, 2021)

cc via e-mail (.pdf)

James Stewart, ASARCO LLC
Amy Veek, ASARCO LLC
Eric Hiser, Jordan Hiser & Joy, PLC
Bill Jones, Blue Sky Modeling, LLC

requirements beyond those imposed by state law. For that reason, this proposed action:

- Is not a “significant regulatory action” subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011);
- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);
- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4);
- Does not have federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- Is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the Clean Air Act; and
- Does not provide the EPA with the discretionary authority to address disproportionate human health or environmental effects with practical, appropriate, and legally permissible methods under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, the SIP is not approved to apply on any Indian reservation land or in any other area where the EPA or an Indian tribe has demonstrated that a tribe has jurisdiction. In those areas of Indian country, the proposed rule does not have tribal implications and will not impose substantial direct costs on tribal governments or preempt tribal law as specified by Executive Order 13175 (65 FR 67249, November 9, 2000).

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Nitrogen dioxide, Ozone, Reporting and recordkeeping requirements, Volatile organic compounds.

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

Dated: May 4, 2021.

Deborah Jordan,

Acting Regional Administrator, Region IX.

[FR Doc. 2021–09842 Filed 5–7–21; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA–R09–OAR–2021–0078; FRL–10022–86–Region 9]

Finding of Failure To Attain the 2008 Lead and 2010 Sulfur Dioxide Standards; Arizona; Hayden and Miami Nonattainment Areas

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing to determine that the Hayden lead (Pb) nonattainment area (NAA) failed to attain the 2008 Pb primary and secondary national ambient air quality standards (NAAQS or “standards”) by the applicable attainment date of October 3, 2019. This proposed determination is based upon monitored air quality data from November 2015–December 2018 for the 2008 Pb NAAQS. The EPA is also proposing to determine that the Hayden and Miami sulfur dioxide (SO₂) NAAs failed to attain the 2010 1-hour SO₂ primary NAAQS by the applicable attainment date of October 4, 2018, based upon monitored air quality data from January 2015–December 2017. If the EPA finalizes these determinations as proposed, the State of Arizona will be required to submit revisions to the Arizona State Implementation Plan (SIP) that, among other elements, provide for expeditious attainment of the 2008 Pb and 2010 SO₂ standards.

DATES: Any comments must arrive by June 9, 2021.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA–R09–OAR–2021–0078 at <http://www.regulations.gov>. For comments submitted at [Regulations.gov](http://www.regulations.gov), follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from [Regulations.gov](http://www.regulations.gov). The EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the

official comment and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the primary submission (*i.e.*, on the web, cloud, or other file sharing system). For additional submission methods, please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section. For the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit <https://www.epa.gov/dockets/commenting-epa-dockets>. If you need assistance in a language other than English or if you are a person with disabilities who needs a reasonable accommodation at no cost to you, please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section.

FOR FURTHER INFORMATION CONTACT: Ben Leers, Air Planning Office (AIR–2), EPA Region IX, (415) 947–4279, Leers.Benjamin@epa.gov.

SUPPLEMENTARY INFORMATION: Throughout this document, “we,” “us,” and “our” refer to the EPA.

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I. Background

A. The 2008 Pb and 2010 SO₂ National Ambient Air Quality Standards

Under section 109 of the Clean Air Act (CAA or “Act”), the EPA has established primary and secondary NAAQS for certain pervasive air pollutants (referred to as “criteria pollutants”) and conducts periodic reviews of the NAAQS to determine whether they should be revised or whether new NAAQS should be established. The primary NAAQS represent ambient air quality standards the attainment and maintenance of which the EPA has determined, including a margin of safety, are requisite to protect the public health.

The secondary NAAQS represent ambient air quality standards the attainment and maintenance of which the EPA has determined are requisite to protect the public welfare from any known or anticipated adverse effects associated with the presence of such air pollutant in the ambient air.

1. The 2008 Pb Standard

Under the CAA, the EPA must establish NAAQS for criteria pollutants, including Pb. Pb is generally emitted in the form of particles that are deposited in water, soil, and dust. People may be exposed to Pb by inhaling it or by ingesting Pb-contaminated food, water, soil, or dust. Once in the body, Pb is quickly absorbed into the bloodstream and can result in a broad range of adverse health effects including damage to the central nervous system, cardiovascular function, kidneys, immune system, and red blood cells. Children are particularly vulnerable to Pb exposure, in part because they are more likely to ingest Pb and in part because their still-developing bodies are more sensitive to the effects of Pb. The harmful effects to children's developing nervous systems (including their brains) arising from Pb exposure may include intelligence quotient (IQ)¹ loss, poor academic achievement, long-term learning disabilities, and an increased risk of delinquent behavior.

The EPA first established primary and secondary Pb standards in 1978 at 1.5 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) as a quarterly average.² Based on new health and scientific data, on October 15, 2008, the EPA revised the federal Pb standards to 0.15 $\mu\text{g}/\text{m}^3$ and revised the averaging time for the standards.³ Since the primary and secondary Pb standards are the same, we refer to them hereafter in this document using the singular Pb standard or NAAQS. A violation of the 2008 Pb NAAQS occurs if any arithmetic 3-month mean concentration is greater than 0.15 $\mu\text{g}/\text{m}^3$.⁴

2. The 2010 SO₂ Standard

Under the CAA, the EPA must also establish a NAAQS for SO₂. SO₂ is primarily released to the atmosphere through the burning of fossil fuels by power plants and other industrial facilities. SO₂ is also emitted from

industrial processes including metal extraction from ore and heavy equipment that burn fuel with a high sulfur content. Short-term exposure to SO₂ can damage the human respiratory system and increase breathing difficulties. Small children and people with respiratory conditions, such as asthma, are more sensitive to the effects of SO₂. Sulfur oxides at high concentrations can also react with compounds to form small particulates that can penetrate deeply into the lungs and cause health problems.

The EPA first established primary SO₂ standards in 1971 at 0.14 parts per million (ppm) over a 24-hour averaging period and 0.3 ppm over an annual averaging period.⁵ In June 2010, the EPA revised the NAAQS for SO₂ to provide increased protection of public health, providing for revocation of the 1971 primary annual and 24-hour SO₂ standards for most areas of the country following area designations under the new NAAQS.⁶ The 2010 NAAQS is 75 parts per billion (ppb) (equivalent to 0.075 ppm) over a 1-hour averaging period.⁷ A violation of the 2010 1-hour SO₂ NAAQS occurs when the annual 99th percentile of ambient daily maximum 1-hour average SO₂ concentrations, averaged over a 3-year period, exceeds 75 ppb.⁸

B. Designations, Classifications, and Attainment Dates for the 2008 Pb and 2010 SO₂ National Ambient Air Quality Standards

Following promulgation of any new or revised NAAQS, the EPA is required by CAA section 107(d) to designate areas throughout the nation as attaining or not attaining the NAAQS.

1. Hayden 2008 Pb Nonattainment Area

The initial designations for the 2008 Pb NAAQS were established in two rounds and were completed on November 22, 2010, and November 22, 2011.⁹ The EPA initially designated the Hayden, Arizona area as unclassifiable due to insufficient monitoring data.¹⁰ In June 2013, the EPA determined that quality assured, certified monitoring data collected in 2012 at the Arizona Department of Environmental Quality

(ADEQ or "State") Globe Highway monitor showed that the area was violating the Pb NAAQS. Accordingly, on May 2, 2014, the EPA proposed to redesignate the Hayden area to nonattainment for the 2008 Pb NAAQS, and on September 3, 2014, finalized the nonattainment designation, effective October 3, 2014.¹¹ Under CAA sections 172(a)(2) and 192(a), the attainment date for a Pb nonattainment area is the date by which attainment can be achieved as expeditiously as practicable, but no later than five years after the area is designated nonattainment. Therefore, the maximum attainment date for the Hayden Pb NAA is October 3, 2019.¹² The Hayden nonattainment area for the 2008 Pb NAAQS includes parts of Gila and Pinal counties.¹³

2. Hayden and Miami 2010 SO₂ Nonattainment Areas

On August 5, 2013, the EPA finalized its first round of designations for the 2010 primary SO₂ NAAQS.¹⁴ In the 2013 action, the EPA designated 29 areas in 16 states as nonattainment for the 2010 SO₂ NAAQS, including the Hayden and Miami areas in Arizona. The Hayden SO₂ NAA includes parts of Gila and Pinal counties and excludes the parts of Indian country located in the area. The Miami SO₂ NAA includes parts of Gila County and excludes parts of Indian country within the area.¹⁵ The EPA's initial round of designations for the 2010 SO₂ NAAQS including the Hayden and Miami SO₂ NAAs became effective on October 4, 2013. Pursuant to CAA sections 172(a)(2) and 192(a), the maximum attainment date for the Hayden and Miami SO₂ NAAs is October 4, 2018, five years after the effective date of the final action designating each area as nonattainment for the 2010 SO₂ NAAQS.

II. Proposed Determination and Consequences

A. Applicable Statutory and Regulatory Provisions

Section 179(c)(1) of the CAA requires the EPA to determine whether a nonattainment area attained an applicable standard by the applicable

¹ IQ is a score created by dividing a person's mental age score, obtained by administering an intelligence test, by the person's chronological age, both expressed in terms of years and months.

"Glossary of Important Assessment and Measurement Terms," Philadelphia, PA: National Council on Measurement in Education. 2016.

² 43 FR 46246 (October 5, 1978).

³ 73 FR 66964 (November 12, 2008).

⁴ 40 CFR 50.16.

⁵ 36 FR 8186 (April 30, 1971).

⁶ 40 CFR 50.4(e).

⁷ 75 FR 35520 (June 22, 2010).

⁸ 40 CFR 50.17.

⁹ See 75 FR 71033 (November 22, 2010); 76 FR 72097 (November 22, 2011).

¹⁰ Arizona Department of Environmental Quality's Globe Highway monitor registered four violations of the Pb NAAQS in 2011; however, at the time of designation the data had not been quality assured and certified. Consequently, the EPA could not rely on those violations as a basis for a nonattainment designation.

¹¹ 79 FR 52205 (September 3, 2014).

¹² ADEQ's "SIP Revision: Hayden Lead Nonattainment Area" (adopted on March 3, 2017), 18, describes "October 2019" as the attainment date for the area. Accordingly, in approving this SIP revision, 83 FR 56734 (November 14, 2018), the EPA established October 3, 2019 as the applicable attainment date for this area.

¹³ For an exact description of the Hayden Pb NAA, refer to 40 CFR 81.303.

¹⁴ 78 FR 47191 (August 5, 2013).

¹⁵ For exact descriptions of the Hayden and Miami SO₂ NAAs, refer to 40 CFR 81.303.

attainment date based on the area's air quality as of the attainment date.

A determination of whether an area's air quality meets applicable standards is generally based upon the most recent three years of complete, quality-assured data gathered at established state and local air monitoring stations (SLAMS) in a nonattainment area and entered into the EPA's Air Quality System (AQS) database.¹⁶ Data from ambient air monitors operated by state and local agencies in compliance with the EPA monitoring requirements must be submitted to AQS.¹⁷ Monitoring agencies annually certify that these data are accurate to the best of their knowledge.¹⁸ All data are reviewed to determine the area's air quality status in accordance with 40 CFR part 50, Appendix R (for Pb) and Appendix T (for SO₂).

We note that when determining the attainment status of SO₂ nonattainment areas, in addition to ambient monitoring data, the EPA may also consider air quality dispersion modeling and/or a demonstration that the control strategy in the SIP has been fully implemented.¹⁹ With regard to the use of monitoring data for such determinations, the EPA's 2014 SO₂ Guidance specifically notes that "[i]f the EPA determines that the air quality monitors located in the affected area are located in the area of maximum concentration, the EPA may be able to use the data from these monitors to make the determination of attainment without the use of air quality modeling data."²⁰ This language might be read to suggest that the EPA must always assess whether the air quality monitors in the affected area are located in the area of maximum concentration prior to using monitoring data to determine an SO₂ NAA's attainment status. However, this language was intended to refer to a situation where the EPA is considering making a determination that the area has attained the NAAQS based on a finding that all of the monitoring sites within the affected area had an attaining design value for the relevant period. As described in section II.C of this notice, in this instance, the monitoring sites in the Hayden and Miami SO₂ NAAs did not have attaining design values for the relevant period. Consequently, even if the monitoring sites are not located in the area of maximum concentration, any

monitors that would be located in the area of maximum concentration could not record concentrations lower than those recorded at the existing monitors at the Hayden and Miami sites. Accordingly, since the Hayden and Miami monitors are violating the NAAQS, it is not necessary to consider whether the monitors are located in the area of maximum concentration in order to determine that the Hayden and Miami SO₂ NAAs did not attain the 2010 SO₂ NAAQS by the October 4, 2018 attainment date. However, in any future assessment of whether these areas have attained the NAAQS, the EPA may assess whether the monitors are located in the area of maximum concentration and may also consider modeling and/or control implementation information, as appropriate.

1. Interpretation of the 2008 Pb Standard

Under EPA regulations in 40 CFR 50.16 and in accordance with 40 CFR part 50 Appendix R, the 2008 Pb standard is met when the design value is less than or equal to 0.15 µg/m³ at each eligible monitoring site within the area. The Pb design value at each eligible monitoring site is the maximum valid 3-month arithmetic mean Pb concentration calculated over three years. The 3-month mean Pb concentrations are rounded to the nearest hundredth µg/m³ for comparison to the NAAQS. Data completeness requirements for a given 3-month period are met if the average of the data capture rate of the three constituent monthly means is greater than or equal to 75 percent.²¹

2. Interpretation of the 2010 SO₂ Standard

Under EPA regulations in 40 CFR 50.17 and in accordance with 40 CFR part 50 Appendix T, the 2010 1-hour annual SO₂ standard is met when the design value is less than or equal to 75 ppb. Design values are calculated by computing the three-year average of the annual 99th percentile daily maximum 1-hour average concentrations.²² When calculating 1-hour primary standard design values, the calculated design values are rounded to the nearest whole number or 1 ppb by convention. An SO₂ 1-hour primary standard design value is valid if it encompasses three consecutive calendar years of complete

data. A year is considered complete when all four quarters are complete, and a quarter is complete when at least 75 percent of the sampling days are complete. A sampling day is considered complete if 75 percent of the hourly concentration values are reported; this includes data affected by exceptional events that have been approved for exclusion by the Administrator.²³

B. Monitoring Network Considerations

Section 110(a)(2)(B)(i) of the CAA requires states to establish and operate air monitoring networks to compile data on ambient air quality for all criteria pollutants. The EPA's monitoring requirements are specified by regulation in 40 CFR part 58. These requirements are applicable to state, and where delegated, local air monitoring agencies that operate criteria pollutant monitors. The regulations in 40 CFR part 58 establish specific requirements for operating air quality surveillance networks to measure ambient concentrations of Pb, including requirements for measurement methods, network design, quality assurance procedures, and in the case of large urban areas, the minimum number of monitoring sites designated as SLAMS.

In sections 4.4 and 4.5 of Appendix D to 40 CFR part 58, the EPA specifies minimum monitoring requirements for Pb and SO₂, respectively, to operate at SLAMS. SLAMS produce data that are eligible for comparison with the NAAQS, and therefore, the monitor must be an approved federal reference method (FRM), federal equivalent method (FEM), or approved regional method (ARM) monitor.

The minimum number of required Pb SLAMS is described in section 4.5 of Appendix D to 40 CFR part 58. There must be at least one source-oriented SLAMS site located to measure the maximum Pb concentration in ambient air resulting from each non-airport Pb source that emits 0.50 or more tons per year (tpy) and from each airport that emits 1.0 tpy or more based on either the most recent National Emission Inventory (NEI) or other scientifically justifiable methods and data. According to the 2017 NEI, two non-airport sources in Gila County, Arizona exceeded the 0.50 tpy threshold and therefore required source-oriented Pb monitoring: The Asarco LLC Hayden Smelter and the Freeport-McMoRan Miami Smelter.²⁴

¹⁶ AQS is the EPA's repository of ambient air quality data.

¹⁷ 40 CFR 58.16.

¹⁸ 40 CFR 58.15.

¹⁹ EPA, Guidance for 1-Hour SO₂ Nonattainment Area SIP Submissions (April 2014) ("2014 SO₂ Guidance"), 49.

²⁰ *Id.*, 50.

²¹ See 40 CFR part 50, Appendix R sections 1(c), 4(c), and 5(b).

²² As defined in 40 CFR part 50, Appendix T section 1(c), daily maximum 1-hour values refer to the maximum 1-hour SO₂ concentration values measured from midnight to midnight that are used in the NAAQS computations.

²³ See 40 CFR part 50, Appendix T sections 1(c), 3(b), 4(c), and 5(a).

²⁴ Arizona facility-level Pb emissions data from the 2017 NEI may be accessed on the EPA NEI website at <https://www.epa.gov/air-emissions->

The minimum number of required SO₂ SLAMS is described in sections 4.4.2 and 4.4.3 of Appendix D to 40 CFR part 58. According to section 4.4.2, the minimum number of required SO₂ monitoring sites is determined by the population weighted emissions index for each state's core based statistical area. Section 4.4.3 describes additional monitors that may be required by an EPA regional administrator.

Under 40 CFR 58.10, states are required to submit annual network plans (ANP) for ambient air monitoring networks for approval by the EPA. Within the Hayden Pb, Hayden SO₂, and Miami SO₂ NAAs, ADEQ is responsible for assuring that each area meets air quality monitoring requirements. ADEQ submits annual monitoring network plans to the EPA that describe the various monitoring sites operated by ADEQ.²⁵ Each ANP discusses the status of the air monitoring network as required under 40 CFR 58.10 and addresses the operation and maintenance of the air monitoring network in the previous year. The EPA regularly reviews these ANPs for compliance with the applicable reporting requirements in 40 CFR part 58.²⁶

The EPA also conducts regular "technical systems audits" (TSAs) during which we review and inspect ambient air monitoring programs to assess compliance with applicable regulations concerning the collection, analysis, validation, and reporting of ambient air quality data.²⁷ In our 2018 TSA of ADEQ, we concluded that ADEQ's ambient air monitoring network meets or exceeds the requirements for the minimum number of SLAMS for all criteria pollutants, including for Pb in the Hayden NAA and for SO₂ in the Hayden and Miami NAAs.²⁸

1. Hayden Pb Monitoring Network

ADEQ operated two Pb SLAMS during the November 2015–December 2018 data period within the Hayden Pb NAA: Globe Highway (AQS ID 04–007–

inventories/2017-national-emissions-inventory-nei-data and are included in our docket via an Excel spreadsheet.

²⁵ See, e.g., "State of Arizona Air Monitoring Network Plan for the Year 2019." Copies of Arizona's ANPs for 2016–2019 are included in the docket.

²⁶ See, e.g., letter dated November 8, 2019, from Gwen Yoshimura, Manager, EPA Region IX, Air Quality Analysis Office, to Daniel Czecholinski, Acting Director, Air Quality Division, ADEQ. Copies of EPA letters responding to Arizona's ANPs for 2016–2019 are included in the docket.

²⁷ See 40 CFR part 58, appendix A, section 2.5.

²⁸ See letter dated April 25, 2019, from Elizabeth Adams, Director, Air Division, EPA Region IX, to Timothy Franquist, Director, Air Quality Division, ADEQ.

1002) and Hillcrest (AQS ID 04–025–8104). The Globe Highway site is located along State Route 77 in Winkelman. The Hillcrest site, which began monitoring on January 1, 2016, is located at 123 S. Hillcrest Avenue in Hayden.²⁹ The primary and secondary monitors at each Pb monitoring site are FEM monitors.

Based on our review of ADEQ's ANPs for the years 2016–2019³⁰ and the 2018 TSA of ADEQ's monitoring program, we propose to find that the monitoring network in the Hayden Pb NAA is adequate for the purpose of collecting ambient Pb concentration data for use in determining whether the Hayden Pb NAA attained the 2008 Pb NAAQS by the October 3, 2019 attainment date.

2. Hayden SO₂ and Miami SO₂ Monitoring Networks

During the 2015–2017 data period, ADEQ operated one SO₂ SLAMS in the Hayden SO₂ NAA: Hayden Old Jail (AQS ID 04–007–1001); and three SO₂ SLAMS in the Miami SO₂ NAA: Miami Ridgeline (AQS ID 04–007–0009); Miami Jones Ranch (AQS ID 04–007–0011); and Miami Townsite (AQS ID 04–007–0012). The Hayden Old Jail site is located on Canyon Drive and Kennecott Avenue in Hayden. The three SO₂ SLAMS in the Miami SO₂ NAA are located in Miami. The Miami Ridgeline site is located on 4030 Linden Street;³¹ the Miami Jones Ranch site is located on Cherry Flats Road; and the Miami Townsite site is located on Sullivan Street and Davis Canyon Road. The primary monitors at each of these sites are FEM monitors.²¹

Based on our review of ADEQ's ANPs for the years 2016–2018³² and the 2018 TSA of ADEQ's monitoring program, we propose to find that the monitoring networks in the Hayden SO₂ and Miami SO₂ NAAs are adequate for the purpose of collecting ambient SO₂ concentration data for use in determining whether each nonattainment area attained the 2010 SO₂ NAAQS by the October 4, 2018 attainment date.

²⁹ Refer to Appendices C and D of the "State of Arizona Air Monitoring Network Plan For the Year 2019" (July 2019) for detailed descriptions and locations of each Pb monitor.

³⁰ ADEQ's ANPs for 2016–2019 address the operation and maintenance of their air monitoring network for 2015–2018.

³¹ The Miami Ridgeline site was closed on September 6, 2017, with EPA approval. Letter dated September 19, 2017, from Elizabeth Adams, Acting Director, Air Division, EPA Region IX, to Timothy S. Franquist, Director, Air Quality Division, ADEQ.

³² ADEQ's ANPs for 2016–2018 address the operation and maintenance of their air monitoring network for 2015–2017.

C. Data Considerations and Proposed Determination

Under 40 CFR 58.15, monitoring agencies must certify, on an annual basis, data collected at all SLAMS and at all FRM, FEM, and ARM special purpose monitor stations that meet EPA quality assurance requirements. In doing so, monitoring agencies must certify that the previous year of ambient concentration and quality assurance data are completely submitted to AQS and that the ambient concentration data are accurate to the best of their knowledge. ADEQ annually certifies that the data it submits to AQS are quality assured, including data collected by ADEQ at monitoring sites in the Hayden Pb NAA, Hayden SO₂ NAA, and Miami SO₂ NAA.³³

1. Pb Data Considerations

As noted in Section II.A of this notice, CAA section 179(c)(1) requires the EPA to determine whether a nonattainment area attained an applicable standard by the applicable attainment date, based on the area's air quality "as of the attainment date." For the Hayden Pb NAA, for reasons discussed in Section I.B.1 of this notice, the applicable attainment date is October 3, 2019, with respect to the 2008 Pb NAAQS. In accordance with Appendix R to 40 CFR part 50, compliance with the Pb NAAQS is determined based on data from 36 consecutive valid 3-month periods (*i.e.*, 38 months, or a 3-year calendar period and the preceding November and December). Considering the applicable attainment date of October 3, 2019, for the 2008 Pb NAAQS, we must review the data collected in the Hayden Pb NAA from November 1, 2015–December 31, 2018. The Pb data collected in the Hayden Pb NAA from November 1, 2015–December 31, 2018 have been certified by ADEQ.³⁴

We have also evaluated the completeness of these data in accordance with the requirements of 40 CFR part 50 Appendix R. As detailed in 40 CFR part 50 Appendix R section 4(c)(i), a 3-month mean Pb value is determined to be valid (*i.e.*, meets data completeness requirements) if the average of the data capture rate of the three constituent monthly means is greater than or equal to 75 percent. The data collected by ADEQ at the Globe Highway monitoring site meet this

³³ See, e.g., letter from Timothy S. Franquist, Director, Air Quality Division ADEQ, to Gwen Yoshimura, Manager, Air Quality Analysis Office, EPA Region IX, certifying calendar year 2018 ambient air quality data and quality assurance data, dated May 1, 2019. Copies of annual certification letters from 2016–2019 are included in the docket.

³⁴ *Id.*

completeness criterion for each 3-month period from November 2015–December 2018. The Hillcrest monitoring site began collecting data on January 1, 2016. Three full months of data are therefore not available for the 3-month periods from November 2015–January 2016 and December 2015–February 2016. The data collected by ADEQ at the

Hillcrest monitoring site meet the Pb completeness criterion for each of the 34 available 3-month periods from January 2016–December 2018.³⁵

2. Pb Data

The Pb design values at both SLAMS within the Hayden Pb NAA for the relevant 36 consecutive 3-month

periods beginning November 2015 through December 2018 are presented in Table 1 of this notice. Table 1 demonstrates that the Pb design values for the November 2015–December 2018 data period are greater than 0.15 $\mu\text{g}/\text{m}^3$ at the Globe Highway and Hillcrest monitoring sites.

TABLE 1—2016–2018 PB DESIGN VALUES FOR THE HAYDEN PB NONATTAINMENT AREA

| Site (AQS ID) | Highest 3-month rolling average | | | Pb design value ($\mu\text{g}/\text{m}^3$) |
|-----------------------------------|---------------------------------|------|------|--|
| | 2016 | 2017 | 2018 | |
| Globe Highway (04–007–1002) | 0.14 | 0.21 | 0.15 | 0.21 |
| Hillcrest (04–007–1003) | ^a 0.31 | 0.28 | 0.23 | 0.31 |

Notes:

^a Three full months of data are not available for the first two 3-month periods (*i.e.*, November 2015–January 2016 and December 2015–February 2016) at the Hillcrest Monitoring site. However, based on the “above NAAQS level” test described in 40 CFR part 58, Appendix R, Section 4(c)(ii)(A), the February 2016 3-month rolling average of 0.31 $\mu\text{g}/\text{m}^3$ is considered valid.

Source: EPA, Design Value Report, November 3, 2020.

The 2018 annual design value site (*i.e.*, the site with the highest design value based on November 2015–December 2018 data) is the Hillcrest site with a Pb design value of 0.31 $\mu\text{g}/\text{m}^3$. Because the Hillcrest monitoring site began operation on January 1, 2016, three full months of monitoring data are not available for the 3-month periods from November 2015–January 2016 and December 2015–February 2016. The EPA applied the “above NAAQS level” test described in 40 CFR 50 Appendix R, Section 4(c)(ii)(A) to determine if the 3-month rolling average ending February 2016 could be considered valid. The 3-month period passed the diagnostic test described therein. Therefore, the February 2016 3-month rolling average of 0.31 $\mu\text{g}/\text{m}^3$ is considered valid.

For the area to attain the 2008 Pb NAAQS by October 3, 2019, the Pb design value reflecting data from November 2015–December 2018 at each eligible monitoring site must be equal to or less than 0.15 $\mu\text{g}/\text{m}^3$. As shown in Table 1, the 2018 design values at both sites in the Hayden Pb NAA are greater than 0.15 $\mu\text{g}/\text{m}^3$. Therefore, based on quality-assured and certified data for November 2015–December 2018, we are proposing to determine that the Hayden

Pb NAA failed to attain the 2008 Pb standard by the October 3, 2019 attainment date.

3. SO₂ Data Considerations

For the Miami and Hayden SO₂ NAAs, for reasons discussed in section I.B.2 of this notice, the applicable attainment date is October 4, 2018. In accordance with Appendix T to 40 CFR part 50, determinations of SO₂ NAAQS compliance are based on three consecutive calendar years of data. To determine the air quality as of the attainment date in each nonattainment area, we must review the data collected during the three calendar years immediately preceding the attainment date for the Hayden and Miami SO₂ NAAs, or January 1, 2015–December 31, 2017.

The SO₂ data for the Hayden and Miami SO₂ NAAs from January 1, 2015–December 31, 2017, have been certified by ADEQ. We have also evaluated the completeness of these data in accordance with the requirements of 40 CFR part 50, Appendix T. The data collected by ADEQ meet the quarterly completeness criterion for all 12 quarters in the three calendar years preceding the attainment date at the Hayden Old Jail and Miami Jones Ranch

SO₂ monitoring sites. The data collected by ADEQ in the three calendar years preceding the attainment date meet the quarterly completeness criteria for only 11 out of 12 quarters at the Miami Townsite SO₂ monitor and 10 out of 12 quarters at the Miami Ridgeline SO₂ monitor. The Miami Townsite SO₂ monitor collected only three quarters of complete data in 2016 because a portion of the data collected in the 1st quarter of 2016 (January 2016–March 2016) was invalidated for not meeting quality assurance requirements. In 2017, the Miami Ridgeline monitor did not meet completeness criteria for the 2nd quarter (April 2017–June 2017) because a portion of data was not collected due to a collection error and machine malfunction, nor for the 4th quarter (October 2017–December 2017) because the site shut down on September 26, 2017.³⁶

4. SO₂ Data

The 1-hour SO₂ design values at each monitoring site within the Hayden and Miami SO₂ NAAs for the 2015–2017 period are presented in Table 2. Table 2 demonstrates that the 1-hour SO₂ design values for the 2015–2017 period are greater than 75 ppb at each eligible monitoring site.

³⁵ See footnote a to Table 1 of this document for a discussion of how we considered the data in these periods after initiation of the Hillcrest monitoring site.

³⁶ See the March 22, 2021 AQS Raw Data Report for SO₂ monitors in the Hayden and Miami SO₂ NAAs showing hourly data from the Miami

Townsite and Miami Ridgeline monitors throughout 2016 and 2017.

TABLE 2—2015–2017 1-HOUR DESIGN VALUES FOR THE HAYDEN AND MIAMI SO₂ NONATTAINMENT AREAS

| Site (AQS ID) | Annual 99th percentile daily maximum 1-hour average | | | 1-hour design value (ppb) | Design value valid? |
|---------------------------------------|---|------------------|-----------------|---------------------------|---------------------|
| | 2015 | 2016 | 2017 | | |
| Hayden Old Jail (04–007–1001) | 246 | 359 | 280 | 295 | Yes. |
| Miami Ridgeline (04–007–0009) | 171 | 120 | ^a 99 | 130 | No. |
| Miami Townsite (04–007–0012) | 231 | ^b 110 | 135 | 159 | Yes. |
| Miami Jones Ranch (04–007–0011) | 242 | 150 | 270 | 221 | Yes. |

Notes:

^a The Miami Ridgeline monitor failed to meet completeness criteria for the 2nd quarter of 2017 (April 2017–June 2017) and for the 4th quarter of 2017 (October 2017–December 2017).

^b The Miami Townsite monitor had only three quarters of complete data in 2016 because a portion of the data collected in the 1st quarter of 2016 was invalidated for not meeting quality assurance requirements.

Source: EPA, Design Value Report, November 30, 2020.

The data in Table 2 demonstrate that one site in the Hayden SO₂ NAA and two sites in the Miami SO₂ NAA failed to attain the 2010 1-hour SO₂ NAAQS by the applicable attainment date of October 4, 2018, while a third site in the Miami NAA, the Ridgeline monitor, did not have a valid design value for this period. Though the annual 99th percentile daily maximum 1-hour average at the Miami Townsite monitor did not meet applicable completeness criteria for all three years in the 2015–2017 data period, the 3-year design value for Miami Townsite was deemed valid due to meeting the criteria in 40 CFR part 50 Appendix T, section 3(c)(i), which requires that “at least 75 percent of the days in each quarter of each of three consecutive years have at least one reported hourly value, and the design value calculated according to the procedures specified in section 5 is above the level of the primary 1-hour standard.” The 3-year design value for Miami Ridgeline is not considered valid because the site did not meet the conditions in 40 CFR part 50 Appendix T, section 3(c)(i), (ii), or (iii) to allow for incomplete design values to be considered valid.

The annual design value site in each NAA is the site with the highest design value based on 2015–2017 data. In the Hayden SO₂ NAA, the annual design value site is the Hayden Old Jail site with a 1-hour SO₂ design value of 295 ppb. In the Miami SO₂ NAA, the annual design value site is the Miami Jones Ranch site with a 1-hour SO₂ design value of 221 ppb.

For an area to attain the 2010 SO₂ NAAQS by the October 4, 2018 attainment date, the design value based upon monitored air quality data from 2015–2017 at each eligible monitoring site must be equal to or less than 75 ppb for the 1-hour standard. Table 2 shows that the design values at each monitoring site in the Hayden and Miami SO₂ NAAs exceed 75 ppb.

Therefore, based on quality-assured and certified data for the 2015–2017 data period, we are proposing to determine that both the Hayden SO₂ NAA and Miami SO₂ NAA failed to attain the 2010 1-hour SO₂ standard by the October 4, 2018 attainment date.

D. Consequences for Pb and SO₂ Nonattainment Areas Failing To Attain Standards by Attainment Dates

The consequences for Pb and SO₂ nonattainment areas for failing to attain the standards by the applicable attainment date are set forth in CAA section 179(d). Under section 179(d), a state must submit a SIP revision for the area meeting the requirements of CAA sections 110 and 172, the latter of which requires, among other elements, a demonstration of attainment and reasonable further progress and contingency measures. In addition, under CAA section 179(d)(2), the SIP revision must include such additional measures as the EPA may reasonably prescribe, including all measures that can be feasibly implemented in the area in light of technological achievability, costs, and any non-air quality and other air quality-related health and environmental impacts. In this case, the dominant source of Pb and SO₂ emissions in the Hayden Pb and SO₂ NAAs is the Asarco Hayden Smelter, and the dominant source of SO₂ emissions in the Miami SO₂ NAA is the Freeport-McMoRan Miami Smelter. Due to the unique nature of these two facilities, which are the only two batch-process primary copper smelters in the country, we do not have adequate information to propose specific additional controls at this time. However, we are seeking comment on what additional measures could be feasibly implemented at these facilities in light of technological achievability, costs, and any non-air quality and other air quality-related health and environmental impacts. We also expect

that information concerning such potential additional control measures would be collected by ADEQ as part of its development of SIP revisions to address the requirements that would be triggered by a final finding of failure to attain for these areas.

The state is required to submit the SIP revision within one year after the EPA publishes a final action in the **Federal Register** determining that the nonattainment area failed to attain the applicable Pb or SO₂ standard. We note that on November 10, 2020, the EPA published an action partially disapproving the 2010 SO₂ attainment plan for the Hayden nonattainment area.³⁷ Although a final finding of failure to attain will not eliminate the state’s obligation to address the disapproved elements of its prior plan submittal, the EPA anticipates that Arizona’s submission of a new, approvable attainment plan in response to this finding would also satisfy these obligations.

In addition to triggering requirements for a new SIP submittal, a final determination that a nonattainment area failed to attain the NAAQS by the attainment date would trigger the implementation of contingency measures adopted under 172(c)(9).

Under CAA sections 179(d)(3) and 172(a)(2), the new attainment date for each nonattainment area is the date by which attainment can be achieved as expeditiously as practicable, but no later than five years after the EPA publishes a final action in the **Federal Register** determining that the nonattainment area failed to attain the applicable Pb or SO₂ standard.³⁸

³⁷ 85 FR 71547.

³⁸ Pursuant to CAA sections 172(a)(2)(D) and 192(a), the attainment date extension provision under section 172(a)(2)(A) does not apply to the Pb or SO₂ NAAQS.

III. Proposed Action and Request for Public Comment

Under CAA section 179(c)(1), the EPA proposes to determine that the Hayden Pb NAA failed to attain the 2008 Pb standard by the applicable attainment date of October 3, 2019. Under CAA section 179(c)(1), the EPA also proposes to determine that the Hayden SO₂ NAA and the Miami SO₂ NAA failed to attain the 2010 1-hour SO₂ standard by the applicable attainment date of October 4, 2018. If finalized as proposed, the State of Arizona would be required under CAA section 179(d) to submit revisions to the SIP for the Hayden Pb NAA, Hayden SO₂ NAA, and Miami SO₂ NAA. The required SIP revision for each area must, among other elements, demonstrate expeditious attainment of the standards within the time period prescribed by CAA section 179(d). If finalized as proposed, the SIP revisions required under CAA section 179(d) would be due for submittal to the EPA no later than one year after the publication date of the final action.

The EPA is soliciting public comments on the issues discussed in this notice. We will accept comments from the public on this proposal for the next 30 days. We will consider these comments before taking final action.

IV. Statutory and Executive Order Reviews

Additional information about these statutes and Executive Orders can be found at <http://www2.epa.gov/laws-regulations/laws-and-executive-orders>.

A. Executive Order 12866: Regulatory Planning and Review, and Executive Order 13563: Improving Regulation and Regulatory Review

This action is not a significant regulatory action and therefore was not submitted to the Office of Management and Budget (OMB) for review.

B. Paperwork Reduction Act (PRA)

This action does not impose an information collection burden under the provisions of the PRA because it does not contain any information collection activities.

C. Regulatory Flexibility Act (RFA)

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA. This action will not impose any requirements on small entities. This proposed action, if finalized, would require the state to adopt and submit SIP revisions to satisfy CAA requirements and would not itself directly regulate any small entities.

D. Unfunded Mandates Reform Act (UMRA)

This action does not contain any unfunded mandate of \$100 million or more, as described in UMRA (2 U.S.C. 1531–1538) and does not significantly or uniquely affect small governments. This action itself imposes no enforceable duty on any state, local, or tribal governments, or the private sector. This action proposes to determine that the Hayden Pb NAA and the Hayden and Miami SO₂ NAAs failed to attain the NAAQS by the applicable attainment dates. If finalized, this determination would trigger existing statutory timeframes for the State to submit SIP revisions. Such a determination in and of itself does not impose any federal intergovernmental mandate.

E. Executive Order 13132: Federalism

This action does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government.

F. Executive Order 13175, Consultation and Coordination With Indian Tribal Governments

This action does not have tribal implications as specified in Executive Order 13175. The proposed finding of failure to attain the Pb and SO₂ NAAQS does not apply to tribal areas, and the proposed rule would not impose a burden on Indian reservation lands or other areas where the EPA or an Indian tribe has demonstrated that a tribe has jurisdiction within the Hayden Pb, Hayden SO₂ and Miami SO₂ nonattainment areas. Thus, this proposed rule does not have tribal implications and will not impose substantial direct costs on tribal governments or preempt tribal law as specified by Executive Order 13175. Nonetheless, the EPA has notified the San Carlos Apache Tribe of the San Carlos Reservation, which borders the eastern boundary of the Hayden Pb and Hayden SO₂ NAAs, of the proposed action.

G. Executive Order 13045, Protection of Children From Environmental Health Risks and Safety Risks

The EPA interprets Executive Order 13045 as applying only to those regulatory actions that concern environmental health or safety risks that the EPA has reason to believe may disproportionately affect children, per the definition of “covered regulatory

action” in section 2–202 of the Executive Order. This proposed action is not subject to Executive Order 13045 because the effect of this proposed action, if finalized, would be to trigger additional planning requirements under the CAA. This proposed action does not establish an environmental standard intended to mitigate health or safety risks.

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

This proposed rule is not subject to Executive Order 13211, because it is not a significant regulatory action under Executive Order 12866.

I. National Technology Transfer and Advancement Act (NTTAA)

This rulemaking does not involve technical standards.

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

The EPA believes that this action does not have disproportionately high and adverse human health or environmental effects on minority populations, low-income populations and/or indigenous peoples, as specified in Executive Order 12898 (59 FR 7629, February 16, 1994). The effect of this proposed action, if finalized, would be to trigger additional planning requirements under the CAA.

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Lead, Pollution, Sulfur dioxide.

Dated: April 23, 2021.

Deborah Jordan,

Acting Regional Administrator, Region IX.

[FR Doc. 2021–09215 Filed 5–7–21; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA–R09–OAR–2021–0176; FRL–10023–40–Region 9]

Approval of California Air Plan Revision, Imperial County Air Pollution Control District

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing to approve a revision to the Imperial County Air

**ASARCO LLC's Comments on Proposed "Finding of Failure to Attain the 2008 Lead and 2010 Sulfur Dioxide Standards; Arizona; Hayden and Miami Nonattainment Areas,"
86 Fed. Reg. 24829 (May 10, 2021) – Docket ID No. EPA-R09-OAR-2021-0078**

Quality Control and Quality Assurance of Data on Which the Proposed Finding is Based

Attachment 3

ADEQ's Affirmation Concerning the Records that ADEQ Produced

From: Daniel Czecholinski <czecholinski.daniel@azdeq.gov>
Sent: Wednesday, June 2, 2021 10:40 AM
To: gtsiolis@nj.rr.com
Subject: Re: Asarco's Public Records Request

Good morning George,

I was able to confirm that we have provided all the data, except for the emails, per Asarco's records request.

Thanks,

Daniel

Daniel Czecholinski, CHMM
Director, Air Quality Division
Ph: 602-771-4684



azdeq.gov

Your feedback matters to ADEQ. Visit azdeq.gov/feedback

On Tue, Jun 1, 2021 at 5:30 PM <gtsiolis@nj.rr.com> wrote:

Thank you, Daniel.

Completely understood, this is a tight timeframe all around!

I'll look out for your e-mail tomorrow.

Cheers,

George A. Tsiolis
Attorney at Law
602-319-4021
201-408-4256
www.gtsiolis.com

Counsel for ASARCO LLC

This email is intended only for the use of the party to which it is addressed and may contain information that is privileged, confidential, or protected by law. If you are not the intended recipient of this e-mail or have received this email in error, please delete it from your system and contact 602-319-4021. Thank you.

From: Daniel Czecholinski <czecholinski.daniel@azdeq.gov>

Sent: Tuesday, June 1, 2021 7:34 PM

To: gtsiolis@nj.rr.com

Subject: Re: Asarco's Public Records Request

George,

I believe we have provided all the data but I cannot confirm this with the records center staff until tomorrow morning. As soon as I get confirmation I will let you know. Sorry for the delay.

Daniel

Daniel Czecholinski, CHMM

Director, Air Quality Division

Ph: 602-771-4684



azdeq.gov

Your feedback matters to ADEQ. Visit azdeq.gov/feedback

On Tue, Jun 1, 2021 at 2:07 PM <gtsiolis@nj.rr.com> wrote:

Hi Daniel,

Thank you again for the conference call earlier today.

Regarding whether there are other records, beyond e-mails, that ADEQ might yet produce in response to Asarco's public records request, please let me know at this e-mail address.

Thank you!

George A. Tsiolis
Attorney at Law
602-319-4021
201-408-4256
www.gtsiolis.com

Counsel for ASARCO LLC

This email is intended only for the use of the party to which it is addressed and may contain information that is privileged, confidential, or protected by law. If you are not the intended recipient of this e-mail or have received this email in error, please delete it from your system and contact 602-319-4021. Thank you.

From: mail@sf-notifications.com <mail@sf-notifications.com>
Sent: Wednesday, May 26, 2021 3:42 PM
To: gtsiolis@nj.rr.com
Subject: CTS# 407982-ASARCO



Cina Sheffield has sent you files.

Expires 6/2/21

A note from Cina :
George,

I have attached the files pertaining to ASARCO (Data SO2) in this ShareFile upload.
Please let me know if you have questions or concerns.

This link is only available for download for 7 days.

Thank you
Cina Sheffield
Record Center Manager
602-771-8709

[Download](#)

Trouble with the above link? You can copy and paste the following URL into your web browser:

<https://azdeq.sharefile.com/d-c8e38945ee3a45a4>

ShareFile is a tool for sending, receiving, and organizing your business files online. It can be used as a password-protected area for sharing information with clients and partners, and it's an easy way to send files that are too large to e-mail.

Powered By Citrix ShareFile 2021

From: Cina Sheffield <sheffield.cina@azdeq.gov>
Sent: Wednesday, May 26, 2021 3:24 PM
To: gtsiolis@nj.rr.com
Subject: Re: (CTS# 407982)-Asarco's Public Records Request - Records Underlying Design Values

Good afternoon,

This email is to inform you that I am in the process of preparing an email to send you some files via Citrix SHareFie upload responsive to your request. Should you have any questions or concerns after the upload please let me know. From my understanding there are also some emails that pertain to your request, that pull was extensive, due to the amount of emails involved the review of those by the AIR Quality staff this may take a few days.

Thank you

Cina Sheffield
Records Center Manager
Ph: 602-771-8709



azdeq.gov

Your feedback matters to ADEQ. Visit azdeq.gov/feedback

**ASARCO LLC's Comments on Proposed "Finding of Failure to Attain the 2008 Lead and 2010 Sulfur Dioxide Standards; Arizona; Hayden and Miami Nonattainment Areas,"
86 Fed. Reg. 24829 (May 10, 2021) – Docket ID No. EPA-R09-OAR-2021-0078**

Quality Control and Quality Assurance of Data on Which the Proposed Finding is Based

Attachment 4

Asarco's Administrative Completeness Review of ADEQ's Records

General Requirements

1. The requirement that the QAPP, pursuant to which the Relevant Air Quality Data were generated, was in existence and compliant with Appendix A §§ 2.1, 2.1.1 and 2.1.2 [formerly Appendix A §§ 1.2, 2.1 and 2.1.1] prior to the generation of those Data. Appendix A § 2.1.2 [formerly Appendix A § 2.1.2].

ADEQ's 2014 SO₂ QAPP

Includes approval signature by Eugenia McNaughton, Ph.D.

ADEQ's 2013 Lead QAPP

Includes approval letter by Eugenia McNaughton, Ph.D.

Appendix A § 2.1.2 – “The QAPP is a formal document describing . . . the quality system that must be implemented to ensure that the results of work performed will satisfy the stated objectives” including how ADEQ “intends to control measurement uncertainty”.

Appendix A § 2.1.3 – Makes the “achievement of” ADEQ’s approved QAPP, alongside ADEQ’s achievement of the requirements of Appendix A, a benchmark of the quality of the data for design value purposes.

2. The requirements that a technical systems audit be conducted at least every 3 years by U.S. EPA Region 9 and reported to the AQS in accordance with Appendix A § 2.5 [formerly Appendix A § 2.5].

EPA’s rulemaking docket includes a 2019-4-25 report of findings of the 2018 TSA.

Sulfur Dioxide Requirements

3. The rule that the goal for acceptable measurement uncertainty for SO₂ is defined for precision as an upper 90% confidence limit for the coefficient of variation (“CV”) of 10%. Appendix A § 2.3.1.5 [formerly Appendix A § 2.3.1.6].

ADEQ’s 2014-approved SO₂ QAPP – states:

- [p. 36] The QAPP’s Measurement Quality Objectives (MQOs) will ensure Appendix A precision requirements are satisfied
- [p. 36] The equation for precision estimates
- [p. 39] “The goal for acceptable measurement uncertainty for precision using the AMU one-point QC check (precision points) is defined as an upper 90% confidence limit for the coefficient of variation (CV) of 10%.”

ADEQ's Data Quality Indicator Report
AMP256
Site 1001
15Q1-15Q4
Values reported without foundation

ADEQ's Data Quality Indicator Report
AMP256
Site 1001
16Q1-16Q4
Values reported without foundation

ADEQ's Data Quality Indicator Report
AMP256
Site 1001
17Q1-17Q4
Values reported without foundation

ADEQ's Quick Look Report
AMP450
Site 1001
2015-2017
No indication

ADEQ's 1-Point QC Assessment and Annual PE Spreadsheet
AMP504
Site 1001
2015
No indication

ADEQ's 1-Point QC Assessment and Annual PE Spreadsheet
AMP504
Site 1001
2016
No indication

ADEQ's 1-Point QC Assessment and Annual PE Spreadsheet
AMP504
Site 1001
2017
No indication

ADEQ's "April 27, 2015" Letter Certifying 2015 Data
No specific discussion

ADEQ's 2017-4-05 Letter Certifying 2016 Data
No specific discussion

ADEQ's 2018-4-27 Letter Certifying 2017 Data
No specific discussion

ADEQ's Data Completeness Reports
AMP430
2015, 2016, 2017
No indication

ADEQ's Certification Evaluation and Concurrence
AMP600
2015
Data Evaluation and Concurrence Report for Gaseous Pollutants
Site 1001
Values reported without foundation

ADEQ's Certification Evaluation and Concurrence
AMP600
2016
Data Evaluation and Concurrence Report for Gaseous Pollutants
Site 1001
Values reported without foundation

ADEQ's Certification Evaluation and Concurrence
AMP600
2017
Data Evaluation and Concurrence Report for Gaseous Pollutants
Site 1001
Values reported without foundation

Quick Look All Parameters
AMP450
Including Site 1001
2016 and 2017
No indication

ADEQ's Raw Ambient Data Reports and Spreadsheets
AMP350
Site 1001
2015-2018
Not directly indicated

4. The rule that the goal for acceptable measurement uncertainty for SO₂ is defined for bias as an upper 95% confidence limit for the absolute bias of 10%. Appendix A § 2.3.1.5 [formerly Appendix A § 2.3.1.6].

ADEQ's 2014-approved SO₂ QAPP – states:

- [p. 36] The QAPP's MQOs will ensure Appendix A precision requirements are satisfied
- [p. 37] The equation for bias estimates
- [p. 39] “The goal for bias using the AMU one-point QC check as an upper 95% confidence limit for the absolute bias of 10%.”

ADEQ's Data Quality Indicator Report

AMP256

Site 1001

15Q1-15Q4

Values reported without foundation

ADEQ's Data Quality Indicator Report

AMP256

Site 1001

16Q1-16Q4

Values reported without foundation

ADEQ's Data Quality Indicator Report

AMP256

Site 1001

17Q1-17Q4

Values reported without foundation

ADEQ's Quick Look Report

AMP450

Site 1001

2015-2017

No indication

ADEQ's 1-Point QC Assessment and Annual PE Spreadsheet

AMP504

Site 1001

2015

No indication

ADEQ's 1-Point QC Assessment and Annual PE Spreadsheet

AMP504

Site 1001

2016

No indication

ADEQ's 1-Point QC Assessment and Annual PE Spreadsheet
AMP504
Site 1001
2017
No indication

ADEQ's "April 27, 2015" Letter Certifying 2015 Data
No specific discussion

ADEQ's 2017-4-05 Letter Certifying 2016 Data
No specific discussion

ADEQ's 2018-4-27 Letter Certifying 2017 Data
No specific discussion

ADEQ's Data Completeness Reports
AMP430
2015, 2016, 2017
No indication

ADEQ's Certification Evaluation and Concurrence
AMP600
2015
Data Evaluation and Concurrence Report for Gaseous Pollutants
Site 1001
Values reported without foundation

ADEQ's Certification Evaluation and Concurrence
AMP600
2016
Data Evaluation and Concurrence Report for Gaseous Pollutants
Site 1001
Values reported without foundation

ADEQ's Certification Evaluation and Concurrence
AMP600
2017
Data Evaluation and Concurrence Report for Gaseous Pollutants
Site 1001
Values reported without foundation

Quick Look All Parameters

AMP450

Including Site 1001

2016 and 2017

No indication

ADEQ's Raw Ambient Data Reports and Spreadsheets

AMP350

Site 1001

2015-2018

Not directly indicated

5. The requirement that gaseous pollutant concentration standards used to obtain test concentrations for SO₂ must be traceable to either a National Institute of Standards and Technology (“**NIST**”) Traceable Reference Material or a NIST-certified Gas Manufacturer’s Internal Standard, certified in accordance with one of the procedures cited in Appendix A § 2.6.1 [formerly Appendix A § 2.6.1].

ADEQ’s 2014-approved SO₂ QAPP – states:

- [p. 36] The QAPP’s MQOs will ensure Appendix A precision requirements are satisfied
- [p. 41] “ADEQ will use NIST-traceable calibration standards, e.g., flow meter devices, EPA-protocol SO₂ gas cylinders, and gas calibrators . . . traceability means that a local standard has been compared and certified, either directly or via not more than one intermediate standard, to a NIST-certified primary standard such as a NIST-traceable Reference Material (NTRM) or a NIST-certified Gas Manufacturer’s Internal Standard (GMIS).”
- [pp. 44, 94-97 and .pdf pp. 355 and 396] “Field sheets” will be used to document compliance with these field QC requirements – *ADEQ’s records production did not include field sheets concerning the SO₂ monitors* → [.pdf pp. 415-422] Field zero/span/precision verification checks and calibrations shall be recorded on “the Sulfur Dioxide (SO₂) Z/S/P and Calibration Reports field sheet – *None were included in ADEQ’s records production*
- [p. 57] “Quality control procedures include, but are not limited to: *periodically obtaining required NIST- traceable certifications for calibration standards/references, also known as (aka), calibrators, verifying NIST-traceability for EPA-protocol test gases . . .*” – *No records indicating compliance.*
- [p. 58 – Table B.2] “Acceptance Criteria for Operating the SO₂ Analyzers in Actual Conditions” – “Standards (References)” requirements – *No records indicating compliance*
- [p. 63] “The purpose of calibration is to minimize bias. Typical calibration activities follow a two-step process: 1. certifying the calibration standards against an authoritative standard . . . the NIST . . .”

- [p. 102] NIST-traceable certifications are supposed to be available for EPA's TSAs and also reviewed as part of ADEQ's TSAs – *No records indicating compliance*

ADEQ's Data Quality Indicator Report
AMP256
Site 1001
15Q1-15Q4
No indication

ADEQ's Data Quality Indicator Report
AMP256
Site 1001
16Q1-16Q4
No indication

ADEQ's Data Quality Indicator Report
AMP256
Site 1001
17Q1-17Q4
No indication

ADEQ's Quick Look Report
AMP450
Site 1001
2015-2017
No indication

ADEQ's 1-Point QC Assessment and Annual PE Spreadsheet
AMP504
Site 1001
2015
No indication

ADEQ's 1-Point QC Assessment and Annual PE Spreadsheet
AMP504
Site 1001
2016
No indication

ADEQ's 1-Point QC Assessment and Annual PE Spreadsheet
AMP504
Site 1001
2017
No indication

ADEQ's "April 27, 2015" Letter Certifying 2015 Data
No specific discussion

ADEQ's 2017-4-05 Letter Certifying 2016 Data
No specific discussion

ADEQ's 2018-4-27 Letter Certifying 2017 Data
No specific discussion

ADEQ's Data Completeness Reports
AMP430
2015, 2016, 2017
No indication

ADEQ's Certification Evaluation and Concurrence
AMP600
2015
Data Evaluation and Concurrence Report for Gaseous Pollutants
No specific discussion

ADEQ's Certification Evaluation and Concurrence
AMP600
2016
Data Evaluation and Concurrence Report for Gaseous Pollutants
No specific discussion

ADEQ's Certification Evaluation and Concurrence
AMP600
2017
Data Evaluation and Concurrence Report for Gaseous Pollutants
Site 1001
No specific discussion

Quick Look All Parameters
AMP450
Including Site 1001
2016 and 2017
No indication

ADEQ's Raw Ambient Data Reports and Spreadsheets
AMP350
Site 1001
2015-2018
No indication

6. The requirement that flow-rate measurements must be made by a flow measuring instrument that is NIST-traceable to an authoritative volume or other applicable standard and certified in accordance with the guidance cited in Appendix A § 2.6.3 [formerly Appendix A § 2.6.3].

ADEQ's 2014-approved SO₂ QAPP – states:

- [p. 36] The QAPP's MQOs will ensure Appendix A precision requirements are satisfied
- [p. 41] “ADEQ will use NIST-traceable calibration standards, e.g., flow meter devices, EPA-protocol SO₂ gas cylinders, and gas calibrators . . . traceability means that a local standard has been compared and certified, either directly or via not more than one intermediate standard, to a NIST-certified primary standard such as a NIST-traceable Reference Material (NTRM) or a NIST-certified Gas Manufacturer's Internal Standard (GMIS).”
- [pp. 44, 94-97 and .pdf pp. 355 and 396] “Field sheets” will be used to document compliance with these field QC requirements – *ADEQ's records production did not include field sheets concerning the SO₂ monitors*
→ [.pdf pp. 415-422] Field zero/span/precision verification checks and calibrations shall be recorded on “the Sulfur Dioxide (SO₂) Z/S/P and Calibration Reports field sheet – *None were included in ADEQ's records production*
- [p. 57] “Quality control procedures include, but are not limited to: periodically obtaining required NIST- traceable certifications for calibration standards/references, also known as (aka), calibrators, verifying NIST-traceability for EPA-protocol test gases . . .” – *No records indicating compliance.*
- [p. 64 – Table B.3] “Materials and Apparatuses used for Verifying and Calibrating SO₂ Monitors” – “Mass Flow Controller” requirements – “Acceptance Criteria” are defined as a “NIST-traceable certification” – *No records indicating compliance – no certification form, certification report, certification/maintenance/test sheet. or certificate of analysis approximating the examples in Figures B.4 through B.11*
- [p. 99 – Data Storage and Retrieval] “Data management includes storing and archiving pollutant and meteorological data, data files and any related documents needed to ensure data quality. Refer to Table B.5 for a summary of the specific ADEQ records and documents and the Unit responsible for storing them.” – *Several of the records that Table B.5 says shall be stored at ADEQ were not produced with ADEQ's records production – including certificates of all instruments and standards, including NIST certificates; instrument calibration and verification records, training records, and correspondence and reports with subcontractors performing the QC checks*

ADEQ's Data Quality Indicator Report
AMP256
Site 1001
15Q1-15Q4
No indication

ADEQ's Data Quality Indicator Report
AMP256
Site 1001
16Q1-16Q4
No indication

ADEQ's Data Quality Indicator Report
AMP256
Site 1001
17Q1-17Q4
No indication

ADEQ's Quick Look Report
AMP450
Site 1001
2015-2017
No indication

ADEQ's 1-Point QC Assessment and Annual PE Spreadsheet
AMP504
Site 1001
2015
No indication

ADEQ's 1-Point QC Assessment and Annual PE Spreadsheet
AMP504
Site 1001
2016
No indication

ADEQ's 1-Point QC Assessment and Annual PE Spreadsheet
AMP504
Site 1001
2017
No indication

ADEQ's "April 27, 2015" Letter Certifying 2015 Data
No specific discussion

ADEQ's 2017-4-05 Letter Certifying 2016 Data

No specific discussion

ADEQ's 2018-4-27 Letter Certifying 2017 Data

No specific discussion

ADEQ's Data Completeness Reports

AMP430

2015, 2016, 2017

No indication

ADEQ's Certification Evaluation and Concurrence

AMP600

2015

Data Evaluation and Concurrence Report for Gaseous Pollutants

No specific discussion

ADEQ's Certification Evaluation and Concurrence

AMP600

2016

Data Evaluation and Concurrence Report for Gaseous Pollutants

No specific discussion

ADEQ's Certification Evaluation and Concurrence

AMP600

2017

Data Evaluation and Concurrence Report for Gaseous Pollutants

Site 1001

No specific discussion

Quick Look All Parameters

AMP450

Including Site 1001

2016 and 2017

No indication

ADEQ's Raw Ambient Data Reports and Spreadsheets

AMP350

Site 1001

2015-2018

No indication

7. The requirement that a one-point quality control (“**QC**”) check [used to make estimates of measurement uncertainty (precision and bias)] must be performed at least once every 2 weeks on each automated monitor used to measure SO₂ in accordance with Appendix A § 3.1.1(a) [formerly Appendix A § 3.2.1]:

ADEQ’s 2014-approved SO₂ QAPP – states:

- [p. 50] will be done bi-weekly
- [p. 38] Includes method of validating bias via one-point QC checks
- [pp. 44, 94-97 and .pdf pp. 355 and 396] “Field sheets” will be used to document compliance with these field QC requirements – *ADEQ’s records production did not include field sheets concerning the SO₂ monitors*
 - [.pdf pp. 415-422] Field zero/span/precision verification checks and calibrations shall be recorded on “the Sulfur Dioxide (SO₂) Z/S/P and Calibration Reports field sheet – *Field sheets for the one-point QC checks were not included in ADEQ’s records production*

ADEQ’s Data Quality Indicator Report
AMP256
Site 1001
15Q1-15Q4
Intervals reported without foundation

ADEQ’s Data Quality Indicator Report
AMP256
Site 1001
16Q1-16Q4
Intervals reported without foundation

ADEQ’s Data Quality Indicator Report
AMP256
Site 1001
16Q1-16Q4
Intervals reported without foundation

ADEQ’s Quick Look Report
AMP450
Site 1001
2015-2017
No indication

ADEQ’s 1-Point QC Assessment and Annual PE Spreadsheet
AMP504
Site 1001
2015
Assessments reported without foundation

ADEQ's 1-Point QC Assessment and Annual PE Spreadsheet
AMP504
Site 1001
2016
Assessments reported without foundation

ADEQ's 1-Point QC Assessment and Annual PE Spreadsheet
AMP504
Site 1001
2017
Assessments reported without foundation

ADEQ's "April 27, 2015" Letter Certifying 2015 Data
No specific discussion

ADEQ's 2017-4-05 Letter Certifying 2016 Data
No specific discussion

ADEQ's 2018-4-27 Letter Certifying 2017 Data
No specific discussion

ADEQ's Data Completeness Reports
AMP430
2015, 2016, 2017
No indication

ADEQ's Certification Evaluation and Concurrence
AMP600
2015
Data Evaluation and Concurrence Report for Gaseous Pollutants
Site 1001
No specific discussion

ADEQ's Certification Evaluation and Concurrence
AMP600
2016
Data Evaluation and Concurrence Report for Gaseous Pollutants
Site 1001
No specific discussion

ADEQ's Certification Evaluation and Concurrence
AMP600
2017
Data Evaluation and Concurrence Report for Gaseous Pollutants
Site 1001
No specific discussion

Quick Look All Parameters

AMP450

Including Site 1001

2016 and 2017

No indication

ADEQ's Raw Ambient Data Reports and Spreadsheets

AMP350

Site 1001

2015-2018

No indication

a. The requirement, under the current rule (effective April 27, 2016), that each one-point QC check be made by challenging the monitor with a QC check gas of known SO₂ concentration between the prescribed range of 0.005 and 0.08 parts per million. Appendix A § 3.1.1(a).

Again, no field sheets documenting compliance as required by QAPP

ADEQ's Data Quality Indicator Report

AMP256

Site 1001

16Q1-16Q4

No indication

ADEQ's Data Quality Indicator Report

AMP256

Site 1001

17Q1-17Q4

No indication

ADEQ's Quick Look Report

AMP450

Site 1001

2016-2017

No indication

ADEQ's 1-Point QC Assessment and Annual PE Spreadsheet

AMP504

Site 1001

2016

Indicated without foundation

ADEQ's 1-Point QC Assessment and Annual PE Spreadsheet
AMP504
Site 1001
2017

Indicated without foundation

ADEQ's 2017-4-05 Letter Certifying 2016 Data
No specific discussion

ADEQ's 2018-4-27 Letter Certifying 2017 Data
No specific discussion

ADEQ's Data Completeness Reports
AMP430
2016, 2017
No indication

ADEQ's Certification Evaluation and Concurrence
AMP600
2016
Data Evaluation and Concurrence Report for Gaseous Pollutants
No specific discussion

ADEQ's Certification Evaluation and Concurrence
AMP600
2017
Data Evaluation and Concurrence Report for Gaseous Pollutants
Site 1001
No specific discussion

Quick Look All Parameters
AMP450
Including Site 1001
2016 and 2017
No indication

ADEQ's Raw Ambient Data Reports and Spreadsheets
AMP350
Site 1001
2015-2018
No indication

b. The requirement, under the former rule (in effect prior to April 27, 2016), that each one-point QC check be made by challenging the monitor with a QC gas check of known SO₂ concentration between the prescribed range of 0.01 and 0.10 parts per million. Former Appendix A § 3.2.1.

ADEQ's 2014-approved SO₂ QAPP [p.36] states all evaluations of measurement uncertainty shall ensure that the uncertain is within the range prescribed in Part 58 Appendix A

→ [.pdf pp. 415-422] Field zero/span/precision verification checks and calibrations shall be recorded on "the Sulfur Dioxide (SO₂) Z/S/P and Calibration Reports field sheet – *Field sheets for the one-point QC checks were not included in ADEQ's records production*

ADEQ's Data Quality Indicator Report
AMP256
Site 1001
15Q1-15Q4
No indication

ADEQ's Data Quality Indicator Report
AMP256
Site 1001
16Q1-16Q4
No indication

ADEQ's Quick Look Report
AMP450
Site 1001
2015-2016
No indication

ADEQ's 1-Point QC Assessment and Annual PE Spreadsheet
AMP504
Site 1001
2015
Indicated without foundation

ADEQ's 1-Point QC Assessment and Annual PE Spreadsheet
AMP504
Site 1001
2016
Indicated without foundation

ADEQ's "April 27, 2015" Letter Certifying 2015 Data
No specific discussion

ADEQ's 2017-4-05 Letter Certifying 2016 Data
No specific discussion

ADEQ's Data Completeness Reports
 AMP430
 2015, 2016
No indication

ADEQ's Certification Evaluation and Concurrence
 AMP600
 2015
 Data Evaluation and Concurrence Report for Gaseous Pollutants
No specific discussion

ADEQ's Certification Evaluation and Concurrence
 AMP600
 2016
 Data Evaluation and Concurrence Report for Gaseous Pollutants
No specific discussion

Quick Look All Parameters
 AMP450
 Including Site 1001
 2016
No indication

ADEQ's Raw Ambient Data Reports and Spreadsheets
 AMP350
 Site 1001
 2015-2018
No indication

8. The rule that SO₂ monitors must be operated in their normal sampling mode during the one-point QC check and the test atmosphere must pass through all filters, scrubbers, conditioners and other components used during normal ambient sampling and as much of the ambient inlet system as is practicable. Appendix A § 3.1.1(b) [formerly Appendix A § 3.2.1.1].

ADEQ's 2014-approved SO₂ QAPP – states:

- [p. 50] will be done bi-weekly
- [p. 38] Includes method of validating bias via one-point QC checks
- [pp. 44, 94-97 and .pdf pp. 355 and 396] "Field sheets" will be used to document compliance with these field QC requirements – *ADEQ's records production did not include field sheets concerning the SO₂ monitors*

→ [.pdf pp. 415-422] Field zero/span/precision verification checks and calibrations shall be recorded on “the Sulfur Dioxide (SO₂) Z/S/P and Calibration Reports field sheet – *Field sheets for the one-point QC checks were not included in ADEQ’s records production*

ADEQ’s Data Quality Indicator Report
AMP256
Site 1001
15Q1-15Q4
No indication

ADEQ’s Data Quality Indicator Report
AMP256
Site 1001
16Q1-16Q4
No indication

ADEQ’s Data Quality Indicator Report
AMP256
Site 1001
17Q1-17Q4
No indication

ADEQ’s Quick Look Report
AMP450
Site 1001
2015-2017
No indication

ADEQ’s 1-Point QC Assessment and Annual PE Spreadsheet
AMP504
Site 1001
2015
No indication

ADEQ’s 1-Point QC Assessment and Annual PE Spreadsheet
AMP504
Site 1001
2016
No indication

ADEQ’s 1-Point QC Assessment and Annual PE Spreadsheet
AMP504
Site 1001
2017
No indication

ADEQ's "April 27, 2015" Letter Certifying 2015 Data
No specific discussion

ADEQ's 2017-4-05 Letter Certifying 2016 Data
No specific discussion

ADEQ's 2018-4-27 Letter Certifying 2017 Data
No specific discussion

ADEQ's Data Completeness Reports
AMP430
2015, 2016, 2017
No indication

ADEQ's Certification Evaluation and Concurrence
AMP600
2015
Data Evaluation and Concurrence Report for Gaseous Pollutants
No specific discussion

ADEQ's Certification Evaluation and Concurrence
AMP600
2016
Data Evaluation and Concurrence Report for Gaseous Pollutants
No specific discussion

ADEQ's Certification Evaluation and Concurrence
AMP600
2017
Data Evaluation and Concurrence Report for Gaseous Pollutants
Site 1001
No specific discussion

Quick Look All Parameters
AMP450
Including Site 1001
2016 and 2017
No indication

ADEQ's Raw Ambient Data Reports and Spreadsheets
AMP350
Site 1001
2015-2018
No indication

9. The rule that the one-point QC check must be conducted before any calibration or span adjustment to the SO₂ monitor. Appendix A § 3.1.1(b) [formerly Appendix A § 3.2.1.1].

ADEQ's 2014-approved SO₂ QAPP – states:

- [.pdf p. 415] Same substantive requirement
- [pp. 44, 94-97 and .pdf pp. 355 and 396] “Field sheets” will be used to document compliance with these field QC requirements – *ADEQ's records production did not include field sheets concerning the SO₂ monitors*
 - [.pdf pp. 415-422] Field zero/span/precision verification checks and calibrations shall be recorded on “the Sulfur Dioxide (SO₂) Z/S/P and Calibration Reports field sheet – *Field sheets for the one-point QC checks were not included in ADEQ's records production*

ADEQ's Data Quality Indicator Report

AMP256

Site 1001

15Q1-15Q4

No indication

ADEQ's Data Quality Indicator Report

AMP256

Site 1001

16Q1-16Q4

No indication

ADEQ's Data Quality Indicator Report

AMP256

Site 1001

17Q1-17Q4

No indication

ADEQ's Quick Look Report

AMP450

Site 1001

2015-2017

No indication

ADEQ's 1-Point QC Assessment and Annual PE Spreadsheet

AMP504

Site 1001

2015

No indication

ADEQ's 1-Point QC Assessment and Annual PE Spreadsheet
AMP504
Site 1001
2016
No indication

ADEQ's 1-Point QC Assessment and Annual PE Spreadsheet
AMP504
Site 1001
2017
No indication

ADEQ's "April 27, 2015" Letter Certifying 2015 Data
No specific discussion

ADEQ's 2017-4-05 Letter Certifying 2016 Data
No specific discussion

ADEQ's 2018-4-27 Letter Certifying 2017 Data
No specific discussion

ADEQ's Data Completeness Reports
AMP430
2015, 2016, 2017
No indication

ADEQ's Certification Evaluation and Concurrence
AMP600
2015
Data Evaluation and Concurrence Report for Gaseous Pollutants
No specific discussion

ADEQ's Certification Evaluation and Concurrence
AMP600
2016
Data Evaluation and Concurrence Report for Gaseous Pollutants
No specific discussion

ADEQ's Certification Evaluation and Concurrence
AMP600
2017
Data Evaluation and Concurrence Report for Gaseous Pollutants
Site 1001
No specific discussion

Quick Look All Parameters

AMP450

Including Site 1001

2016 and 2017

No indication

ADEQ's Raw Ambient Data Reports and Spreadsheets

AMP350

Site 1001

2015-2018

No indication

10. The requirement to report the audit concentration of the QC gas and the corresponding measured concentration indicated by each SO₂ monitor tested in the one-point QC check to the AQS. Appendix A § 3.1.1(d) [formerly Appendix A § 3.2.1.3].

ADEQ's Data Quality Indicator Report

AMP256

Site 1001

15Q1-15Q4

No indication

ADEQ's Data Quality Indicator Report

AMP256

Site 1001

16Q1-16Q4

No indication

ADEQ's Data Quality Indicator Report

AMP256

Site 1001

17Q1-17Q4

No indication

ADEQ's Quick Look Report

AMP450

Site 1001

2015-2017

No indication

ADEQ's 1-Point QC Assessment and Annual PE Spreadsheet

AMP504

Site 1001

2015

Entries made without foundation

ADEQ's 1-Point QC Assessment and Annual PE Spreadsheet
AMP504
Site 1001
2016

Entries made without foundation

ADEQ's 1-Point QC Assessment and Annual PE Spreadsheet
AMP504
Site 1001
2017

Entries made without foundation

ADEQ's "April 27, 2015" Letter Certifying 2015 Data
No specific discussion

ADEQ's 2017-4-05 Letter Certifying 2016 Data
No specific discussion

ADEQ's 2018-4-27 Letter Certifying 2017 Data
No specific discussion

ADEQ's Data Completeness Reports
AMP430
2015, 2016, 2017
No indication

ADEQ's Certification Evaluation and Concurrence
AMP600
2015
Data Evaluation and Concurrence Report for Gaseous Pollutants
No specific discussion

ADEQ's Certification Evaluation and Concurrence
AMP600
2016
Data Evaluation and Concurrence Report for Gaseous Pollutants
No specific discussion

ADEQ's Certification Evaluation and Concurrence
AMP600
2017
Data Evaluation and Concurrence Report for Gaseous Pollutants
Site 1001
No specific discussion

Quick Look All Parameters

AMP450

Including Site 1001

2016 and 2017

No indication

ADEQ's Raw Ambient Data Reports and Spreadsheets

AMP350

Site 1001

2015-2018

No indication

11. The rule that a performance evaluation must be conducted on each primary SO₂ monitor once a year. Appendix A § 3.1.2 [formerly Appendix A § 3.2.2].

ADEQ's 2014-approved SO₂ QAPP – states same [p. 59]

ADEQ's Data Quality Indicator Report

AMP256

Site 1001

15Q1-15Q4

Indicated without foundation

ADEQ's Data Quality Indicator Report

AMP256

Site 1001

16Q1-16Q4

Indicated without foundation

ADEQ's Data Quality Indicator Report

AMP256

Site 1001

17Q1-17Q4

Indicated without foundation

ADEQ's Quick Look Report

AMP450

Site 1001

2015-2017

No indication

ADEQ's 1-Point QC Assessment and Annual PE Spreadsheet

AMP504

Site 1001

2015

Indicated without foundation

ADEQ's 1-Point QC Assessment and Annual PE Spreadsheet
AMP504
Site 1001
2016

Indicated without foundation

ADEQ's 1-Point QC Assessment and Annual PE Spreadsheet
AMP504
Site 1001
2017

Shows no annual PE was done of the Echotech monitor that was used through the 2017-1-25 reading; indicates without foundation that annual PE was done of API analyzer that was used commencing with 2017-2-03 reading

ADEQ's "April 27, 2015" Letter Certifying 2015 Data

No specific discussion

ADEQ's 2017-4-05 Letter Certifying 2016 Data

No specific discussion

ADEQ's 2018-4-27 Letter Certifying 2017 Data

No specific discussion

ADEQ's Data Completeness Reports

AMP430

2015, 2016, 2017, 2018

No indication

ADEQ's Certification Evaluation and Concurrence

AMP600

2015

Data Evaluation and Concurrence Report for Gaseous Pollutants

No specific discussion

ADEQ's Certification Evaluation and Concurrence

AMP600

2016

Data Evaluation and Concurrence Report for Gaseous Pollutants

No specific discussion

ADEQ's Certification Evaluation and Concurrence

AMP600

2017

Data Evaluation and Concurrence Report for Gaseous Pollutants

Site 1001

No specific discussion

Quick Look All Parameters

AMP450

Including Site 1001

2016 and 2017

No indication

ADEQ's Raw Ambient Data Reports and Spreadsheets

AMP350

Site 1001

2015-2018

No indication

12. The rule that the performance evaluation should be conducted by a trained experienced technician other than the routine site operator. Appendix A § 3.1.2 [formerly Appendix A § 3.2.2].

ADEQ's 2014-approved SO₂ QAPP

- Distinguishes Air Monitoring Unit technicians from Data Management & Quality Assurance Unit personnel [p.96]
- Requires use of performance audit field sheets [.pdf p. 479] – *none produced with ADEQ's records production*

ADEQ's Data Quality Indicator Report

AMP256

Site 1001

15Q1-15Q4

No indication

ADEQ's Data Quality Indicator Report

AMP256

Site 1001

16Q1-16Q4

No indication

ADEQ's Data Quality Indicator Report

AMP256

Site 1001

17Q1-17Q4

No indication

ADEQ's Quick Look Report

AMP450

Site 1001

2015-2017

No indication

ADEQ's 1-Point QC Assessment and Annual PE Spreadsheet
AMP504
Site 1001
2015
No indication

ADEQ's 1-Point QC Assessment and Annual PE Spreadsheet
AMP504
Site 1001
2016
No indication

ADEQ's 1-Point QC Assessment and Annual PE Spreadsheet
AMP504
Site 1001
2017
No indication

ADEQ's "April 27, 2015" Letter Certifying 2015 Data
No specific discussion

ADEQ's 2017-4-05 Letter Certifying 2016 Data
No specific discussion

ADEQ's 2018-4-27 Letter Certifying 2017 Data
No specific discussion

ADEQ's Data Completeness Reports
AMP430
2015, 2016, 2017
No indication

ADEQ's Certification Evaluation and Concurrence
AMP600
2015
Data Evaluation and Concurrence Report for Gaseous Pollutants
No specific discussion

ADEQ's Certification Evaluation and Concurrence
AMP600
2016
Data Evaluation and Concurrence Report for Gaseous Pollutants
No specific discussion

ADEQ's Certification Evaluation and Concurrence
AMP600
2017
Data Evaluation and Concurrence Report for Gaseous Pollutants
No specific discussion

Quick Look All Parameters
AMP450
Including Site 1001
2016 and 2017
No indication

ADEQ's Raw Ambient Data Reports and Spreadsheets
AMP350
Site 1001
2015-2018
No indication

13. The rule that the performance evaluation be made by challenging the monitor with audit gas standards of known concentration from at least three audit levels in accordance with Appendix A § 3.1.2.1 [formerly Appendix A § 3.2.2.1].

ADEQ's 2014-approved SO₂ QAPP

- States same [p. 59]
- Requires the use of a performance audit field sheet [.pdf p. 479] – *none included with ADEQ's records production*

ADEQ's Data Quality Indicator Report
AMP256
Site 1001
15Q1-15Q4
May be indicated, without foundation

ADEQ's Data Quality Indicator Report
AMP256
Site 1001
16Q1-16Q4
May be indicated, without foundation

ADEQ's Data Quality Indicator Report
AMP256
Site 1001
17Q1-17Q4
May be indicated, without foundation

ADEQ's Quick Look Report

AMP450

Site 1001

2015-2017

No indication

ADEQ's 1-Point QC Assessment and Annual PE Spreadsheet

AMP504

Site 1001

2015

Indicated without foundation

ADEQ's 1-Point QC Assessment and Annual PE Spreadsheet

AMP504

Site 1001

2016

Indicated without foundation

ADEQ's 1-Point QC Assessment and Annual PE Spreadsheet

AMP504

Site 1001

2017

Indicated without foundation

ADEQ's "April 27, 2015" Letter Certifying 2015 Data

No specific discussion

ADEQ's 2017-4-05 Letter Certifying 2016 Data

No specific discussion

ADEQ's 2018-4-27 Letter Certifying 2017 Data

No specific discussion

ADEQ's Data Completeness Reports

AMP430

2015, 2016, 2017

No indication

ADEQ's Certification Evaluation and Concurrence

AMP600

2015

Data Evaluation and Concurrence Report for Gaseous Pollutants

No specific discussion

ADEQ's Certification Evaluation and Concurrence
AMP600
2016
Data Evaluation and Concurrence Report for Gaseous Pollutants
No specific discussion

ADEQ's Certification Evaluation and Concurrence
AMP600
2017
Data Evaluation and Concurrence Report for Gaseous Pollutants
No specific discussion

Quick Look All Parameters
AMP450
Including Site 1001
2016 and 2017
No indication

ADEQ's Raw Ambient Data Reports and Spreadsheets
AMP350
Site 1001
2015-2018
No indication

a. The requirements, under the current rule (effective April 27, 2016), that: (i) one point "must be within" two to three times the method detection limit of the instruments with the monitoring network, (ii) the second point must be less than or equal to the 99th percentile of the SO₂ data at the site, and (iii) the third point should be around the primary SO₂ NAAQS or the highest 3-year SO₂ concentration at the site. Appendix A § 3.1.2.1.

Again, ADEQ's records production included no performance audit field sheets, which are required under the QAPP

ADEQ's Data Quality Indicator Report
AMP256
Site 1001
16Q1-16Q4
No indication

ADEQ's Quick Look Report
AMP450
Site 1001
2016-2017
No indication

ADEQ's 1-Point QC Assessment and Annual PE Spreadsheet
AMP504
Site 1001
2016

When compare to Quick Look Report

*Shows failed to satisfy (i) because the lowest PE assessment concentration was 65 ppb whereas the MDL for the Echotech monitor is 0.2 ppb
May have satisfied (ii) and (iii), without foundation*

ADEQ's 1-Point QC Assessment and Annual PE Spreadsheet
AMP504
Site 1001
2017

When compare to Quick Look Report

*Shows failed to satisfy (i), (ii) and (iii) for the Echotech monitor used through the 2017-1-25 reading because no annual PE was done of that monitor and the NPAP audit did not encompass that monitor;
Shows failed to satisfy (i) for the API analyzer used commencing with the 2017-2-03 reading because the lowest PE assessment concentration was 65 ppb whereas the MDL for the API analyzer is 0.4 ppb (note, also, the lowest NPAP audit assessment concentration was 4.2 ppb);
May have satisfied (ii) and (iii), without foundation*

ADEQ's 2017-4-05 Letter Certifying 2016 Data
No specific discussion

ADEQ's 2018-4-27 Letter Certifying 2017 Data
No specific discussion

ADEQ's Data Completeness Reports
AMP430
2016, 2017
No indication

ADEQ's Certification Evaluation and Concurrence
AMP600
2016
Data Evaluation and Concurrence Report for Gaseous Pollutants
No specific discussion

Quick Look All Parameters
AMP450
Including Site 1001
2016 and 2017
No indication

ADEQ's Raw Ambient Data Reports and Spreadsheets
AMP350
Site 1001
2015-2018
No indication

b. The requirement, under the former rule (in effect prior to April 27, 2016), that the audit levels should represent or bracket 80 percent of ambient concentrations measured by the monitor being evaluated. Former Appendix A § 3.2.2.1.

Again, ADEQ's records production included no performance audit field sheets, which are required under the QAPP

ADEQ's Data Quality Indicator Report
AMP256
Site 1001
15Q1-15Q4
No indication

ADEQ's Data Quality Indicator Report
AMP256
Site 1001
16Q1-16Q4
No indication

ADEQ's Quick Look Report
AMP450
Site 1001
2015-2016
No indication

ADEQ's 1-Point QC Assessment and Annual PE Spreadsheet
AMP504
Site 1001
2015
No indication

ADEQ's 1-Point QC Assessment and Annual PE Spreadsheet
AMP504
Site 1001
2016
No indication

ADEQ's "April 27, 2015" Letter Certifying 2015 Data
No specific discussion

ADEQ's 2017-4-05 Letter Certifying 2016 Data

No specific discussion

ADEQ's Data Completeness Reports

AMP430

2015, 2016

No indication

ADEQ's Certification Evaluation and Concurrence

AMP600

2015

Data Evaluation and Concurrence Report for Gaseous Pollutants

No specific discussion

ADEQ's Certification Evaluation and Concurrence

AMP600

2016

Data Evaluation and Concurrence Report for Gaseous Pollutants

No specific discussion

Quick Look All Parameters

AMP450

Including Site 1001

2016

No indication

ADEQ's Raw Ambient Data Reports and Spreadsheets

AMP350

Site 1001

2015-2018

No indication

14. The rule that the standards from which the audit test gas concentrations are obtained and used for the performance evaluation must be traceable to either a NIST Traceable Reference Material or a NIST-certified Gas Manufacturer's Internal Standard, certified in accordance with one of the procedures cited in Appendix A § 2.6.1 [formerly Appendix A § 2.6.1]. Appendix A § 3.1.2.3 [formerly Appendix A § 3.2.2.3].

ADEQ's 2014-approved SO₂ QAPP -states:

- [p. 57] "Quality control procedures include, but are not limited to: periodically obtaining required NIST- traceable certifications for calibration standards/references, also known as (aka), calibrators, verifying NIST- traceability for EPA-protocol test gases . . ." – *No records indicating compliance.*

- [p. 58 – Table B.2] “Acceptance Criteria for Operating the SO₂ Analyzers in Actual Conditions” – “Standards (References)” requirements – *No records indicating compliance*
- [p. 63] “The purpose of calibration is to minimize bias. Typical calibration activities follow a two-step process: 1. certifying the calibration standards against an authoritative standard . . . the NIST . . .”
- [p. 102] NIST-traceable certifications are supposed to be available for EPA’s TSAs and also reviewed as part of ADEQ’s TSAs – *No records indicating compliance*

ADEQ’s Data Quality Indicator Report

AMP256

Site 1001

15Q1-15Q4

No indication

ADEQ’s Data Quality Indicator Report

AMP256

Site 1001

16Q1-16Q4

No indication

ADEQ’s Data Quality Indicator Report

AMP256

Site 1001

17Q1-17Q4

No indication

ADEQ’s Quick Look Report

AMP450

Site 1001

2015-2017

No indication

ADEQ’s 1-Point QC Assessment and Annual PE Spreadsheet

AMP504

Site 1001

2015

No indication

ADEQ’s 1-Point QC Assessment and Annual PE Spreadsheet

AMP504

Site 1001

2016

No indication—this lack is underscored, for instance, by the first three entries in column O of AMP 504 2016.

ADEQ's 1-Point QC Assessment and Annual PE Spreadsheet
AMP504
Site 1001
2017
No indication

ADEQ's "April 27, 2015" Letter Certifying 2015 Data
No specific discussion

ADEQ's 2017-4-05 Letter Certifying 2016 Data
No specific discussion

ADEQ's 2018-4-27 Letter Certifying 2017 Data
No specific discussion

ADEQ's Data Completeness Reports
AMP430
2015, 2016, 2017
No indication

ADEQ's Certification Evaluation and Concurrence
AMP600
2015
Data Evaluation and Concurrence Report for Gaseous Pollutants
No specific discussion

ADEQ's Certification Evaluation and Concurrence
AMP600
2016
Data Evaluation and Concurrence Report for Gaseous Pollutants
No specific discussion

ADEQ's Certification Evaluation and Concurrence
AMP600
2017
Data Evaluation and Concurrence Report for Gaseous Pollutants
No specific discussion

Quick Look All Parameters
AMP450
Including Site 1001
2016 and 2017
No indication

ADEQ's Raw Ambient Data Reports and Spreadsheets
AMP350
Site 1001
2015-2018
No indication

15. The rule that the gas standards and equipment used for the performance evaluation must not be the same as the standards and equipment used for the one-point QC check, calibrations or span evaluations. Appendix A § 3.1.2.3 [formerly Appendix A § 3.2.2.3].

ADEQ's 2014-approved SO₂ QAPP

- Requires the use of a performance audit field sheet [.pdf p. 479] – *none included with ADEQ's records production*

ADEQ's Data Quality Indicator Report
AMP256
Site 1001
15Q1-15Q4
No indication

ADEQ's Data Quality Indicator Report
AMP256
Site 1001
16Q1-16Q4
No indication

ADEQ's Data Quality Indicator Report
AMP256
Site 1001
17Q1-17Q4
No indication

ADEQ's Quick Look Report
AMP450
Site 1001
2015-2017
No indication

ADEQ's 1-Point QC Assessment and Annual PE Spreadsheet
AMP504
Site 1001
2015
No indication

ADEQ's 1-Point QC Assessment and Annual PE Spreadsheet
AMP504
Site 1001
2016

No indication

ADEQ's 1-Point QC Assessment and Annual PE Spreadsheet
AMP504
Site 1001
2017

No indication

ADEQ's "April 27, 2015" Letter Certifying 2015 Data

No specific discussion

ADEQ's 2017-4-05 Letter Certifying 2016 Data

No specific discussion

ADEQ's 2018-4-27 Letter Certifying 2017 Data

No specific discussion

ADEQ's Data Completeness Reports

AMP430

2015, 2016, 2017

No indication

ADEQ's Certification Evaluation and Concurrence

AMP600

2015

Data Evaluation and Concurrence Report for Gaseous Pollutants

No specific discussion

ADEQ's Certification Evaluation and Concurrence

AMP600

2016

Data Evaluation and Concurrence Report for Gaseous Pollutants

No specific discussion

ADEQ's Certification Evaluation and Concurrence

AMP600

2017

Data Evaluation and Concurrence Report for Gaseous Pollutants

No specific discussion

Quick Look All Parameters

AMP450

Including Site 1001

2016 and 2017

No indication

ADEQ's Raw Ambient Data Reports and Spreadsheets

AMP350

Site 1001

2015-2018

No indication

16. The rule that the performance evaluation shall be carried out by allowing the SO₂ monitor to analyze the audit gas test atmosphere in its normal sampling mode such that the test atmosphere passes through all filters, scrubbers, conditioners, and other sample inlet components used during normal ambient sampling and as much of the ambient air inlet system as is practicable. Appendix A § 3.1.2.4 [formerly Appendix A § 3.2.2.4].

ADEQ's 2014-approved SO₂ QAPP – states:

- Requires the use of a performance audit field sheet [.pdf p. 479] – *none included with ADEQ's records production*

ADEQ's Data Quality Indicator Report

AMP256

Site 1001

15Q1-15Q4

No indication

ADEQ's Data Quality Indicator Report

AMP256

Site 1001

16Q1-16Q4

No indication

ADEQ's Data Quality Indicator Report

AMP256

Site 1001

17Q1-17Q4

No indication

ADEQ's Quick Look Report

AMP450

Site 1001

2015-2017

No indication

ADEQ's 1-Point QC Assessment and Annual PE Spreadsheet
AMP504
Site 1001
2015
No indication

ADEQ's 1-Point QC Assessment and Annual PE Spreadsheet
AMP504
Site 1001
2016
No indication

ADEQ's 1-Point QC Assessment and Annual PE Spreadsheet
AMP504
Site 1001
2017
No indication

ADEQ's "April 27, 2015" Letter Certifying 2015 Data
No specific discussion

ADEQ's 2017-4-05 Letter Certifying 2016 Data
No specific discussion

ADEQ's 2018-4-27 Letter Certifying 2017 Data
No specific discussion

ADEQ's Data Completeness Reports
AMP430
2015, 2016, 2017
No indication

ADEQ's Certification Evaluation and Concurrence
AMP600
2015
Data Evaluation and Concurrence Report for Gaseous Pollutants
No specific discussion

ADEQ's Certification Evaluation and Concurrence
AMP600
2016
Data Evaluation and Concurrence Report for Gaseous Pollutants
No specific discussion

ADEQ's Certification Evaluation and Concurrence

AMP600

2017

Data Evaluation and Concurrence Report for Gaseous Pollutants

No specific discussion

Quick Look All Parameters

AMP450

Including Site 1001

2016 and 2017

No indication

ADEQ's Raw Ambient Data Reports and Spreadsheets

AMP350

Site 1001

2015-2018

No indication

17. The requirement to report the evaluation concentrations of the audit gases and the corresponding measured concentration indicated or produced by each SO₂ monitor tested in the performance evaluation to the AQS. Appendix A § 3.1.2.6 [formerly Appendix A § 3.2.2.6].

ADEQ's Data Quality Indicator Report

AMP256

Site 1001

15Q1-15Q4

No indication

ADEQ's Data Quality Indicator Report

AMP256

Site 1001

16Q1-16Q4

No indication

ADEQ's Data Quality Indicator Report

AMP256

Site 1001

17Q1-17Q4

No indication

ADEQ's Quick Look Report

AMP450

Site 1001

2015-2017

No indication

ADEQ's 1-Point QC Assessment and Annual PE Spreadsheet
AMP504
Site 1001
2015

Entries made without foundation

ADEQ's 1-Point QC Assessment and Annual PE Spreadsheet
AMP504
Site 1001
2016

Entries made without foundation

ADEQ's 1-Point QC Assessment and Annual PE Spreadsheet
AMP504
Site 1001
2017

Entries made without foundation

ADEQ's "April 27, 2015" Letter Certifying 2015 Data
No specific discussion

ADEQ's 2017-4-05 Letter Certifying 2016 Data
No specific discussion

ADEQ's 2018-4-27 Letter Certifying 2017 Data
No specific discussion

ADEQ's Data Completeness Reports
AMP430
2015, 2016, 2017
No indication

ADEQ's Certification Evaluation and Concurrence
AMP600
2015
Data Evaluation and Concurrence Report for Gaseous Pollutants
No specific discussion

ADEQ's Certification Evaluation and Concurrence
AMP600
2016
Data Evaluation and Concurrence Report for Gaseous Pollutants
No specific discussion

ADEQ's Certification Evaluation and Concurrence

AMP600

2017

Data Evaluation and Concurrence Report for Gaseous Pollutants

No specific discussion

Quick Look All Parameters

AMP450

Including Site 1001

2016 and 2017

No indication

ADEQ's Raw Ambient Data Reports and Spreadsheets

AMP350

Site 1001

2015-2018

No indication

Lead Requirements

18. The rule that the goal for acceptable measurement uncertainty for lead methods is defined for precision as an upper 90% confidence limit for the CV of 20%. Appendix A § 2.3.1.3 [formerly Appendix A § 2.3.1.4].

ADEQ's 2013-approved Lead QAPP – states:

- [p. 23] “Precision goal is $\leq 20\%$ coefficient of variation (CV) for a 90% confidence limit. The measure of precision will be determined from the Pb concentration of the collocated TSP filter samples and will only include Pb concentration data $> 0.02 \mu\text{g}/\text{m}^3$.”

ADEQ's Data Quality Indicator Report

AMP256

Sites 1002/1002 and 1003

15Q1-15Q4

Values reported without foundation

ADEQ's Data Quality Indicator Report

AMP256

Sites 1002/1002 and 1003

16Q1-16Q4

Values reported without foundation

ADEQ's Data Quality Indicator Report
AMP256
Sites 1002/1002 and 1003
17Q1-17Q4
Values reported without foundation

ADEQ's Data Quality Indicator Report
AMP256
Sites 1002/1002 and 1003
18Q1-18Q4
Values reported without foundation

ADEQ's Quick Look Report
AMP450
Sites 1002/1002 and 1003
2015-2018
No indication

ADEQ's Assessment Spreadsheet
AMP 504
Site 1002/1002
2015
Not specifically discussed

ADEQ's Assessment Spreadsheet
AMP 504
Sites 1002/1002 and 1003
2016
Not specifically discussed

ADEQ's Assessment Spreadsheet
AMP 504
Sites 1002/1002 and 1003
2017
Not specifically discussed

ADEQ's Assessment Spreadsheet
AMP 504
Sites 1002/1002 and 1003
2018
Not specifically discussed

ADEQ's "April 27, 2015" Letter Certifying 2015 Data
No specific discussion

ADEQ's 2017-4-05 Letter Certifying 2016 Data
No specific discussion

ADEQ's 2018-4-27 Letter Certifying 2017 Data
No specific discussion

ADEQ's 2019-5-01 Letter Certifying 2018 Data
No specific discussion

ADEQ's Data Completeness Reports
AMP430
2015, 2016, 2017, 2018
No indication

ADEQ's Certification Evaluation and Concurrence
AMP600
2015
Data Concurrence and Evaluation Report for Lead
For the two collocated Globe Highway monitors (Site 1002/1002)
*No indication; does not include any entries for the non-collocated (in 2015)
Hillcrest monitor (Site 1003)*

ADEQ's Certification Evaluation and Concurrence
AMP600
2016
Data Concurrence and Evaluation Report for Lead
For the two collocated Globe Highway monitors (Site 1002/1002)
No indication
For the non-collocated (in 2016) Hillcrest monitor (Site 1003)
No indication

ADEQ's Certification Evaluation and Concurrence
AMP600
2017
Data Concurrence and Evaluation Report for Lead
For the two collocated Globe Highway monitors (Site 1002/1002)
No indication
For the non-collocated (in 2017) Hillcrest monitor (Site 1003)
No indication

ADEQ's Certification Evaluation and Concurrence
AMP600
2018
Data Concurrence and Evaluation Report for Lead
For the two collocated Globe Highway monitors (Site 1002/1002)
No indication

For the non-located (in 2018) Hillcrest monitor (Site 1003)

No indication

Quick Look All Parameters

AMP450

Including Sites 1002/1002 and 1003

2016 and 2017

No indication

ADEQ's Lead Air Sampling Records

Site 1002/1002

2015-2018

No indication

ADEQ's Lead Air Sampling Records

Site 1003

2016-2018

No indication

Pima County Laboratory Sample Analyses Reports

Site 1002/1002

2015-2018

No indication

Pima County Laboratory Sample Analyses Reports

Site 1003

2016-2018

No indication

Pima County Laboratory Lead Audit Strip Analyses Reports

Site 1002/1002

2015-2018

No indication

Pima County Laboratory Lead Audit Strip Analyses Reports

Site 1003

2016-2018

No indication

ADEQ's Raw Ambient Data Reports and Spreadsheets

AMP350

Sites 1002/1002 and 1003

2015-2018

No indication

19. The rule that the goal for acceptable measurement uncertainty for lead methods is defined for bias as an upper 95% confidence limit for the absolute bias of 15%. Appendix A § 2.3.1.3 [formerly Appendix A § 2.3.1.4].

ADEQ's 2013-approved Lead QAPP – states:

- [p. 23] “Overall absolute bias upper bound goal is $\leq 15\%$ at the 95% confidence limit. The measure of absolute bias will be determined by the field-portion of the Pb PEP audit program for the TSP samplers.”
 - *No records of the “field-portion” of the audit program*

ADEQ's Data Quality Indicator Report
AMP256
Sites 1002/1002 and 1003
15Q1-15Q4
Values reported without foundation

ADEQ's Data Quality Indicator Report
AMP256
Sites 1002/1002 and 1003
16Q1-16Q4
Values reported without foundation

ADEQ's Data Quality Indicator Report
AMP256
Sites 1002/1002 and 1003
17Q1-17Q4
Values reported without foundation

ADEQ's Data Quality Indicator Report
AMP256
Sites 1002/1002 and 1003
18Q1-18Q4
Values reported without foundation

ADEQ's Quick Look Report
AMP450
Sites 1002/1002 and 1003
2015-2018
No indication

ADEQ's Assessment Spreadsheet
AMP 504
Site 1002/1002
2015
Indicated without foundation

ADEQ's Assessment Spreadsheet
AMP 504
Sites 1002/1002 and 1003
2016

Indicated without foundation

ADEQ's Assessment Spreadsheet
AMP 504
Sites 1002/1002 and 1003
2017

Indicated without foundation

ADEQ's Assessment Spreadsheet
AMP 504
Sites 1002/1002 and 1003
2018

Indicated without foundation

ADEQ's "April 27, 2015" Letter Certifying 2015 Data
No specific discussion

ADEQ's 2017-4-05 Letter Certifying 2016 Data
No specific discussion

ADEQ's 2018-4-27 Letter Certifying 2017 Data
No specific discussion

ADEQ's 2019-5-01 Letter Certifying 2018 Data
No specific discussion

ADEQ's Data Completeness Reports
AMP430
2015, 2016, 2017, 2018
No indication

ADEQ's Certification Evaluation and Concurrence
AMP600
2015
Data Concurrence and Evaluation Report for Lead
For the two collocated Globe Highway monitors (Site 1002/1002)
*Values reported without foundation; does not include any entries for the non-
collocated (in 2015) Hillcrest monitor (Site 1003)*

ADEQ's Certification Evaluation and Concurrence
AMP600
2016
Data Concurrence and Evaluation Report for Lead
For the two collocated Globe Highway monitors (Site 1002/1002)
Values reported without foundation
For the non-collocated (in 2016) Hillcrest monitor (Site 1003)
Values reported without foundation

ADEQ's Certification Evaluation and Concurrence
AMP600
2017
Data Concurrence and Evaluation Report for Lead
For the two collocated Globe Highway monitors (Site 1002/1002)
Values reported without foundation
For the non-collocated (in 2017) Hillcrest monitor (Site 1003)
Values reported without foundation

ADEQ's Certification Evaluation and Concurrence
AMP600
2018
Data Concurrence and Evaluation Report for Lead
For the two collocated Globe Highway monitors (Site 1002/1002)
Values reported without foundation
For the non-collocated (in 2018) Hillcrest monitor (Site 1003)
Values reported without foundation

Quick Look All Parameters
AMP450
Including Sites 1002/1002 and 1003
2016 and 2017
No indication

ADEQ's Lead Air Sampling Records
Site 1002/1002
2015-2018
No indication

ADEQ's Lead Air Sampling Records
Site 1003
2016-2018
No indication

Pima County Laboratory Sample Analyses Reports
Site 1002/1002
2015-2018
No indication

Pima County Laboratory Sample Analyses Reports
Site 1003
2016-2018
No indication

Pima County Laboratory Lead Audit Strip Analyses Reports
Site 1002/1002
2015-2018
No indication—test values not included

Pima County Laboratory Lead Audit Strip Analyses Reports
Site 1003
2016-2018
No indication—test values not included

ADEQ's Raw Ambient Data Reports and Spreadsheets
AMP350
Sites 1002/1002 and 1003
2015-2018
No indication

20. The rule that, for lead high volume samplers, the flow rate verification frequency is one verification every 90 days (quarter) with four in a year. Appendix A § 3.4.2 [formerly Appendix A §§ 3.3.4.1, 3.3.2].

ADEQ's 2013-approved Lead QAPP – states: [p. 23] “For flow rate verifications, an annual absolute bias goal of $\leq 7\%$ based on all TSP flow rate verifications that pass flow rate acceptance criteria. If a sampler fails a verification check, the flow rate value for that check will not be averaged into the annual bias statistic.” – *No field sheets or other forms regarding same*

ADEQ's Data Quality Indicator Report
AMP256
Sites 1002/1002 and 1003
15Q1-15Q4
Indicates observations [for 1002/1002] without foundation

ADEQ's Data Quality Indicator Report
AMP256
Sites 1002/1002 and 1003
16Q1-16Q4
Indicates observations without foundation

ADEQ's Data Quality Indicator Report
AMP256
Sites 1002/1002 and 1003
17Q1-17Q4
Indicates observations without foundation

ADEQ's Data Quality Indicator Report
AMP256
Sites 1002/1002 and 1003
18Q1-18Q4
Indicates observations without foundation

ADEQ's Quick Look Report
AMP450
Sites 1002/1002 and 1003
2015-2018
No indication

ADEQ's Assessment Spreadsheet
AMP 504
Site 1002/1002
2015
*Indicated without foundation for the Globe Highway Monitors (Site 1002/1002);
no indication for the non-located (in 2015) Hillcrest monitor (Site 1003)*

ADEQ's Assessment Spreadsheet
AMP 504
Sites 1002/1002 and 1003
2016
Indicated without foundation

ADEQ's Assessment Spreadsheet
AMP 504
Sites 1002/1002 and 1003
2017
Indicated without foundation

ADEQ's Assessment Spreadsheet
AMP 504
Sites 1002/1002 and 1003
2018

Indicated without foundation

ADEQ's "April 27, 2015" Letter Certifying 2015 Data
No specific discussion

ADEQ's 2017-4-05 Letter Certifying 2016 Data
No specific discussion

ADEQ's 2018-4-27 Letter Certifying 2017 Data
No specific discussion

ADEQ's 2019-5-01 Letter Certifying 2018 Data
No specific discussion

ADEQ's Data Completeness Reports
AMP430
2015, 2016, 2017, 2018
No indication

ADEQ's Certification Evaluation and Concurrence
AMP600
2015
Data Concurrence and Evaluation Report for Lead
No specific discussion

ADEQ's Certification Evaluation and Concurrence
AMP600
2016
Data Concurrence and Evaluation Report for Lead
No specific discussion

ADEQ's Certification Evaluation and Concurrence
AMP600
2017
Data Concurrence and Evaluation Report for Lead
No specific discussion

ADEQ's Certification Evaluation and Concurrence
AMP600
2018
Data Concurrence and Evaluation Report for Lead
No specific discussion

Quick Look All Parameters
AMP450
Including Sites 1002/1002 and 1003
2016 and 2017
No indication

ADEQ's Lead Air Sampling Records
Site 1002/1002
2015-2018
No indication

ADEQ's Lead Air Sampling Records
Site 1003
2016-2018
No indication

Pima County Laboratory Sample Analyses Reports
Site 1002/1002
2015-2018
No indication

Pima County Laboratory Sample Analyses Reports
Site 1003
2016-2018
No indication

Pima County Laboratory Lead Audit Strip Analyses Reports
Site 1002/1002
2015-2018
No indication

Pima County Laboratory Lead Audit Strip Analyses Reports
Site 1003
2016-2018
No indication

ADEQ's Raw Ambient Data Reports and Spreadsheets
AMP350
Sites 1002/1002 and 1003
2015-2018
No indication

21. The rule that, if the flow rate verification for lead high volume samplers is made in conjunction with a flow rate adjustment, it must be made prior to the flow rate adjustment. Appendix A § 3.4.1 [formerly Appendix A § 3.2.3].

ADEQ's 2013-approved Lead QAPP – states:

- [p. 26]: “AMU service documents, otherwise known as field sheets, related to the operation of air monitoring sites and instruments are generated and stored in hardcopy site files and/or electronically in each site’s folder at: J:\AQD\AQD\ASSESS\MONITORING UNIT\SITE_LOG\ADEQ Active Sites. Field sheets include: site logs, instrument logs, communication logs, instrument verification and calibration sheets, site and instrument change forms, and field service reports.”
 - *Field sheets not included in ADEQ’s records production*
- [p. 65] “Good data management practices also include personnel accountability for completion of specific tasks. Therefore, all field sheets, ADEQ Lead_{TSP} Air Sampling Record . . . forms . . . will be reviewed by the appropriate AAS personnel member for correctness and completeness, including any required signatures or initials.”
 - *Field sheets and Lead_{TSP} Air Sampling Record forms not included in ADEQ’s records production*

ADEQ’s Data Quality Indicator Report
AMP256
Sites 1002/1002 and 1003
15Q1-15Q4
No indication

ADEQ’s Data Quality Indicator Report
AMP256
Sites 1002/1002 and 1003
16Q1-16Q4
No indication

ADEQ’s Data Quality Indicator Report
AMP256
Sites 1002/1002 and 1003
17Q1-17Q4
No indication

ADEQ’s Data Quality Indicator Report
AMP256
Sites 1002/1002 and 1003
18Q1-18Q4
No indication

ADEQ's Quick Look Report
AMP450
Sites 1002/1002 and 1003
2015-2018

No indication

ADEQ's Assessment Spreadsheet
AMP 504
Site 1002/1002
2015

No indication

ADEQ's Assessment Spreadsheet
AMP 504
Sites 1002/1002 and 1003
2016

No indication

ADEQ's Assessment Spreadsheet
AMP 504
Sites 1002/1002 and 1003
2017

No indication

ADEQ's Assessment Spreadsheet
AMP 504
Sites 1002/1002 and 1003
2018

No indication

ADEQ's "April 27, 2015" Letter Certifying 2015 Data

No specific discussion

ADEQ's 2017-4-05 Letter Certifying 2016 Data

No specific discussion

ADEQ's 2018-4-27 Letter Certifying 2017 Data

No specific discussion

ADEQ's 2019-5-01 Letter Certifying 2018 Data

No specific discussion

ADEQ's Data Completeness Reports
AMP430
2015, 2016, 2017, 2018

No indication

ADEQ's Certification Evaluation and Concurrence
AMP600
2015
Data Concurrence and Evaluation Report for Lead
No specific discussion

ADEQ's Certification Evaluation and Concurrence
AMP600
2016
Data Concurrence and Evaluation Report for Lead
No specific discussion

ADEQ's Certification Evaluation and Concurrence
AMP600
2017
Data Concurrence and Evaluation Report for Lead
No specific discussion

ADEQ's Certification Evaluation and Concurrence
AMP600
2018
Data Concurrence and Evaluation Report for Lead
No specific discussion

Quick Look All Parameters
AMP450
Including Sites 1002/1002 and 1003
2016 and 2017
No indication

ADEQ's Lead Air Sampling Records
Site 1002/1002
2015-2018
No indication

ADEQ's Lead Air Sampling Records
Site 1003
2016-2018
No indication

Pima County Laboratory Sample Analyses Reports
Site 1002/1002
2015-2018
No indication

Pima County Laboratory Sample Analyses Reports
Site 1003
2016-2018
No indication

Pima County Laboratory Lead Audit Strip Analyses Reports
Site 1002/1002
2015-2018
No indication

Pima County Laboratory Lead Audit Strip Analyses Reports
Site 1003
2016-2018
No indication

ADEQ's Raw Ambient Data Reports and Spreadsheets
AMP350
Sites 1002/1002 and 1003
2015-2018
No indication

22. The rule that, for the flow rate verification, flow-rate measurements must be made by a flow measuring instrument that is NIST-traceable to an authoritative volume or other applicable standard and certified in accordance with the guidance cited in Appendix A § 2.6.3 [formerly Appendix A § 2.6.3]. Appendix A § 3.4.1 [formerly Appendix A § 3.2.3].

ADEQ's 2013-approved Lead QAPP – states:

- [p. 44] “QC procedures include, but are not limited to: periodic (typically annual) NIST-traceable certification of calibration standards/references (aka, calibrators) used for testing samplers and supporting meteorological instruments; regularly scheduled calibrations, verifications, and PE audits”
 - *No field sheets that this occurred and no such certification*
- [p. 49] “The following calibrations are typically performed in the field: [] Verification/calibration of volumetric flow rate of each sampler against the transfer =standard; [] Verification/calibration of sampler temperature and pressure sensors against the working temperature and pressure standard; and [] Verification/calibration of sampler’s internal clock against a NIST-traceable timepiece such as a cell phone, GPS, or atomic watch.”
 - *No field sheets that this occurred and no such certification*
- [p. 50] Table B.10 requires a NIST-traceable certification for three calibration parameters, including flow rate
 - *No such certification*
- [p. 52] Table B-12 requires a NIST-traceable certification of the flow rate annually
 - *No such certification*

ADEQ's Data Quality Indicator Report
AMP256
Sites 1002/1002 and 1003
15Q1-15Q4
No indication

ADEQ's Data Quality Indicator Report
AMP256
Sites 1002/1002 and 1003
16Q1-16Q4
No indication

ADEQ's Data Quality Indicator Report
AMP256
Sites 1002/1002 and 1003
17Q1-17Q4
No indication

ADEQ's Data Quality Indicator Report
AMP256
Sites 1002/1002 and 1003
18Q1-18Q4
No indication

ADEQ's Quick Look Report
AMP450
Sites 1002/1002 and 1003
2015-2018
No indication

ADEQ's Assessment Spreadsheet
AMP 504
Site 1002/1002
2015
No indication

ADEQ's Assessment Spreadsheet
AMP 504
Sites 1002/1002 and 1003
2016
No indication

ADEQ's Assessment Spreadsheet
AMP 504
Sites 1002/1002 and 1003
2017

No indication

ADEQ's Assessment Spreadsheet
AMP 504
Sites 1002/1002 and 1003
2018

No indication

ADEQ's "April 27, 2015" Letter Certifying 2015 Data

No specific discussion

ADEQ's 2017-4-05 Letter Certifying 2016 Data

No specific discussion

ADEQ's 2018-4-27 Letter Certifying 2017 Data

No specific discussion

ADEQ's 2019-5-01 Letter Certifying 2018 Data

No specific discussion

ADEQ's Data Completeness Reports

AMP430

2015, 2016, 2017, 2018

No indication

ADEQ's Certification Evaluation and Concurrence

AMP600

2015

Data Concurrence and Evaluation Report for Lead

No specific discussion

ADEQ's Certification Evaluation and Concurrence

AMP600

2016

Data Concurrence and Evaluation Report for Lead

No specific discussion

ADEQ's Certification Evaluation and Concurrence

AMP600

2017

Data Concurrence and Evaluation Report for Lead

No specific discussion

ADEQ's Certification Evaluation and Concurrence
AMP600
2018
Data Concurrence and Evaluation Report for Lead
No specific discussion

Quick Look All Parameters
AMP450
Including Sites 1002/1002 and 1003
2016 and 2017
No indication

ADEQ's Lead Air Sampling Records
Site 1002/1002
2015-2018
No indication

ADEQ's Lead Air Sampling Records
Site 1003
2016-2018
No indication

Pima County Laboratory Sample Analyses Reports
Site 1002/1002
2015-2018
No indication

Pima County Laboratory Sample Analyses Reports
Site 1003
2016-2018
No indication

Pima County Laboratory Lead Audit Strip Analyses Reports
Site 1002/1002
2015-2018
No indication

Pima County Laboratory Lead Audit Strip Analyses Reports
Site 1003
2016-2018
No indication

ADEQ's Raw Ambient Data Reports and Spreadsheets
AMP350
Sites 1002/1002 and 1003
2015-2018
No indication

23. The rule that the percent differences between the audit and measured flow rates be reported to the AQS. Appendix A § 3.4.1 [formerly Appendix A § 3.2.4].

ADEQ's Data Quality Indicator Report
AMP256
Sites 1002/1002 and 1003
15Q1-15Q4
Only the averages reported, not the individual percent differences

ADEQ's Data Quality Indicator Report
AMP256
Sites 1002/1002 and 1003
16Q1-16Q4
Only the averages reported, not the individual percent differences

ADEQ's Data Quality Indicator Report
AMP256
Sites 1002/1002 and 1003
17Q1-17Q4
Only the averages reported, without foundation; not the individual percent differences

ADEQ's Data Quality Indicator Report
AMP256
Sites 1002/1002 and 1003
18Q1-18Q4
Only the averages reported, without foundation; not the individual percent differences

ADEQ's Quick Look Report
AMP450
Sites 1002/1002 and 1003
2015-2018
No indication

ADEQ's Assessment Spreadsheet
AMP 504
Site 1002/1002
2015
No indication

ADEQ's Assessment Spreadsheet
AMP 504
Sites 1002/1002 and 1003
2016
No indication

ADEQ's Assessment Spreadsheet
AMP 504
Sites 1002/1002 and 1003
2017
No indication

ADEQ's Assessment Spreadsheet
AMP 504
Sites 1002/1002 and 1003
2018
No indication

ADEQ's "April 27, 2015" Letter Certifying 2015 Data
No specific discussion

ADEQ's 2017-4-05 Letter Certifying 2016 Data
No specific discussion

ADEQ's 2018-4-27 Letter Certifying 2017 Data
No specific discussion

ADEQ's 2019-5-01 Letter Certifying 2018 Data
No specific discussion

ADEQ's Data Completeness Reports
AMP430
2015, 2016, 2017, 2018
No indication

ADEQ's Certification Evaluation and Concurrence
AMP600
2015
Data Concurrence and Evaluation Report for Lead
No specific discussion

ADEQ's Certification Evaluation and Concurrence
AMP600
2016
Data Concurrence and Evaluation Report for Lead
No specific discussion

ADEQ's Certification Evaluation and Concurrence
AMP600
2017
Data Concurrence and Evaluation Report for Lead
No specific discussion

ADEQ's Certification Evaluation and Concurrence
AMP600
2018
Data Concurrence and Evaluation Report for Lead
No specific discussion

Quick Look All Parameters
AMP450
Including Sites 1002/1002 and 1003
2016 and 2017
No indication

ADEQ's Lead Air Sampling Records
Site 1002/1002
2015-2018
No indication

ADEQ's Lead Air Sampling Records
Site 1003
2016-2018
No indication

Pima County Laboratory Sample Analyses Reports
Site 1002/1002
2015-2018
No indication

Pima County Laboratory Sample Analyses Reports
Site 1003
2016-2018
No indication

Pima County Laboratory Lead Audit Strip Analyses Reports
Site 1002/1002
2015-2018
No indication

Pima County Laboratory Lead Audit Strip Analyses Reports
Site 1003
2016-2018
No indication

ADEQ's Raw Ambient Data Reports and Spreadsheets
AMP350
Sites 1002/1002 and 1003
2015-2018
No indication

24. The requirement to conduct a flow rate audit of the lead high volume samplers twice a year. Appendix A § 3.4.3 [formerly Appendix A § 3.3.4.1, 3.3.3].

ADEQ's 2013-approved QAPP – states:

- [p. 26] “The QA Auditor submits the PE audit field sheets to the QA/QC Lead for review and dissemination to the Pb data reviewer(s).”
- [p. 52] Requires “field sheets” documenting the audit.
[.pdf p. 842] “Record the audit standard’s flow rate and the sampler’s flow rate.”

- No field sheets with the information indicated

ADEQ's Data Quality Indicator Report
AMP256
Sites 1002/1002 and 1003
15Q1-15Q4

Indicated without foundation, except for the non-located (in 2015) Hillcrest monitor (Site 1003)

ADEQ's Data Quality Indicator Report
AMP256
Sites 1002/1002 and 1003
16Q1-16Q4

Indicated without foundation

ADEQ's Data Quality Indicator Report
AMP256
Sites 1002/1002 and 1003
17Q1-17Q4

Indicated without foundation

ADEQ's Data Quality Indicator Report
AMP256
Sites 1002/1002 and 1003
18Q1-18Q4

Indicated without foundation

ADEQ's Quick Look Report
AMP450
Sites 1002/1002 and 1003
2015-2018

No indication

ADEQ's Assessment Spreadsheet
AMP 504
Site 1002/1002
2015

Indicated without foundation, except for the non-collocated (in 2015) Hillcrest monitor (Site 1003)

ADEQ's Assessment Spreadsheet
AMP 504
Sites 1002/1002 and 1003
2016

Indicated without foundation

ADEQ's Assessment Spreadsheet
AMP 504
Sites 1002/1002 and 1003
2017

Indicated without foundation

ADEQ's Assessment Spreadsheet
AMP 504
Sites 1002/1002 and 1003
2018

Indicated without foundation

ADEQ's "April 27, 2015" Letter Certifying 2015 Data

No specific discussion

ADEQ's 2017-4-05 Letter Certifying 2016 Data

No specific discussion

ADEQ's 2018-4-27 Letter Certifying 2017 Data

No specific discussion

ADEQ's 2019-5-01 Letter Certifying 2018 Data

No specific discussion

ADEQ's Data Completeness Reports

AMP430

2015, 2016, 2017, 2018

No indication

ADEQ's Certification Evaluation and Concurrence

AMP600

2015

Data Concurrence and Evaluation Report for Lead

No specific discussion

ADEQ's Certification Evaluation and Concurrence

AMP600

2016

Data Concurrence and Evaluation Report for Lead

No specific discussion

ADEQ's Certification Evaluation and Concurrence

AMP600

2017

Data Concurrence and Evaluation Report for Lead

No specific discussion

ADEQ's Certification Evaluation and Concurrence

AMP600

2018

Data Concurrence and Evaluation Report for Lead

No specific discussion

Quick Look All Parameters

AMP450

Including Sites 1002/1002 and 1003

2016 and 2017

No indication

ADEQ's Lead Air Sampling Records

Site 1002/1002

2015-2018

No indication

ADEQ's Lead Air Sampling Records

Site 1003

2016-2018

No indication

Pima County Laboratory Sample Analyses Reports

Site 1002/1002

2015-2018

No indication

Pima County Laboratory Sample Analyses Reports

Site 1003

2016-2018

No indication

Pima County Laboratory Lead Audit Strip Analyses Reports

Site 1002/1002

2015-2018

No indication

Pima County Laboratory Lead Audit Strip Analyses Reports

Site 1003

2016-2018

No indication

ADEQ's Raw Ambient Data Reports and Spreadsheets

AMP350

Sites 1002/1002 and 1003

2015-2018

No indication

25. The rule that the flow rate standard used for the auditing must not be the same flow rate standard used for verifications or to calibrate the monitor. Appendix A § 3.4.3 [formerly Appendix A §§ 3.3.4.1, 3.3.3, 3.2.4].

ADEQ's 2013-approved QAPP – states:

- [p. 26] “The QA Auditor submits the PE audit field sheets to the QA/QC Lead for review and dissemination to the Pb data reviewer(s).”
- [p. 52] Requires “field sheets” documenting the audit
- No field sheets with the information indicated

ADEQ's Data Quality Indicator Report

AMP256

Sites 1002/1002 and 1003

15Q1-15Q4

No indication

ADEQ's Data Quality Indicator Report
AMP256
Sites 1002/1002 and 1003
16Q1-16Q4
No indication

ADEQ's Data Quality Indicator Report
AMP256
Sites 1002/1002 and 1003
17Q1-17Q4
No indication

ADEQ's Data Quality Indicator Report
AMP256
Sites 1002/1002 and 1003
18Q1-18Q4
No indication

ADEQ's Quick Look Report
AMP450
Sites 1002/1002 and 1003
2015-2018
No indication

ADEQ's Assessment Spreadsheet
AMP 504
Site 1002/1002
2015
No indication

ADEQ's Assessment Spreadsheet
AMP 504
Sites 1002/1002 and 1003
2016
No indication

ADEQ's Assessment Spreadsheet
AMP 504
Sites 1002/1002 and 1003
2017
No indication

ADEQ's Assessment Spreadsheet
AMP 504
Sites 1002/1002 and 1003
2018

No indication

ADEQ's "April 27, 2015" Letter Certifying 2015 Data

No specific discussion

ADEQ's 2017-4-05 Letter Certifying 2016 Data

No specific discussion

ADEQ's 2018-4-27 Letter Certifying 2017 Data

No specific discussion

ADEQ's 2019-5-01 Letter Certifying 2018 Data

No specific discussion

ADEQ's Data Completeness Reports

AMP430

2015, 2016, 2017, 2018

No indication

ADEQ's Certification Evaluation and Concurrence

AMP600

2015

Data Concurrence and Evaluation Report for Lead

No specific discussion

ADEQ's Certification Evaluation and Concurrence

AMP600

2016

Data Concurrence and Evaluation Report for Lead

No specific discussion

ADEQ's Certification Evaluation and Concurrence

AMP600

2017

Data Concurrence and Evaluation Report for Lead

No specific discussion

ADEQ's Certification Evaluation and Concurrence

AMP600

2018

Data Concurrence and Evaluation Report for Lead

No specific discussion

Quick Look All Parameters
AMP450
Including Sites 1002/1002 and 1003
2016 and 2017
No indication

ADEQ's Lead Air Sampling Records
Site 1002/1002
2015-2018
No indication

ADEQ's Lead Air Sampling Records
Site 1003
2016-2018
No indication

Pima County Laboratory Sample Analyses Reports
Site 1002/1002
2015-2018
No indication

Pima County Laboratory Sample Analyses Reports
Site 1003
2016-2018
No indication

Pima County Laboratory Lead Audit Strip Analyses Reports
Site 1002/1002
2015-2018
No indication

Pima County Laboratory Lead Audit Strip Analyses Reports
Site 1003
2016-2018
No indication

ADEQ's Raw Ambient Data Reports and Spreadsheets
AMP350
Sites 1002/1002 and 1003
2015-2018
No indication

26. The requirement to audit the lead reference or equivalent method analytical procedure each calendar quarter. Appendix A § 3.4.6 [formerly Appendix A § 3.3.4.2].

ADEQ's 2013-approved QAPP – states:

- [p. 23] “For the quarterly Pb audit strips, a bias goal of $\pm 10\%$ will be targeted.

ADEQ's Data Quality Indicator Report

AMP256

Sites 1002/1002 and 1003

15Q1-15Q4

“Lead audit strip analysis” reported without foundation; the records production did not include QA/QC laboratory data packages

ADEQ's Data Quality Indicator Report

AMP256

Sites 1002/1002 and 1003

16Q1-16Q4

“Lead audit strip analysis” reported without foundation

ADEQ's Data Quality Indicator Report

AMP256

Sites 1002/1002 and 1003

17Q1-17Q4

“Lead audit strip analysis” reported without foundation

ADEQ's Data Quality Indicator Report

AMP256

Sites 1002/1002 and 1003

18Q1-18Q4

“Lead audit strip analysis” reported without foundation

ADEQ's Quick Look Report

AMP450

Sites 1002/1002 and 1003

2015-2018

No indication

ADEQ's Assessment Spreadsheet

AMP 504

Site 1002/1002

2015

Indicated without foundation

ADEQ's Assessment Spreadsheet
AMP 504
Sites 1002/1002 and 1003
2016

Indicated without foundation

ADEQ's Assessment Spreadsheet
AMP 504
Sites 1002/1002 and 1003
2017

Indicated without foundation

ADEQ's Assessment Spreadsheet
AMP 504
Sites 1002/1002 and 1003
2018

Indicated without foundation

ADEQ's "April 27, 2015" Letter Certifying 2015 Data
No specific discussion

ADEQ's 2017-4-05 Letter Certifying 2016 Data
No specific discussion

ADEQ's 2018-4-27 Letter Certifying 2017 Data
No specific discussion

ADEQ's 2019-5-01 Letter Certifying 2018 Data
No specific discussion

ADEQ's Data Completeness Reports
AMP430
2015, 2016, 2017, 2018
No indication

ADEQ's Certification Evaluation and Concurrence
AMP600
2015
Data Concurrence and Evaluation Report for Lead
No specific discussion; reports without foundation a "Bias" under "Analysis Audit Summary"

ADEQ's Certification Evaluation and Concurrence

AMP600

2016

Data Concurrence and Evaluation Report for Lead

No specific discussion; reports without foundation a "Bias" under "Analysis Audit Summary"

ADEQ's Certification Evaluation and Concurrence

AMP600

2017

Data Concurrence and Evaluation Report for Lead

No specific discussion; reports without foundation a "Bias" under "Analysis Audit Summary"—reported value is -12.53

ADEQ's Certification Evaluation and Concurrence

AMP600

2018

Data Concurrence and Evaluation Report for Lead

No specific discussion; reports without foundation a "Bias" under "Analysis Audit Summary"—reported value is -10.30

Quick Look All Parameters

AMP450

Including Sites 1002/1002 and 1003

2016 and 2017

No indication

ADEQ's Lead Air Sampling Records

Site 1002/1002

2015-2018

No indication

ADEQ's Lead Air Sampling Records

Site 1003

2016-2018

No indication

Pima County Laboratory Sample Analyses Reports

Site 1002/1002

2015-2018

No indication

Pima County Laboratory Sample Analyses Reports

Site 1003

2016-2018

No indication

Pima County Laboratory Lead Audit Strip Analyses Reports
Site 1002/1002
2015-2018

Indicated without foundation

Pima County Laboratory Lead Audit Strip Analyses Reports
Site 1003
2016-2018

Indicated without foundation

ADEQ's Raw Ambient Data Reports and Spreadsheets
AMP350
Sites 1002/1002 and 1003
2015-2018

No indication

27. The rule that the lead method audit samples must be prepared using batches of reagents different from those used to calibrate the lead analytical equipment being audited. Appendix A § 3.4.6 [formerly Appendix A § 3.3.4.2].

ADEQ's Data Quality Indicator Report
AMP256
Sites 1002/1002 and 1003
15Q1-15Q4

No indication

ADEQ's Data Quality Indicator Report
AMP256
Sites 1002/1002 and 1003
16Q1-16Q4

No indication

ADEQ's Data Quality Indicator Report
AMP256
Sites 1002/1002 and 1003
17Q1-17Q4

No indication

ADEQ's Data Quality Indicator Report
AMP256
Sites 1002/1002 and 1003
18Q1-18Q4

No indication

ADEQ's Quick Look Report
AMP450
Sites 1002/1002 and 1003
2015-2018

No indication

ADEQ's Assessment Spreadsheet
AMP 504
Site 1002/1002
2015

No indication

ADEQ's Assessment Spreadsheet
AMP 504
Sites 1002/1002 and 1003
2016

No indication

ADEQ's Assessment Spreadsheet
AMP 504
Sites 1002/1002 and 1003
2017

No indication

ADEQ's Assessment Spreadsheet
AMP 504
Sites 1002/1002 and 1003
2018

No indication

ADEQ's "April 27, 2015" Letter Certifying 2015 Data

No specific discussion

ADEQ's 2017-4-05 Letter Certifying 2016 Data

No specific discussion

ADEQ's 2018-4-27 Letter Certifying 2017 Data

No specific discussion

ADEQ's 2019-5-01 Letter Certifying 2018 Data

No specific discussion

ADEQ's Data Completeness Reports
AMP430
2015, 2016, 2017, 2018

No indication

ADEQ's Certification Evaluation and Concurrence
AMP600
2015
Data Concurrence and Evaluation Report for Lead
No specific discussion

ADEQ's Certification Evaluation and Concurrence
AMP600
2016
Data Concurrence and Evaluation Report for Lead
No specific discussion

ADEQ's Certification Evaluation and Concurrence
AMP600
2017
Data Concurrence and Evaluation Report for Lead
No specific discussion

ADEQ's Certification Evaluation and Concurrence
AMP600
2018
Data Concurrence and Evaluation Report for Lead
No specific discussion

Quick Look All Parameters
AMP450
Including Sites 1002/1002 and 1003
2016 and 2017
No indication

ADEQ's Lead Air Sampling Records
Site 1002/1002
2015-2018
No indication

ADEQ's Lead Air Sampling Records
Site 1003
2016-2018
No indication

Pima County Laboratory Sample Analyses Reports
Site 1002/1002
2015-2018
No indication

Pima County Laboratory Sample Analyses Reports
Site 1003
2016-2018
No indication

Pima County Laboratory Lead Audit Strip Analyses Reports
Site 1002/1002
2015-2018
No indication

Pima County Laboratory Lead Audit Strip Analyses Reports
Site 1003
2016-2018
No indication

ADEQ's Raw Ambient Data Reports and Spreadsheets
AMP350
Sites 1002/1002 and 1003
2015-2018
No indication

28. The rule that the lead method audit samples must be prepared in the following equivalent ambient lead concentrations in $\mu\text{g}/\text{m}^3$: (i) 30-100% of lead NAAQS; (ii) 200-300% of lead NAAQS. Appendix A § 3.4.6 [formerly Appendix A § 3.3.4.2].

ADEQ's Data Quality Indicator Report
AMP256
Sites 1002/1002 and 1003
15Q1-15Q4
No indication

ADEQ's Data Quality Indicator Report
AMP256
Sites 1002/1002 and 1003
16Q1-16Q4
No indication

ADEQ's Data Quality Indicator Report
AMP256
Sites 1002/1002 and 1003
17Q1-17Q4
No indication

ADEQ's Data Quality Indicator Report
AMP256
Sites 1002/1002 and 1003
18Q1-18Q4
No indication

ADEQ's Quick Look Report
AMP450
Sites 1002/1002 and 1003
2015-2018
No indication

ADEQ's Assessment Spreadsheet
AMP 504
Site 1002/1002
2015
Two assessment masses reported without foundation; unclear if they correspond to the percentages of the lead NAAQS in (i) and (ii)

ADEQ's Assessment Spreadsheet
AMP 504
Sites 1002/1002 and 1003
2016
Two assessment masses reported without foundation; unclear if they correspond to the percentages of the lead NAAQS in (i) and (ii)

ADEQ's Assessment Spreadsheet
AMP 504
Sites 1002/1002 and 1003
2017
Two assessment masses reported without foundation; unclear if they correspond to the percentages of the lead NAAQS in (i) and (ii)

ADEQ's Assessment Spreadsheet
AMP 504
Sites 1002/1002 and 1003
2018
Two assessment masses reported without foundation; unclear if they correspond to the percentages of the lead NAAQS in (i) and (ii)

ADEQ's "April 27, 2015" Letter Certifying 2015 Data
No specific discussion

ADEQ's 2017-4-05 Letter Certifying 2016 Data
No specific discussion

ADEQ's 2018-4-27 Letter Certifying 2017 Data
No specific discussion

ADEQ's 2019-5-01 Letter Certifying 2018 Data
No specific discussion

ADEQ's Data Completeness Reports
AMP430
2015, 2016, 2017, 2018
No indication

ADEQ's Certification Evaluation and Concurrence
AMP600
2015
Data Concurrence and Evaluation Report for Lead
No specific discussion

ADEQ's Certification Evaluation and Concurrence
AMP600
2016
Data Concurrence and Evaluation Report for Lead
No specific discussion

ADEQ's Certification Evaluation and Concurrence
AMP600
2017
Data Concurrence and Evaluation Report for Lead
No specific discussion

ADEQ's Certification Evaluation and Concurrence
AMP600
2018
Data Concurrence and Evaluation Report for Lead
No specific discussion

Quick Look All Parameters
AMP450
Including Sites 1002/1002 and 1003
2016 and 2017
No indication

ADEQ's Lead Air Sampling Records
Site 1002/1002
2015-2018
No indication

ADEQ's Lead Air Sampling Records

Site 1003

2016-2018

No indication

Pima County Laboratory Sample Analyses Reports

Site 1002/1002

2015-2018

No indication

Pima County Laboratory Sample Analyses Reports

Site 1003

2016-2018

No indication

Pima County Laboratory Lead Audit Strip Analyses Reports

Site 1002/1002

2015-2018

No indication

Pima County Laboratory Lead Audit Strip Analyses Reports

Site 1003

2016-2018

No indication

ADEQ's Raw Ambient Data Reports and Spreadsheets

AMP350

Sites 1002/1002 and 1003

2015-2018

No indication

29. The requirement to analyze three audit samples in each of the two ranges each quarter samples are analyzed. Appendix A § 3.4.6(b) [formerly Appendix A § 3.3.4.2(b)].

ADEQ's Data Quality Indicator Report

AMP256

Sites 1002/1002 and 1003

15Q1-15Q4

No indication

ADEQ's Data Quality Indicator Report

AMP256

Sites 1002/1002 and 1003

16Q1-16Q4

No indication

ADEQ's Data Quality Indicator Report
AMP256
Sites 1002/1002 and 1003
17Q1-17Q4
No indication

ADEQ's Data Quality Indicator Report
AMP256
Sites 1002/1002 and 1003
18Q1-18Q4
No indication

ADEQ's Quick Look Report
AMP450
Sites 1002/1002 and 1003
2015-2018
No indication

ADEQ's Assessment Spreadsheet
AMP 504
Site 1002/1002
2015
Assessments reported without foundation; unclear if the assessment masses reported correspond to the two ranges: (i) 30-100% of lead NAAQS; (ii) 200-300% of lead NAAQS

ADEQ's Assessment Spreadsheet
AMP 504
Sites 1002/1002 and 1003
2016
Assessments reported without foundation; unclear if the assessment masses reported correspond to the two ranges: (i) 30-100% of lead NAAQS; (ii) 200-300% of lead NAAQS

ADEQ's Assessment Spreadsheet
AMP 504
Sites 1002/1002 and 1003
2017
Assessments reported without foundation; unclear if the assessment masses reported correspond to the two ranges: (i) 30-100% of lead NAAQS; (ii) 200-300% of lead NAAQS

ADEQ's Assessment Spreadsheet
AMP 504
Sites 1002/1002 and 1003
2018

Assessments reported without foundation; unclear if the assessment masses reported correspond to the two ranges: (i) 30-100% of lead NAAQS; (ii) 200-300% of lead NAAQS

ADEQ's "April 27, 2015" Letter Certifying 2015 Data
No specific discussion

ADEQ's 2017-4-05 Letter Certifying 2016 Data
No specific discussion

ADEQ's 2018-4-27 Letter Certifying 2017 Data
No specific discussion

ADEQ's 2019-5-01 Letter Certifying 2018 Data
No specific discussion

ADEQ's Data Completeness Reports
AMP430
2015, 2016, 2017, 2018
No indication

ADEQ's Certification Evaluation and Concurrence
AMP600
2015
Data Concurrence and Evaluation Report for Lead
No specific discussion

ADEQ's Certification Evaluation and Concurrence
AMP600
2016
Data Concurrence and Evaluation Report for Lead
No specific discussion

ADEQ's Certification Evaluation and Concurrence
AMP600
2017
Data Concurrence and Evaluation Report for Lead
No specific discussion

ADEQ's Certification Evaluation and Concurrence
AMP600
2018
Data Concurrence and Evaluation Report for Lead
No specific discussion

Quick Look All Parameters
AMP450
Including Sites 1002/1002 and 1003
2016 and 2017
No indication

ADEQ's Lead Air Sampling Records
Site 1002/1002
2015-2018
No indication

ADEQ's Lead Air Sampling Records
Site 1003
2016-2018
No indication

Pima County Laboratory Sample Analyses Reports
Site 1002/1002
2015-2018
No indication

Pima County Laboratory Sample Analyses Reports
Site 1003
2016-2018
No indication

Pima County Laboratory Lead Audit Strip Analyses Reports
Site 1002/1002
2015-2018
Indicated without foundation

Pima County Laboratory Lead Audit Strip Analyses Reports
Site 1003
2016-2018
Indicated without foundation

ADEQ's Raw Ambient Data Reports and Spreadsheets
AMP350
Sites 1002/1002 and 1003
2015-2018

No indication

30. The requirement to report the audit concentrations (in μg lead per filter or strip) and the corresponding measured concentrations (in μg lead per filter or strip) to the AQS. Appendix A § 3.4.6(c) [formerly Appendix A § 3.3.4.2(c)].

ADEQ's Data Quality Indicator Report
AMP256
Sites 1002/1002 and 1003
15Q1-15Q4

No indication

ADEQ's Data Quality Indicator Report
AMP256
Sites 1002/1002 and 1003
16Q1-16Q4

No indication

ADEQ's Data Quality Indicator Report
AMP256
Sites 1002/1002 and 1003
17Q1-17Q4

No indication

ADEQ's Data Quality Indicator Report
AMP256
Sites 1002/1002 and 1003
18Q1-18Q4

No indication

ADEQ's Quick Look Report
AMP450
Sites 1002/1002 and 1003
2015-2018

No indication

ADEQ's Assessment Spreadsheet
AMP 504
Site 1002/1002
2015

Entries made without foundation

ADEQ's Assessment Spreadsheet
AMP 504
Sites 1002/1002 and 1003
2016

Entries made without foundation

ADEQ's Assessment Spreadsheet
AMP 504
Sites 1002/1002 and 1003
2017

Entries made without foundation

ADEQ's Assessment Spreadsheet
AMP 504
Sites 1002/1002 and 1003
2018

Entries made without foundation

ADEQ's "April 27, 2015" Letter Certifying 2015 Data
No specific discussion

ADEQ's 2017-4-05 Letter Certifying 2016 Data
No specific discussion

ADEQ's 2018-4-27 Letter Certifying 2017 Data
No specific discussion

ADEQ's 2019-5-01 Letter Certifying 2018 Data
No specific discussion

ADEQ's Data Completeness Reports
AMP430
2015, 2016, 2017, 2018
No indication

ADEQ's Certification Evaluation and Concurrence
AMP600
2015
Data Concurrence and Evaluation Report for Lead
No specific discussion

ADEQ's Certification Evaluation and Concurrence
AMP600
2016
Data Concurrence and Evaluation Report for Lead
No specific discussion

ADEQ's Certification Evaluation and Concurrence
AMP600
2017
Data Concurrence and Evaluation Report for Lead
No specific discussion

ADEQ's Certification Evaluation and Concurrence
AMP600
2018
Data Concurrence and Evaluation Report for Lead
No specific discussion

Quick Look All Parameters
AMP450
Including Sites 1002/1002 and 1003
2016 and 2017
No indication

ADEQ's Lead Air Sampling Records
Site 1002/1002
2015-2018
No indication

ADEQ's Lead Air Sampling Records
Site 1003
2016-2018
No indication

Pima County Laboratory Sample Analyses Reports
Site 1002/1002
2015-2018
No indication

Pima County Laboratory Sample Analyses Reports
Site 1003
2016-2018
No indication

Pima County Laboratory Lead Audit Strip Analyses Reports
Site 1002/1002
2015-2018
No indication

Pima County Laboratory Lead Audit Strip Analyses Reports
Site 1003
2016-2018

No indication

ADEQ's Raw Ambient Data Reports and Spreadsheets
AMP350
Sites 1002/1002 and 1003
2015-2018

Entries made without foundation

EXHIBIT 3

U.S. EPA's Responses to ASARCO LLC's Comments on the Proposed Version of the Rule

Response to Comments Document for the EPA’s Final Finding of Failure to Attain the 2008 Lead and 2010 Sulfur Dioxide Standards; Arizona; Hayden and Miami Nonattainment Area. Docket ID No. EPA-R09-OAR-2021-0078 (January 2022)

Introduction

On May 10, 2021, the EPA proposed to determine that the Hayden lead (Pb) nonattainment area (NAA) failed to attain the 2008 Pb primary and secondary national ambient air quality standards (NAAQS) by the applicable attainment date of October 3, 2019, based upon monitored air quality data from November 2015–December 2018. In the May 10, 2021 action, the EPA also proposed to determine that the Hayden and Miami sulfur dioxide (SO₂) NAAs failed to attain the 2010 1-hour SO₂ primary NAAQS by the applicable attainment date of October 4, 2018, based upon monitored air quality data from January 2015–December 2017.¹

Our May 10, 2021 proposed rule provided a 30-day public comment period that closed on June 9, 2021. During this period, six substantive comment letters were submitted to the EPA. The preamble to the EPA’s final finding of failure to attain the Pb and SO₂ NAAQS in these areas includes our responses to five of the six substantive comments. The sixth substantive comment letter was submitted by a representative of Asarco LLC (“Asarco” or “the commenter”) and relates to the quality and validity of monitoring data relied upon in the EPA’s proposed finding of failure to attain the Pb and SO₂ NAAQS in the Hayden nonattainment area. We summarize and respond to the comments concerning data quality and validity from Asarco in this document.

The comments from Asarco are organized into four categories: (A) comments generally regarding both the Pb and SO₂ data, (B) additional comments regarding SO₂ data, (C) additional comments regarding Pb data, and (D) additional comments based on the EPA’s 2019 report

¹ 86 FR 24829.

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concerning its 2018 technical systems audit (TSA) of the Arizona Department of Environmental Quality's (ADEQ's) air monitoring network ("2019 TSA Report").² For ease of reference, we use the same numbering system and generally adopt the same terminology as the commenter.

Asarco included four attachments to its letter:

- the records that ADEQ produced in response to a public records request submitted by Asarco ("ADEQ's Records"),³
- the public records request that Asarco submitted to ADEQ,⁴
- ADEQ's affirmation concerning the records that ADEQ produced, and
- Asarco's "Completeness Review" of these records ("Attachment 4").

Comment A: Comments Generally Regarding Both the Pb and SO₂ Data

Asarco claims that the records available in the docket for the proposed finding of failure to attain ("rulemaking docket") and ADEQ's Records do not include sufficient required documentation. The commenter uses the term "QC/QA Rules" to refer to 40 CFR Part 58, appendix A and 40 CFR Part 50, appendices A-1, T, G and R and uses the term "Required

² US EPA Region IX, Technical Systems Audit of the Ambient Air Monitoring Program: Arizona Department of Environmental Quality, April 2 - April 6, 2018, Final Report dated April 2019 (enclosure to letter dated April 25, 2019, from Elizabeth Adams, Director, Air Division, EPA Region IX, to Timothy Franquist, Director, Air Quality Division, ADEQ).

³ The electronic files comprising the records that ADEQ provided to the commenter were too large to upload to the rulemaking docket via the <https://www.regulations.gov> website. The commenter sent these materials via FedEx to the EPA Region IX office, but, due to information security concerns, EPA staff were not able to access the files. The commenter therefore submitted these files in a series of emails to EPA staff. See emails dated June 7, 2021, from George A. Tsiolis, Attorney at Law, to Benjamin Leers, EPA Region IX, Subject: Proposed Finding of Failure to Attain - Rulemaking Docket No. EPA-R09-OAR-2021-0078. These documents are included in the docket for this action and are referenced according to the file naming conventions in the docket index for this action. Numerous files were provided in the comma-separated value (.csv) format, which is not accepted for upload to the federal docket management system. These files have been converted to Microsoft excel format (.xlsx) for inclusion in the docket.

⁴ Letter dated May 19, 2021, from George A. Tsiolis, Attorney at Law, Counsel for Asarco, to Cina Sheffield, Manager of Records Center, and Daniel Czecholinski, Director of Air Quality, Arizona Department of Environmental Quality, Subject: "Request for Public Records - Records Underlying Design Values," ("Asarco's Public Record's Request").

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Documentation” to refer to the “documentation required by the QC/QA Rules and ADEQ’s quality assurance program plans (“QAPPs”) . . .”

We excerpt and respond to the commenter’s specific contentions below.

Comment A.1:

The absence of Required Documentation from the rulemaking docket means: (i) a finding of failure to attain, as proposed in the rulemaking and for the reasons stated in the proposal, would be without adequate foundation in the rulemaking record; (ii) the public is presently deprived of an opportunity to comment regarding the representativeness of the SO₂ Data and Pb Data and, consequently, on the proposed finding of failure to attain, in violation of applicable rulemaking requirements; and (iii) EPA should, at a minimum, make available to the public, in the rulemaking docket, the missing Required Documentation, and extend the rulemaking comment period by an amount of time that is sufficient for the public to have a meaningful opportunity to review that Required Documentation and thereafter submit comments on the proposed rulemaking.

Response A.1:

As an initial matter, the commenter appears to misunderstand the nature of the applicable quality assurance provisions and the process by which the EPA evaluates the suitability of air quality monitoring data for regulatory decisions.⁵ Air quality monitors whose data are used to evaluate compliance with the NAAQS are subject to the minimum quality system requirements set forth 40 CFR part 58, appendix A (referred to hereinafter as “Appendix A”).⁶ These requirements are implemented by state, tribal and local monitoring organizations (or groups of such organizations), which are known as primary quality assurance organizations (PQAOs).⁷ Each PQAO must implement a quality system that addresses the requirements of Appendix A.⁸

⁵ The commenter refers to 40 CFR part 58, appendix A and 40 CFR part 50 appendices A-1, T, G and R collectively as the “QC/QA Rules.” The appendices to part 50, however, do not specifically pertain to quality assurance. Rather, appendices A-1 and G establish federal reference methods for measuring ambient concentrations of SO₂ and Pb, respectively, while appendices R and T explain the data handling conventions and computations necessary for determining when these NAAQS are met. For clarity, we distinguish among these requirements in our responses.

⁶ See Appendix A, section 1.1.(a).

⁷ See generally Appendix A, section 1.2.

⁸ Appendix A, section 1.2.

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The EPA oversees the implementation of these requirements by evaluating assessments and documentation of data quality submitted by PQAOs,⁹ by reviewing and approving QAPPs and quality management plans (QMPs) developed by PQAOs,¹⁰ and by conducting triennial TSAs of each PQAO.¹¹ In addition, the EPA conducts audits of monitors providing data for NAAQS compliance purposes through the EPA's national performance audit program (NPAP), the PM_{2.5} performance evaluation program (PM_{2.5}-PEP) program and the Pb performance evaluation program (Pb-PEP).¹²

As noted in our proposal and described in more detail in the responses that follow, the EPA considered air quality system (AQS) design value reports (known as AMP480 reports), annual data certifications submitted by ADEQ, annual network plans (ANPs) and the 2019 TSA Report to assess the quality of the available monitoring data for the Hayden Pb and SO₂ NAAs for the 2015–2018 period. As described in detail in the responses that follow, we found that these data were appropriately quality assured and, based on these data, we proposed to determine that the Hayden Pb and SO₂ NAAs failed to attain the respective NAAQS by their respective attainment dates.¹³ Because all of the materials we directly considered in developing our proposal were available in our rulemaking docket, we do not agree with the commenter's assertions that our proposed determinations were “without adequate foundation in the rulemaking record” or that “the public was deprived of an opportunity to comment regarding the representativeness of the SO₂ Data and Pb Data.”

⁹ Id. section 1.4.

¹⁰ Id. sections 2.1, 2.1.1, and 2.2.2.

¹¹ Id. section 2.5.

¹² Id. section 2.4. PQAOs may self-implement these programs rather than consent to use the federal programs if they meet the adequacy requirements and the definition of independent assessment in Appendix A.

¹³ See 86 FR 24829, 24832-24834 (preamble discussion of Pb and SO₂ data considerations the proposed determination).

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We also note that the commenter uses the term “Required Documentation” to refer to documents that establish compliance with the provisions of ADEQ’s QAPPs,¹⁴ Appendix A and 40 CFR part 50 appendices A-1, T, G, and R. This “Required Documentation” comprises voluminous amounts of quality assurance (QA) documentation, including records for each individual sample collected, supporting calibration/traceability information, and quality control documentation. Because the EPA’s role under Appendix A is to oversee a PQAO’s implementation of QA requirements rather than to implement those requirements directly, the vast majority of this documentation is not required to be submitted to or reviewed by the EPA. However, during TSAs, the EPA reviews portions of the PQAO’s QA documentation and confirms that the PQAO has systems in place to internally review this documentation.¹⁵ For example, during a TSA, the EPA typically reviews a PQAO’s last three years of quality assurance and quality control information, such as one-point quality control checks, multi-point calibrations, annual performance evaluations, one-point flow rate verifications, semi-annual flow rate audits, flow rate calibrations and the certifications and standard operating procedures (SOP) associated with the instrumentation used to assess or generate these test atmospheres. The EPA also reviews samples of station and instrument logbooks, data quality indicator reports queried from AQS, adherence to siting criteria described in 40 CFR part 58, appendix E, “Probe and

¹⁴ ADEQ’s QAPPs that are relevant to this action are as follows: “Quality Assurance Program Plan for the Lead Ambient Air Monitoring Network” (December 2012) (“2012 Pb QAPP”), *E.3.047_2013 ADEQ Lead (Pb) QAPP w_2012 Pima Quality Manual and SOPs.pdf*; “Quality Assurance Program Plan for the Lead Ambient Air Monitoring Network” (June 2018) (“2018 Pb QAPP”), *E.3.052_2018 ADEQ Lead (Pb) QAPP.pdf*; and “Quality Assurance Program Plan for the Sulfur Dioxide Ambient Air Monitoring Network” (June 2014) (“SO₂ QAPP”), *E.3.048_2014 SO2 QAPP_List of Attachments.docx*; *E.3.064_First Third of 2014 ADEQ SO2 QAPP with Attachments.pdf*; *E.3.065_Second Third of 2014 ADEQ SO2 QAPP with Attachments.pdf*; *E.3.066_Third Third of 2014 ADEQ SO2 QAPP with Attachments-2.pdf*.

¹⁵ See, e.g., EPA, “Quality Assurance Guidance Document: Conducting Technical Systems Audits of Ambient Air Monitoring Programs,” 56 (November 2017). “The audit team should review the supporting documentation to determine if the data has been handled appropriately.”

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Monitoring Path Siting Criteria for Ambient Air Monitoring,” and data validation records to evaluate a PQAQO's decision-making rationale. It would not be feasible for the EPA to review all of the numerous QA documents associated with a particular monitoring site and pollutant as part of our evaluation of whether a particular area has attained the NAAQS. Accordingly, our general practice when conducting such an evaluation is to review the documents that are required to be submitted to or developed by the EPA pursuant to the requirements of 40 CFR part 58.

Consistent with this general practice, the EPA did not review all of ADEQ's underlying QA documentation in formulating our proposed determinations. Rather, as previously noted, we considered the documents cited in our proposal and included them in the rulemaking docket (i.e., AQS reports, annual data certifications, ANPs and the 2019 TSA Report). The remainder of the “Required Documentation” referred to by the commenter was not considered by the EPA for this proposal and therefore is not required to be in the docket. Moreover, this documentation is generally available to the public from the relevant PQAQO, as demonstrated by ADEQ's response to commenter's records request.¹⁶ Accordingly, we do not agree with the commenter that it is necessary for the EPA to extend the comment period to provide the public with a chance to review the “Required Documentation.”

Comment A.2:

The following Required Documentation is not included in the Docket Records or ADEQ's Records:

- a. Hard-copy site logbooks, including, without limitation, contemporaneous records of flow checks, zero/span/precision checks, and calibrations/adjustments of the SO₂ analyzers and Pb samplers.
- b. Electronic logbooks that meet EPA requirements for traceability and version control, including, without limitation, contemporaneous records of

¹⁶ See attachment 3 to Asarco's comment letter.

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- flow checks, zero/span/precision checks, and calibrations/adjustments of the SO₂ analyzers and Pb samplers.
- c. Certificates that demonstrate reference gases, materials, and devices used to conduct the flow checks and zero/span/precision checks and inform the calibrations/adjustments were, in fact, traceable to a National Institute of Standards and Technology ("NIST")-certified primary standard, such as a NIST-Certified Gas Manufacturer's Internal Standard or a NIST-Traceable Reference Material.
 - d. Records of validation of the Data using systematic criteria in addition to critical and operational criteria.

Response A.2:

For the reasons described in response A.1 in this document, these materials were not required to be included in the docket. With respect to ADEQ's Records, we note that Asarco's public records request to ADEQ did not expressly list any of these documents. Some of the documents are referred to in ADEQ's QAPPs and therefore could be considered to fall within Asarco's broad request for:

ADEQ's records that document and establish that the air quality data that ADEQ submitted into the Air Quality System ("AQS") or otherwise to the U.S. EPA and that underlie the Design Values ("Relevant Air Quality Data" or "Data") were generated and submitted in a manner that satisfies the quality control and quality assurance requirements of . . . the Quality Assurance Project Plans ("QAPP") pursuant to which the Relevant Air Quality Data were generated.

However, it appears that ADEQ did not interpret this request as extending to the numerous documents that are referred to in the QAPPs, such as hardcopy and electronic logbooks and certificates for reference gases.¹⁷ To our knowledge, the commenter did not follow up with a request to ADEQ for these documents. In any case, as detailed in responses to comments B and C in this document, compliance with the applicable regulatory requirements is documented in

¹⁷ For example, the 2018 Pb QAPP, table A.3 (pages 29–30) lists numerous types of records relevant to QA procedures that are maintained by ADEQ.

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other materials referred to in our proposal and in additional documents that ADEQ provided to the commenter.

Comment A.3:

The absence of the above Required Documentation in the Docket Records or ADEQ's Records correlates to Finding #10 of EPA's April 25, 2019 report of the findings of its 2018 Technical System Audit of ADEQ's ambient air monitoring program ("2019 TSA Report"). Doc. B-14, Rulemaking Docket. In Finding #10, EPA concluded that, for the three-year period of time covered by the audit: (i) ADEQ was not implementing required procedures to "assure retention of all critical records"; (ii) ADEQ's air monitoring staff "were not fully aware of the ADEQ records management system requirements"; and (iii) monitoring records "were not being managed as required." Recommendation 8 of the 2019 TSA Report elaborates that ADEQ's ambient air quality monitoring records retention system "does not fully meet EPA requirements for traceability and version control." The vagueness of this statement reasonably creates a presumption that the traceability requirements of the QC/QA rules are not satisfied for the Data. There is nothing in the Docket Records or ADEQ's Records that rebuts the presumption.

Response A.3:

Contrary to Asarco's suggestion, the EPA's monitoring regulations do not include "traceability requirements" for records. As referenced in the 2019 TSA Report,¹⁸ the "requirements" referred to in this comment are, in fact, contained in EPA guidance,¹⁹ in a technical note concerning electronic logbooks,²⁰ in ADEQ's internal record management procedures,²¹ and in ADEQ's QMP.²² In Finding #10 of the 2019 TSA Report, we explained that:

The ADEQ had an agency-wide records management program with established procedures that were reinforced in the ADEQ QMP. These documents discuss the creation and archiving of documents working through program Coordinators and

¹⁸ 2019 TSA Report, 22, 27.

¹⁹ EPA, Quality Assurance Handbook for Air Pollution Measurement Systems ("QA Handbook"), Vol. II, Ambient Air Quality Monitoring Program (January 2017).

²⁰ EPA, Use of Electronic Logbooks for Ambient Air Monitoring (April 20, 2016).

²¹ ADEQ, SOP for Program Physical Records Management (October 2014, updated February 2016).

²² ADEQ, Quality Management Plan (June 2016).

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Custodians. The ADEQ ambient air monitoring QAPPs noted in general which group stores the records and where, but lacked specificity such as which program records must be retained, specific retention locations, retention schedules and archiving procedures.

The ADEQ air monitoring staff were not fully aware of the ADEQ records management system requirements and many of the monitoring records being created were not being managed as required.²³

In other words, we found that ADEQ was not fully implementing its own internal requirements for records management. However, we did not find that ADEQ was failing to meet any regulatory requirement concerning records management. Importantly, we did not recommend invalidation of any data based on this finding. Rather, we recommended that ADEQ update its internal procedures to ensure retention of all critical records.²⁴

We also recommended as a “best practice” that ADEQ should “consult the records management system developer regarding version handling procedures and/or develop in-house handling procedures to maintain records integrity.”²⁵ This recommendation applied specifically to electronic logbooks, which ADEQ had started to use at the time of the 2018 TSA. The EPA did not find any evidence that any records had been lost or improperly altered. Accordingly, we did not recommend invalidation of any data based on this recommendation.

Comment A.4:

The absence of the above Required Documentation in the Docket Records or ADEQ's Records also correlates to Finding #13 of the 2019 TSA Report. In Finding #13, EPA stated that ADEQ's validators “did not consider all systemic criteria or the adequacy of the data sets based on the systemic criteria” and that “consistent failures of any of these criteria may cause entire data sets to be suspect.” According to Finding #13, this same deficiency was documented in EPA's 2015 Technical Systems Audit of ADEQ's ambient air monitoring program. This indicates the deficiency affects the reliability of all of the Data. In

²³ 2019 TSA Report, 22.

²⁴ Id. at 23.

²⁵ Id. at 27.

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the absence of records that ADEQ did consider all applicable systemic criteria, the Data must be considered presumptively invalid and without documentary foundation that may rebut the presumption.

Response A.4:

Asarco misquotes finding 13 of the 2019 TSA Report, which stated that “[t]he data validation process did not include a review of *systematic* criteria.”²⁶ In our QA Handbook and validation templates, the EPA distinguishes between critical, operational, and systematic criteria.²⁷ Critical criteria are “critical to maintaining the integrity of a sample or group of samples,”²⁸ so observations that do not meet all critical criteria “should be invalidated unless there are compelling reason and justification for not doing so.”²⁹ Operational criteria are “important for maintaining and evaluating the quality of the data collection system,” such that “violation of a criterion or a number of criteria may be cause for invalidation.”³⁰ Systematic criteria “are important for the correct interpretation of the data but *do not usually impact the validity of a sample or group of samples*. . .”³¹ Therefore, we do not agree that this finding from the TSA regarding systematic criteria presumptively invalidates the data as asserted by the commenter.

We also note that the TSA finding was that ADEQ did not consistently review or evaluate systematic criteria. The EPA did not find that any systematic criteria had *not* been met or that ADEQ lacked records establishing compliance with these criteria. In fact, the materials included in the docket for our notice of proposed rulemaking and information provided by

²⁶ 2019 TSA Report, 26 (emphasis added).

²⁷ QA Handbook, appendix D, 2.

²⁸ *Id.*

²⁹ *Id.*

³⁰ *Id.*

³¹ *Id.* (emphasis added).

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ADEQ in response to the commenter's request establish compliance with many systematic criteria for the relevant years and NAAQS at Sites 1001, 1002 and 1003.³² For example, systematic criteria for SO₂ and Pb (high volume total suspended particulate) monitors include precision and bias,³³ which are discussed in responses B.1–B.2 and C.1–C.2 of this document for SO₂ and Pb, respectively. Other systematic criteria for both pollutants include standard reporting units, rounding convention, data completeness, and monitor siting. These criteria are addressed in the AQS reports and ANP documents that were included in the rulemaking docket. Nothing in these documents indicates any problem with systematic criteria significant enough to merit invalidation of the data, especially given that such criteria are not typically grounds for such invalidation.

Comment A.5:

The obligation to document compliance with all applicable QC/QA Rules is stated in the rules as an affirmative obligation, the satisfaction of which must be demonstrated in order for the Data to be lawfully relied upon in a NAAQS attainment-status determination. Such a demonstration is not evident in the Docket Records or ADEQ's Records.

Response A.5:

We do not agree with Asarco's characterization of the applicable quality assurance requirements. Section 1.2.3 of Appendix A provides that “[f]ailure to conduct or pass a required check or procedure, or a series of required checks or procedures, does not by itself invalidate data for regulatory decision making.” This section further explains that, when determining the suitability of data for regulatory decisions, the EPA and PQAOs use a “weight of evidence”

³² ADEQ monitoring Sites 1001, 1002, and 1003 are the "Hayden Old Jail" (AQS ID 04-007-1001), "Globe Highway" (AQS ID 04-007-1002), and "Hillcrest" (AQS ID 04-007-1003) monitoring sites, respectively.

³³ QA Handbook, 15–16, 48–49.

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approach that takes into account the checks and procedures required in Appendix A, along with other data quality information, reports, and similar documentation.³⁴ Based on an assessment of all of this information, PQAOs and the EPA then determine whether or not to use or not to use monitoring data for a specific regulatory purpose.³⁵

The EPA's weight of evidence assessment is typically based on "consensus built validation templates."³⁶ These templates are found in appendix D of the QA Handbook and distinguish between critical, operational, and systematic criteria, as discussed in response A.4 in this document. Thus, where there has been a failure to meet a specific QA requirement or requirements, the EPA considers whether the relevant requirement(s) are critical, operational, and/or systematic criteria as part of our weight of evidence evaluation of data quality.

In accordance with these provisions and recommendations, the EPA has weighed the available evidence concerning data quality to determine which monitoring data to use for the Hayden Pb and SO₂ NAAs.³⁷ Because ADEQ is the PQAQO for these NAAs, we have considered several types of documentation that address ADEQ's quality assurance procedures for ambient air quality monitoring, including AQS design value reports, annual data certifications, ANPs and TSAs.³⁸ We referred to these documents in our proposal and included them in the docket for our proposed rulemaking. In the following paragraphs, we explain in greater detail how the EPA

³⁴ Id.

³⁵ Id. A discussion of the options that PQAOs and the EPA may consider when weighing evidence to make a validity determination is also included in the EPA's Best Practices for Review and Validation of Ambient Air Monitoring Data, 26-28 and Appendix C (August 2021). While this document was published following the end of the public comment period for our May 10, 2021 proposed rule, the guidance contained in this document reflects the EPA's longstanding interpretation of Appendix A, as provided in other guidance documents, trainings, and historical TSA reports.

³⁶ Id.

³⁷ Because this comment pertains to only to the Hayden Pb and SO₂ NAAs, we only refer to those areas in our response. However, we note that we followed the same approach for the Miami SO₂ NAA.

³⁸ We note that all of the documents we considered addressing ADEQ's quality assurance procedures for our May 10, 2021 proposed action were referred to in the proposal and included in the docket.

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considered these documents in evaluating which monitoring data to use for the Hayden Pb and SO₂ NAAs.

As noted in our proposal, state and local monitoring agencies are required to submit specific types of ambient air quality data and associated quality assurance data to the EPA's AQS database.³⁹ As with other state and local monitoring organizations, ADEQ submits these data electronically on a quarterly basis. Furthermore, in accordance with 40 CFR 58.15, ADEQ annually certifies that the previous year of ambient concentration and quality assurance data are completely submitted to AQS and that the ambient concentration data are accurate, taking into consideration the quality assurance findings.⁴⁰ Together with these certification letters, ADEQ also submits a summary of the precision and accuracy data for all ambient air quality data.⁴¹ The EPA's evaluations of the relevant quality assurance data are reflected in the associated AQS design value reports (known as AMP480), which include a certification evaluation and concurrence ("Cert&Eval") flag that indicates the overall quality of the corresponding monitoring data.⁴² For each of the monitoring sites and pollutants addressed in our May 10, 2021 proposal, the associated flag in these reports was "Y," meaning that, "[t]he certifying agency has submitted a certification letter, and *EPA has no unresolved reservations about data quality* (after reviewing the letter, the attached summary reports, the amount of quality assurance data submitted to AQS, the quality statistics, and the highest reported concentrations)" (emphasis added).⁴³

³⁹ 86 FR 24829, 24831 (citing 40 CFR 58.16).

⁴⁰ Id. at 24832 (citing annual certification letters from 2016–2019).

⁴¹ See 40 CFR 58.15(c).

⁴² The relevant reports for Hayden were cited in our proposal and included in our docket (e.g., *C.2_2020-11-03_Pb Design Value Report.pdf*)

⁴³ Id. We note one exception for Site 1003 (Hillcrest) for 2015 because Site 1003 did not begin operation until January 2016.

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The AMP480 reports also include a validity indicator (“Valid Ind.”) that reflects whether the design value is valid (i.e., calculated using data that meet the applicable completeness criteria). The completeness criteria, in turn, reflect whether any data were invalidated due to QA issues. For example, as explained in our proposal, “[t]he Miami Townsite SO₂ monitor collected only three quarters of complete data in 2016 because a portion of the data collected in the 1st quarter of 2016 (January 2016–March 2016) was invalidated for not meeting quality assurance requirements.” In contrast, all data collected at the Hayden monitoring sites met the completeness criteria.⁴⁴

In addition, as noted in our proposed rulemaking, pursuant to 40 CFR 58.10, ADEQ submits annual monitoring network plans that describe the monitoring sites operated by ADEQ.⁴⁵ Among other things, the ANPs address specific requirements of Appendix A such as requirements for flow rate verification (Appendix A, sections 3.4.1 and 3.4.2), semi-annual flow rate audits (Appendix A, section 3.4.3) and collocated quality control sampling for Pb (Appendix A, sections 3.4.3 and 3.4.4), and the requirement for one-point quality control (QC) check for SO₂ (Appendix A, section 3.1.1).⁴⁶ These requirements are discussed in greater detail in our responses to comments B and C in this document. The EPA reviews these ANPs for compliance with the applicable reporting requirements in 40 CFR part 58, including the QA requirements of

⁴⁴ 86 FR 24829, 24832–24833.

⁴⁵ Id. at 24832 (citing, e.g., “State of Arizona Air Monitoring Network Plan for the Year 2019”). Copies of Arizona’s ANPs for 2016–2019 are included in the rulemaking docket.

⁴⁶ See, e.g., State of Arizona Air Monitoring Network Plan for the Year 2018 (July 2018), 13 (Pb collocation requirements); Appendix C, 3, 13 (flow rate verification and semi-annual flow rate audit requirements); Appendix C, 2, 13 (SO₂ one-point QC check requirements).

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Appendix A.⁴⁷ The EPA approved ADEQ's ANPs with respect to the QA requirements for the relevant monitoring sites in the Hayden NAA for the relevant years (2016–2019).⁴⁸

Finally, as also described in our proposal, the EPA conducts regular TSAs during which we review and inspect ambient air monitoring programs to assess compliance with applicable regulations concerning the collection, analysis, validation, and reporting of ambient air quality data.⁴⁹ In our 2018 TSA of ADEQ, we concluded that ADEQ's ambient air monitoring network meets or exceeds the requirements for the minimum number of state and local air monitoring stations (SLAMS) for all criteria pollutants, including for Pb in the Hayden NAA and for SO₂ in the Hayden and Miami NAAs.⁵⁰ In our letter to ADEQ conveying the findings of our 2018 TSA of ADEQ, we also noted that “the ADEQ's air monitoring program is robust and meets EPA requirements,” but that “[a]s with any audit, this TSA uncovered some program areas that can be improved by ADEQ.”⁵¹ In particular, in the 2019 TSA Report we made thirteen findings that ADEQ was required to address with a corrective action plan. We also explained that, “[u]nless otherwise noted, *the findings in this report are not cause for data invalidation.*”⁵² For the reasons described in our response to comment D, none of these findings were cause for invalidation of the data at issue in this action.

⁴⁷ See, e.g., letter dated November 8, 2019, from Gwen Yoshimura, Manager, EPA Region IX, Air Quality Analysis Office, to Daniel Czecholinski, Acting Director, Air Quality Division, ADEQ. Copies of EPA letters responding to Arizona's ANPs for 2016–2019 are included in the rulemaking docket.

⁴⁸ ADEQ's ANPs for the years 2016–2019 address the operation and maintenance of their air monitoring network for the years 2015–2018.

⁴⁹ 86 FR 24829, 24832 (citing Appendix A, section 2.5).

⁵⁰ Letter dated April 25, 2019, from Elizabeth Adams, Director, Air Division, EPA Region IX, to Timothy Franquist, Director, Air Quality Division, ADEQ.

⁵¹ Id.

⁵² 2019 TSA Report, 4 (emphasis added).

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Comment A.6:

In proposing the finding of failure to attain, the proposed rulemaking relies on SO₂ and Pb design values, respectively derived from: (i) the annual 99th percentile of ambient daily maximum 1-hour average SO₂ concentrations for 2015, 2016, and 2017, 86 Fed. Reg. 24829, 24834/1-2, Table 2; and (ii) highest annual 3-month rolling average Pb concentrations for 2016, 2017 and 2018, 86 Fed. Reg. at 24833/2-3, Table 1. 40 C.F.R. Part 50 Appendix T and Appendix R provide that only data that are generated in a manner consistent with the QC/QA Rules may be used in design value calculations. The deficiencies described in Comments A.1 through A.5, above, indicate the Data were not generated in a manner consistent with the QC/QA Rules. Therefore, the proposed finding of failure to attain is without adequate foundation in the rulemaking record.

Response A.6:

Asarco has mischaracterized the applicable regulatory requirements. 40 CFR part 50, appendix T, section 2(a) provides that, “[a]ll valid FRM/FEM⁵³ SO₂ hourly data required to be submitted to [AQS], or otherwise available to EPA, meeting the requirements of part 58 of this chapter including appendices A, C, and E shall be used in design value calculations.” Similarly, 40 CFR part 50, appendix R section 3(a) provides that “[a]ll valid FRM/FEM Pb-TSP⁵⁴ data and all valid FRM/FEM Pb-PM₁₀⁵⁵ data submitted to [AQS], or otherwise available to EPA, meeting the requirements of part 58 of this chapter including appendices A, C, and E shall be used in design value calculations.” Of the requirements of 40 CFR part 58 referred to in these provisions, only those in Appendix A specifically pertain to QA. As explained in response A.5 in this document, Appendix A itself provides that “[f]ailure to conduct or pass a required check or procedure, or a series of required checks or procedures, does not by itself invalidate data for

⁵³ FRM and FEM refer to data collected under a federal reference method or federal equivalent method, respectively. See 40 CFR 50.1(f) and (g) and 53.1.

⁵⁴ Pb-TSP refers to elemental lead in total suspended particulate, which is the Pb NAAQS indicator. Unless otherwise noted, all references to Pb data in this document are to Pb-TSP data.

⁵⁵ Pb-PM₁₀ refers to elemental lead, in particles with an aerodynamic size of 10 microns or less. Pb-PM₁₀ data may be used as a surrogate for Pb-TSP data only to show that the Pb NAAQS were violated (i.e., not met).

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regulatory decision making.”⁵⁶ Furthermore, as described in greater detail in responses B, C, and D in this document, the record demonstrates that almost all applicable Appendix A requirements were met for the relevant monitors and years. To the extent that specific requirements were not met, or compliance with these requirements is not explicitly documented in the materials in the docket, we explain in the relevant responses why we have determined that the relevant data should not be invalidated, under the weight of evidence approach described in Appendix A, section 1.2.3. Therefore, we do not agree that the finding of failure to attain is without adequate foundation in the rulemaking record.

Comment A.7:

The deficiencies described in Comments A.1 through A.5, above, indicate the Data were not generated in a manner consistent with the QC/QA Rules. Therefore, reliance on the Data to enter a final finding of failure to attain would be arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with law.

Response A.7:

As previously noted, failure to meet all requirements of Appendix A does not automatically invalidate data for regulatory decision making. As described in greater detail in responses B, C, and D in this document, the record demonstrates that almost all applicable Appendix A requirements were met for the relevant monitors and years. To the extent that specific requirements were not met, or compliance with these requirements is not explicitly documented in the materials in the docket, we explain in the relevant responses why we have determined that the relevant data should not be invalidated under the weight of evidence approach described in Appendix A, section 1.2.3. Therefore, we do not agree that reliance on the

⁵⁶ Appendix A, section 1.2.3.

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data to issue a final finding of failure to attain is be arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with law.

Comment B: Additional Comments Regarding the SO₂ Data

Asarco claimed that the rulemaking docket and ADEQ's Records do not demonstrate that the generation of the SO₂ data from Site 1001 complied with the QC/QA Rules in Appendix A.

We excerpt and respond to the commenter's specific contentions below.

Comments B.1–B.2:

Appendix A states that the goal for acceptable measurement uncertainty for SO₂ is defined for precision as an upper 90% confidence limit for the coefficient of variation (“CV”) of 10%. This goal is reiterated in ADEQ's 2014-approved “SO₂ Ambient Air Monitoring Network QAPP” (“SO₂ QAPP”). None of the documents comprising the Docket Records or ADEQ's Records demonstrates satisfaction of this goal for the Hayden Old Jail Site (AQS ID 04-007-1001) (“Site 1001”) or the SO₂ Data generated at Site 1001. To the extent that ADEQ's “Data Evaluation and Concurrence Reports for Gaseous Pollutants,” Report Code AMP (“AMP”) 600, and “Data Quality Indicator Reports” for SO₂, AMP 256, recite precision values, confidence limit values, or other values related to precision, those values are without foundation in the Docket Records and ADEQ's Records, as indicated in Comments A.2, A.3 and A.4, above. (See item 3 of **Attachment 4**, hereto, for further detail.)

Appendix A states that the goal for acceptable measurement uncertainty for SO₂ is defined for bias as an upper 95% confidence limit for the absolute bias of 10%. This goal is reiterated in the SO₂ QAPP. None of the documents comprising the Docket Records or ADEQ's Records demonstrates satisfaction of this goal for Site 1001 or the SO₂ Data generated at Site 1001. To the extent that ADEQ's “Data Evaluation and Concurrence Reports for Gaseous Pollutants,” AMP 600, and “Data Quality Indicator Reports” for SO₂, AMP 256, recite bias values or other values related to bias, those values are without foundation in the Docket Records and ADEQ's Records, as indicated in Comments A.2, A.3 and A.4, above. (See item 4 of Attachment 4, hereto, for further detail.)

Responses B.1–B.2:

The commenter is correct that, for SO₂ “[t]he goal for acceptable measurement uncertainty for precision is defined as an upper 90 percent confidence limit for the CV of 10 percent and for bias as an upper 95 percent confidence limit for the absolute bias of 10

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percent.”⁵⁷ However, contrary to the commenter's implication, there is no requirement for the EPA or PQAOs to “demonstrate[] satisfaction” of the precision and bias goals established in Appendix A. As explained in responses A.4 and A.5 in this document, the EPA evaluates the suitability of monitoring data for regulatory purposes using a “weight of evidence” approach, based on the validation templates found in appendix D of the QA Handbook. As noted in response A.4 in this document, in the validation templates, the EPA has classified the precision and bias goals as systematic, rather than critical or operational criteria.⁵⁸ Thus, if these goals are not met “it does not mean that the pollutant data cannot be used for NAAQS decisions; it means that the decision makers will have less confidence that they will make the correct decision, especially around the action limit [i.e., the NAAQS].”⁵⁹ The precision and bias goals are thus benchmarks by which to evaluate data quality.

For SO₂ monitors, one-point QC checks are used to assess precision and bias.⁶⁰ These checks are performed by “challenging” the monitor with a QC check gas of known concentration (referred to as the “assessment concentration,” “audit concentration,” or “audit value”).⁶¹ The audit concentration and the concentration measured by the monitor (referred to as the “monitor concentration” or “measured value”) are reported to AQS, and these values are available in “extract QA data” reports (known as AMP504).⁶² The percent differences between these two concentrations are used to assess the precision and bias of the monitoring data, using equations specified in section 4.1 of Appendix A. Reports of these statistics are available in AQS, for

⁵⁷ Appendix A, section 2.3.1.5.

⁵⁸ QA Handbook, appendix D, 15–16.

⁵⁹ QA Handbook, vol. II, section 18, 10.

⁶⁰ Appendix A, section 4.1.1.

⁶¹ Id. section 3.1.1. See also, EPA, Guideline on the Meaning and the Use of Precision and Bias Data Required by 40 CFR Part 58 Appendix A Final Draft (January 2007).

⁶² See, e.g., EPA, AQS (Air Quality System) User Guide, Issue 4 (2021), 115-116 “List of Standard Reports.”

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example, through QA data quality indicator (DQI) reports (known as AMP256) and certification evaluation and concurrence reports (known as AMP600).⁶³ In response to the commenter's public records request, ADEQ provided all of these reports (i.e., AMP504, AMP256, and AMP600) for the relevant monitors and NAAQS. Therefore, we do not agree with the commenter's assertion that the precision and bias goals are not addressed in ADEQ's Records. For example, for Site 1001, the 2015 SO₂ AMP256 report lists the "CV UB" (i.e., the 90% upper bound on coefficient of variance) as 4.87 and the "Bias UB" (upper bound on the mean absolute value of the percent differences of monitor concentrations and assessment concentrations) as 4.59.⁶⁴ Similarly, for Site 1001, the 2015 SO₂ AMP600 report lists one-point quality check precision and bias levels of 4.87 and 4.59, respectively.⁶⁵ These values meet the precision and bias goals of Appendix A. Similarly, the precision and bias values for Site 1001 for 2016 and 2017 also meet these goals.⁶⁶

Furthermore, because the original data from the one-point QC checks, including the "monitor concentration" and "assessment concentration", which are used to calculate the CV UB and Bias UB, are available in the AMP504 reports, we do not agree with the commenter's assertion that the values in the AMP256 and AMP600 reports lack adequate foundation in the rulemaking record. To the extent that the commenter is suggesting that additional documentation supporting these values is necessary, we do not agree for the reasons described in responses A.1–A.4 in this document.

⁶³ Id.

⁶⁴ SO₂ AMP256 (2015), *E.3.016 AMP256 SO2 2015.pdf*.

⁶⁵ SO₂ AMP600 (2015), *E.3.037 AMP600 2015 updated ADEQ 4-6-2017.pdf*.

⁶⁶ SO₂ AMP600 (2016), *E.3.039 AMP600 2016 ADEQ Recertification 4-27-2018.pdf*; SO₂ AMP600 (2017), *E.3.040 AMP600 2017 ADEQ 4-27-2018.pdf*.

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Finally, even if the precision and bias goals had not been met, this would not constitute grounds for invalidation for the reasons described in response A.5 in this document and in the preceding paragraphs. In particular, we note that the 2015–2017 SO₂ design value for Site 1001 was 295 ppb, nearly three times higher than the NAAQS level of 75 ppb. Accordingly, a failure to meet the precision and bias goals would not undermine confidence in our determination that the Hayden SO₂ NAA failed to attain the 2008 SO₂ standard by the October 4, 2018 attainment date.

Comment B.3:

As indicated in Comment A.2.c, above, the Docket Records and ADEQ's Records do not include certificates, required by Appendix A, that demonstrate reference gases, materials, and devices used to conduct flow checks and zero/span/precision checks and inform the calibrations/adjustments were NIST-traceable. This defect encompasses, but is not limited to, the test concentrations and flow measuring instruments employed to assess the validity of the SO₂ Data at Site 1001. Also, the Docket Records and ADEQ's records do not include certificates, required by Appendix A, that demonstrate test gas concentrations used for performance evaluations of the SO₂ monitor at Site 1001 were NIST-traceable. As such, these defects are also a violation of corresponding requirements of the SO₂ QAPP, including the QAPP's requirements of "field sheets," "NIST-traceable certifications," and other records that contemporaneously document compliance with those requirements. (See items 5, 6 and 14 of Attachment 4, hereto, for further detail.)

Response B.3:

This comment appears to refer to the requirement of Appendix A, section 2.6.1 that:

Gaseous pollutant concentration standards (permeation devices or cylinders of compressed gas) used to obtain test concentrations for CO, SO₂, NO, and NO₂ must be traceable to either a National Institute of Standards and Technology (NIST) Traceable Reference Material (NTRM) or a NIST-certified Gas Manufacturer's Internal Standard (GMIS), certified in accordance with one of the procedures given in reference 4 of this appendix.

The comment also appears to refer to the requirement of Appendix A, section 3.1.2.3 for "[t]he standards from which audit gas test concentrations are obtained" to "meet the specifications of

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section 2.6.1 of this appendix.” The commenter also refers to provisions of the SO₂ QAPP concerning “‘field sheets,’ ‘NIST-traceable certifications,’ and other records that contemporaneously document compliance with those requirements.” Contrary to the commenter’s suggestion, however, Appendix A does not require the PQAQO to submit certificates to the EPA that demonstrate test gas concentrations used for performance evaluations were NIST-traceable.

For the reasons described in response A.1 in this document, these materials were not required to be included in the docket for our proposed action. Furthermore, as explained in response A.2 in this document, it appears that ADEQ did not interpret the commenter’s public records request as extending to these types of documents. In any case, as detailed in responses B.4–B.5 in this document, compliance with the applicable regulatory requirements is documented in other materials referred to in our proposal and in additional documents that ADEQ provided to the commenter. Finally, during our triennial TSAs, EPA staff review a selection of supporting documents, including field sheets and certificates.⁶⁷

Comment B.4:

Without limiting the foregoing, with respect to the SO₂ Data generated at Site 1001 and concerning the requirements of 40 C.F.R. Part 58 Appendix A and corresponding requirements of the SO₂ QAPP:

Comment B.4.a:

The Docket Records and ADEQ’s Records do not include “field sheets,” electronic logbooks, or other records that contemporaneously document compliance with the rule that a one-point quality control (“QC”) check must be

⁶⁷ See, e.g., 2019 TSA Report, 3 (describing the EPA’s review of “on-site documentation” (e.g., site logs, instrument logs, check sheets) and “supporting documentation for data points”), 7 (“The site logbooks, including records of flow checks and precision checks, were electronic.”), and 9 (“Station logbooks (e-logbooks) and instrument logbooks were up to date and contained relevant information on operations and maintenance activities.”).

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performed at least once every two weeks on each automated monitor used to measure SO₂. (See item 7 of Attachment 4, hereto, for further detail.)

Response B.4.a:

This comment appears to refer to the requirement of Appendix A, section 3.1.1(a) for a one-point QC check to be performed at least once every 2 weeks on each automated monitor used to measure SO₂. However, contrary to the commenter's suggestion, Appendix A does not require PQAOs to submit, "records that contemporaneously document compliance" with this requirement to the EPA.

Furthermore, as described in response B.1–B.2 in this document, the original data from the one-point QC checks, including the "Assessment Date," are available in the AMP504 reports for Site 1001. Summaries of these data are also available in the AMP256 reports, which list the "intervals required" (i.e., the number of QC checks required annually), the "valued intervals" (i.e., the number of QC checks performed in a given year), and the "% complete" (i.e., the percentage of required checks actually performed in a given year). For Site 1001, in 2015, 21 of the required 26 biweekly checks (81%) were performed within each 14-day period; in 2016, 24 biweekly checks (92%) were completed; and in 2017, 25 biweekly checks (96%) were completed.⁶⁸

Although ADEQ did not conduct 100% of the required checks within 14 days in the relevant years, we do not consider this failure to be grounds for invalidation under the weight of evidence approach discussed in response A.5 in this document. In particular, we note that, under

⁶⁸ SO₂ AMP256 (2015), *E.3.016 AMP256_SO2_2015.pdf*; SO₂ AMP256 (2016), *E.3.017 AMP256_SO2_2016.pdf*; SO₂ AMP256 (2017), *E.3.018 AMP256_SO2_2017.pdf*. The one-point QC completeness data are evaluated by (1) counting the number of checks in each 14-day interval starting with the January 1–14 interval (for each 14-day interval, multiple checks only count as one), and (2) dividing the total number of checks counted under (1) by 26. See, e.g., EPA, Guidance on the Data Certification Process for Calendar Year 2017 Data, 2.

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the EPA's SO₂ validation template, the "acceptance criterion" for one-point QC checks for SO₂ is a $< \pm 10.1\%$ or $< \pm 1.5$ ppb difference between the monitor concentration and assessment concentration (whichever is greater).⁶⁹ This is considered a critical criterion,⁷⁰ so failure to meet it would generally be grounds for invalidation of all data back to the previous passing check.⁷¹ In contrast, the biweekly frequency requirement is not an acceptance criterion.⁷² Accordingly, failure to conduct a single check within the 14-day timeframe would not be grounds for invalidation unless the next check that was performed failed. In the case of the checks performed late by ADEQ at Site 1001, none of the 2015–2017 checks that were performed outside of a 14-day interval from the previous check failed.⁷³

Repeated failure to conduct required QC checks could also be grounds for invalidation of routine data collected during the period when checks were not performed. However, the EPA generally considers an annual 75% completeness level to be acceptable for purposes of validation.⁷⁴ In addition, a review of QC checks in the AMP504 reports shows that the greatest period of time between any two checks during 2015–2017 was 22 days, indicating there was not a repeated failure to perform QC checks at the site.⁷⁵ Therefore, in the absence of other evidence indicating a problem with the QC checks, we do not consider the checks performed outside of a 14-day interval to be grounds for invalidating any data.

⁶⁹ QA Handbook, appendix D, 14.

⁷⁰ Id.

⁷¹ Best Practices for Review and Validation of Ambient Air Monitoring Data, 38.

⁷² Id.

⁷³ SO₂ AMP504 (2015), *E.3.008 AMP 504 2015.xlsx*; SO₂ AMP504 (2016), *E.3.009 AMP 504 2016.xlsx*; SO₂ AMP504, (2017), *E.3.010 AMP 504 2017.xlsx*.

⁷⁴ See, e.g., EPA, Guidance on the Data Certification Process for Calendar Year 2017 Data, attachment 1, "Criteria That Will Generate Green (Acceptable) Warning (Yellow) and "N" Flags (Red)," 8, showing one-point QC completeness >75% as "Acceptable." This guidance is reviewed and updated annually prior to certification of monitoring data by PQAOs.

⁷⁵ SO₂ AMP504 (2015), *E.3.008 AMP 504 2015.xlsx*; SO₂ AMP504 (2016), *E.3.009 AMP 504 2016.xlsx*; SO₂ AMP504 (2017), *E.3.010 AMP 504 2017.xlsx*.

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Comments B.4.b-B.4.c:

The Docket Records and ADEQ's Records do not include "field sheets," electronic logbooks, or other records that contemporaneously document compliance with the rule, effective beginning April 27, 2016, that each one-point QC check must be made by challenging the monitor with a QC check gas of known SO₂ concentration between the prescribed range of 0.005 and 0.08 parts per million. (See item 7.a of Attachment 4, hereto, for further detail.)

The Docket Records and ADEQ's Records do not include "field sheets," electronic logbooks, or other records that contemporaneously document compliance with the rule, effective prior to April 27, 2016, that each one-point QC check must be made by challenging the monitor with a QC check gas of known SO₂ concentration between the prescribed range of 0.01 and 0.10 parts per million. (See item 7.b of Attachment 4, hereto, for further detail.)

Responses B.4.b-B.4.c:

This comment appears to refer to the requirement of Appendix A, section 3.2.1 in effect prior to April 27, 2016, and the requirement of Appendix A, section 3.1.1(a) in effect as of April 27, 2016.⁷⁶ However, contrary to the commenter's suggestion, Appendix A does not require PQAOs to submit "records that contemporaneously document compliance" with these requirements to the EPA. Furthermore, as described in response B.1-B.2 in this document, the original data from the one-point QC checks, including the "assessment concentrations" (i.e., SO₂ concentration of the QC check gas), are available in the AMP504 reports for Site 1001.

From January 14, 2015, through February 12, 2016, the assessment concentration was between 0.089 parts per million (ppm) and 0.091 ppm,⁷⁷ which was within the prescribed range of 0.01-0.10 ppm under the version of Appendix A, section 3.2.1 in effect prior to April 27, 2016.

⁷⁶ Appendix A, section 3.2.1 (2015).

⁷⁷ SO₂ AMP504 (2015), *E.3.008 AMP 504 2015.xlsx*; SO₂ AMP504 (2016), *E.3.009 AMP 504 2016.xlsx*. The "reported unit" of 7 represents ppm.

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From February 25, 2016 through January 25, 2017 the assessment concentration was 75 parts per billion (ppb) (0.075 ppm),⁷⁸ which was within both the prescribed range of 0.01–0.10 ppm under the version of Appendix A, section 3.2.1 in effect prior to April 27, 2016, and the prescribed range of 0.005–0.08 ppm in effect under Appendix A, section 3.1.1(a) as of April 27, 2016.

From February 3, 2017, through the end of 2018, the assessment concentration was 76 ppb (0.076 ppm),⁷⁹ which was within the prescribed range of 0.005–0.08 ppm in effect under Appendix A, section 3.1.1(a) as of April 27, 2016. This value was also consistent with the provision of Appendix A, section 3.1.1(a) that states that “[i]f monitoring for NAAQS decisions, the QC concentration can be selected at a higher concentration within the prescribed range.”

Comment B.4.d:

The Docket Records and ADEQ's Records do not include “field sheets,” electronic logbooks, or other records that contemporaneously document compliance with the rule that SO₂ monitors must be operated in their normal sampling mode during the one-point QC check and the test atmosphere must pass through all filters, scrubbers, conditioners and other components used during normal ambient sampling and as much of the ambient inlet system as is practicable. (See item 8 of Attachment 4, hereto, for further detail.)

Response B.4.d:

This comment appears to refer to the requirement of Appendix A, section 3.1.1(b) that “[p]oint analyzers must operate in their normal sampling mode during the QC check and the test atmosphere must pass through all filters, scrubbers, conditioners and other components used during normal ambient sampling and as much of the ambient air inlet system as is practicable.”

⁷⁸ SO₂ AMP504 (2016), *E.3.009 AMP 504 2016.xlsx*; SO₂ AMP504 (2017), *E.3.010 AMP 504 2017.xlsx*. The “reported unit” of 8 represents ppb.

⁷⁹ SO₂ AMP504 (2017), *E.3.010 AMP 504 2017.xlsx*; SO₂ AMP504 (2018), *E.3.011 AMP 504 2018.xlsx*.

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However, contrary to the commenter's suggestion, Appendix A does not require PQAOs to provide "records that contemporaneously document compliance" with this requirement.

Moreover, the EPA does not consider this requirement to be a critical, operational, or systematic criterion.⁸⁰ Therefore, failure to fully document compliance with this requirement would not be a basis for invalidation of the associated data.

ADEQ's procedures for complying with this requirement at Site 1001 are partially documented in its SOP for the Ecotech Model EC9850T Sulfur Dioxide Trace Analyzer,⁸¹ which was used at Site 1001 prior to January 19, 2017.⁸² Section 11.2 of the EC9850T SOP explains that, when performing a zero/span/precision (Z/S/P) verification check,⁸³ "[t]he analyzer must be operated in a normal sampling mode, and the test gas must pass through all filters and other components used during normal ambient sampling."⁸⁴ This SOP is attached to the SO₂ QAPP, which ADEQ provided to the commenter. For the reasons described in response A.1 in this document, the EC9850T SOP was not required to be included in the docket for the EPA's proposed action. However, it was included in the attachments to Asarco's comment letter and is therefore available in the docket for the EPA's final action.

The SOP for the Teledyne T100, which has been used at the Site 1001 since January 19, 2017,⁸⁵ was not among the documents that ADEQ provided to the commenter. However, we note that as part of its TSAs, the EPA reviews QC check procedures, including evaluating whether the

⁸⁰ QA Handbook, appendix D, 14–16.

⁸¹ SO₂ QAPP, attachment G, ADEQ AAS AMU-006 SOP: Operating the Ecotech Model EC9850T Sulfur Dioxide Trace Analyzer, version 2.0, issued June 19, 2014 (hereinafter "EC9850T SOP"). See *E.3.066_Third Third of 2014 ADEQ SO2 QAPP with Attachments-2.pdf*.

⁸² See, e.g., ADEQ 2015 Annual Network Plan, appendix C, 12 (*E.3.003_2015 Network Plan.pdf*).

⁸³ A one-point precision check, which is part of the Z/S/P verification check procedure described in the EC9850T SOP, is synonymous with a one-point QC check, as described in Appendix A.

⁸⁴ EC9850T SOP, 8.

⁸⁵ See, e.g., ADEQ 2017 Annual Network Plan, 4, Table 1.4-1 (*E.3.005_2017 Network Plan.pdf*).

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test gas passes through all filters and other components used during normal ambient sampling.⁸⁶

The EPA has made findings for other PQAOs that indicated a failure to comply with 3.1.1(b)⁸⁷ but did not make this finding for ADEQ in the 2019 TSA Report. Therefore, although ADEQ's documentation does not fully demonstrate compliance with Appendix A, section 3.1.1(b), we do not consider this omission to be cause for invalidating the data, given that (1) this is not a critical, operational, or systematic criterion, and (2) there is no evidence that ADEQ failed to meet this requirement at Site 1001 during the 2015–2017 period.

Comment B.4.e:

The Docket Records and ADEQ's Records do not include "field sheets," electronic logbooks, or other records that contemporaneously document compliance with the rule that the one-point QC check must be conducted before any calibration or span adjustment of the SO₂ monitor. (See item 9 of Attachment 4, hereto, for further detail.)

Response B.4.e:

This comment appears to refer to the requirement of Appendix A, section 3.1.1(b) that "[t]he QC check must be conducted before any calibration or adjustment to the monitor." However, contrary to the commenter's suggestion, Appendix A does not require PQAOs to submit "records that contemporaneously document compliance" with this requirement to the EPA. ADEQ's procedures for complying with this requirement at the Hayden Old Jail monitoring site are partially documented in section 11.3 of the EC9850T SOP, which explains that, "[i]f a calibration is required, a Z/S/P must be performed prior to the calibration of the

⁸⁶ See, e.g., 2019 TSA report.

⁸⁷ See, e.g., EPA, Technical Systems Audit of the Ambient Air Monitoring Program: Maricopa County Air Quality Department March 29 - April 2, 2019, Final Report, 18 (February 2020). "Calibrations and zero, span, and one-point QC checks were performed without passing through as much of the sample line as practicable."

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instrument.”⁸⁸ This SOP is attached to the SO₂ QAPP, which ADEQ provided to the commenter. For the reasons described in Response A.1, this document was not required to be included in the docket for the EPA's proposed action. However, it was included in the attachments to Asarco's comment letter and is therefore available in the docket for the EPA's final action.

The SOP for the Teledyne T100, which has been used at the Hayden Old Jail since January 19, 2017,⁸⁹ was not among the documents that ADEQ provided to the commenter. However, we note that as part of its TSAs, the EPA reviews QC check procedures, including evaluating whether one-point QC checks are conducted before any calibration or span adjustment of the monitor.⁹⁰ The EPA has made findings for other PQAOs that indicated a failure to comply with 3.1.1(b)⁹¹ but did not make this finding for ADEQ in the 2019 TSA report. Therefore, although ADEQ's documentation does not fully demonstrate compliance with Appendix A, section 3.1.1(b), we do not consider this omission to be cause for invalidating the data, given that (1) this is not a critical, operational or systematic criterion, and (2) there is no evidence that ADEQ failed to meet this requirement at Site 1001 site during the 2015–2017 period.

Comment B.4.f:

The Docket Records and ADEQ's Records do not include “field sheets,” electronic logbooks, or other records that contemporaneously document compliance with the rule that a performance evaluation must be conducted on each primary SO₂ monitor at least once a year. (See item 11 of Attachment 4, hereto, for further detail.)

⁸⁸ EC9850T SOP, 12. As noted above, a one-point precision check, which is part of the Z/S/P Verification Check procedure described in the EC9850T SOP, is synonymous with a one-point QC check, as described in Appendix A.

⁸⁹ See, e.g., ADEQ 2017 Annual Network Plan, 4, Table 1.4-1 (*E.3.005_2017 Network Plan.pdf*).

⁹⁰ See, e.g., 2019 TSA Report; “The evaluation of sites typically included inspection of the sampling lines, examination of station and instrument logbooks, review of whether the site met applicable siting criteria, and review of QC check and QA audit procedures.”

⁹¹ See, e.g., EPA, Technical Systems Audit of the Ambient Air Monitoring Program: California Air Resources Board September – December 2018 (January 2020), 90, “QC checks must be conducted before any calibration or adjustment to the monitor (i.e., an “as-is” check) and the results documented;” 92, “An as-is check prior to adjustment was performed, but not completed and documented.”

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Response B.4.f:

This comment appears to refer to the requirement of Appendix A, section 3.1.2 that “[a] performance evaluation must be conducted on each primary monitor once a year.” However, contrary to the commenter’s suggestion, Appendix A does not require PQAOs to submit “records that contemporaneously document compliance” with this requirement to the EPA. In accordance with Appendix A, section 3.1.2.6, ADEQ reports the results of its performance evaluations to AQS. Accordingly, compliance with this requirement at the Hayden Old Jail monitoring site is documented in multiple AQS reports, including the AMP504 reports, which provide the “Assessment Date” and corresponding results for each “Annual PE” (annual performance evaluation). These results are also summarized in the AMP256 reports. In response to the commenter’s public records request, ADEQ provided all of these reports (i.e., AMP504, AMP256, and AMP600) for the relevant monitors and NAAQS. These reports confirm that ADEQ met this requirement for the SO₂ monitor at Site 1001 during the relevant time period. For the reasons described in response A.1 in this document, these materials were not required to be included in the docket for the EPA’s proposed action. However, they were included in the attachments to Asarco’s comment letter and are therefore available in the rulemaking docket for the EPA’s final action.

Comment B.4.g:

The Docket Records and ADEQ’s Records do not include “field sheets,” electronic logbooks, or other records that contemporaneously document compliance with the rule that the performance evaluation should be conducted by a trained experienced technician other than the routine site operator. (See item 12 of Attachment 4, hereto, for further detail.)

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Response B.4.g:

This comment appears to refer to the requirement of Appendix A, section 3.1.2 that “[t]he evaluation should be conducted by a trained experienced technician other than the routine site operator.” Because this provision is stated as “should” rather than “must” we interpret it as a recommendation rather than a binding requirement. Moreover, contrary to the commenter’s suggestion, Appendix A does not require PQAOs to submit “records that contemporaneously document compliance” with this recommendation to the EPA. ADEQ’s compliance with this recommendation is documented in its SO₂ QAPP, which states that “ADEQ PE audits are conducted once a quarter by the QA Auditor,”⁹² and explains that the QA auditor is part of the QA team,⁹³ which “is housed in the DM&QA [Data Management & Quality Assurance] Unit and is independent from AMU [Air Monitoring Unit], which generates the SO₂ measurements.”⁹⁴ For the reasons described in response A.1 in this document, the SO₂ QAPP was not required to be included in the docket for the EPA’s proposed action. However, it was included in the attachments to Asarco’s comment letter and is therefore available in the docket for the EPA’s final action.

Comment B.4.h:

The Docket Records and ADEQ’s Records do not include “field sheets,” electronic logbooks, or other records that contemporaneously document compliance with the rule that the performance evaluation must be made by challenging the monitor with audit gas standards of known concentration from at least three audit levels specified in 40 C.F.R. Part 58 Appendix A. (See item 13 of Attachment 4, hereto, for further detail.)

⁹² SO₂ QAPP, 107.

⁹³ Id. at 18.

⁹⁴ Id. at 17.

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Response B.4.h:

This comment appears to refer to the requirement of Appendix A, section 3.1.2.1 that “[t]he evaluation is made by challenging the monitor with audit gas standards of known concentration from at least three audit levels.” Compliance with this requirement at Site 1001 is documented in AQS reports, including the AMP504 reports, which provide the “monitor concentration” and “assessment concentration” for levels 6 through 10 (i.e., five audit levels). These results are also summarized in the AMP256 reports. For the reasons described in response A.1 in this document, these AQS reports were not required to be included in the docket for the EPA’s proposed action. However, they were included in the attachments to Asarco’s comment letter and are therefore available in the docket for the EPA’s final action.

Comment B.4.i:

The Docket Records and ADEQ’s Records do not include “field sheets,” electronic logbooks, or other records that contemporaneously document compliance with the rule, effective beginning April 27, 2016, that (a) one point “must be within” two to three times the method detection limit of the instruments with the monitoring network, (b) the second point must be less than or equal to the 99th percentile of SO₂ data at the site, and (c) the third point should be around the primary SO₂ NAAQS or the highest 3-year SO₂ concentration at the site. (See item 13.a of Attachment 4, hereto, for further detail.)

Response B.4.i:

This comment appears to refer to the requirement of Appendix A, section 3.1.2.1 (effective April 27, 2016) that:

One point [i.e., one audit level concentration] must be within two to three times the method detection limit of the instruments within the PQAOs network, the second point will be less than or equal to the 99th percentile of the data at the site or the network of sites in the PQAo or the next highest audit concentration level. The third point can be around the primary NAAQS or the highest 3-year concentration at the site or the network of sites in the PQAo. An additional 4th level is encouraged for those agencies that would like to confirm the monitors’ linearity at the higher end of the operational range. In rare circumstances, there may be sites measuring concentrations above audit level 10. Notify the

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appropriate EPA region and the AQS program in order to make accommodations for auditing at levels above level 10.

Contrary to the commenter's suggestion, Appendix A does not require PQAOs to submit "records that contemporaneously document compliance" with this requirement to the EPA. As described in response B.5.a in this document, the 2016 performance evaluation for Site 1001 was performed on February 4, 2016, prior to the effective date of this requirement. ADEQ's 2017 performance evaluation for Site 1001 is documented in AQS reports, including the 2017 SO₂ AMP504 report, which provides the "monitor concentration" and "assessment concentration" for audit levels 6 through 10. These results are also summarized in the 2017 SO₂ AMP256 report. As discussed in response B.5.c in this document, these reports show that the requirement for one audit level "within two to three times the method detection limit" was not met in 2017, but failure to meet this requirement is not grounds for invalidation. For the reasons described in response A.1 in this document, these AQS reports were not required to be included in the docket for the EPA's proposed action. However, they were included in the attachments to Asarco's comment letter and are therefore available in the docket for the EPA's final action.

Comment B.4.j:

The Docket Records and ADEQ's Records do not include "field sheets," electronic logbooks, or other records that contemporaneously document compliance with the rule, effective prior to April 27, 2016, that the audit levels should represent or bracket 80 percent of ambient concentrations measured by the monitor being evaluated. (See item 13.b of Attachment 4, hereto, for further detail.)

Response B.4.j:

This comment appears to refer to the requirement of former Appendix A, section 3.2.2.1(a) (effective prior to April 27, 2016) that, "[t]he evaluation is made by challenging the analyzer with audit gas standard of known concentration (effective concentration for open path

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analyzers) from at least three consecutive audit levels. The audit levels selected should represent or bracket 80 percent of ambient concentrations measured by the analyzer being evaluated . . .”

Because the second sentence of this provision is stated as “should” rather than “must,” we interpret this provision as a recommendation rather than a binding requirement. We also note that, contrary to the commenter’s suggestion, Appendix A does not require PQAOs to submit “records that contemporaneously document compliance” with this provision to the EPA.

Compliance with this provision at Site 1001 is documented in AQS reports, including the 2015–2016 SO₂ AMP504 reports, which provide the “monitor concentration” and “assessment concentration” for audit levels 6 through 10. These results are also summarized in the 2015–2016 SO₂ AMP256 reports. The 2015 and 2016 performance evaluations for Site 1001 satisfied the requirement for three audit levels, as they employed five consecutive audit levels, covering ambient concentrations between 0.065 and 0.900 ppm.⁹⁵ For the reasons described in response A.1 in this document, these materials were not required to be included in the docket for the EPA’s proposed action. However, they were included in the attachments to Asarco’s comment letter and are therefore available in the docket for the EPA’s final action.

Comment B.4.k:

The Docket Records and ADEQ’s Records do not include “field sheets,” electronic logbooks, or other records that contemporaneously document compliance with the rule that the gas standards and equipment used for the performance evaluation must not be the same as the standards and equipment used for the one-point QC check, calibrations or span evaluations. (See item 15 of Attachment 4, hereto, for further detail.)

⁹⁵ SO₂ AMP504 (2015), *E.3.008 AMP 504 2015.xlsx*; SO₂ AMP504 (2016), *E.3.009 AMP 504 2016.xlsx*. The “reported unit” of 7 represents ppm.

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Response B.4.k:

This comment appears to refer to the requirement of Appendix A, section 3.1.2.3 that “[t]he gas standards and equipment used for the performance evaluation must not be the same as the standards and equipment used for one-point QC, calibrations, span evaluations or NPAP.” However, contrary to the commenter’s suggestion, Appendix A does not require PQAOs to submit “records that contemporaneously document compliance” with this requirement to the EPA. Furthermore, the EPA does not consider this requirement to be a critical, operational, or systematic criterion,⁹⁶ so a lack of documentation for this requirement is generally not a basis for invalidation of the associated data.

ADEQ’s compliance with this requirement is generally documented in the SO₂ QAPP, which explains that “[t]he NIST-traceable certifications are performed by the manufacturer” for the QA multi-gas calibrators used for performance evaluations, while the multi-gas calibrators used for one-point QC checks, calibrations and span evaluations “are NIST-certified annually, in-house by AMU technicians, using a BIOS Defender flow meter/calibrator, or similar model.”⁹⁷ Similarly, the QAPP notes that “[t]he QA Auditor performs independent PE audits . . . using different NIST-traceable calibration standards, or references, on ADEQ and source-operated SO₂ monitors.”⁹⁸ Finally, SOP QA-001 “General Procedures and Deliverables for the Quality Assurance Field Audit Program,” which is included as an attachment to the SO₂ QAPP, contains a list of audit standards equipment (including audit gas cylinders), indicating that the list of audit standards is separate from the standards used by station operators for QC activities. For

⁹⁶ QA Handbook, appendix D, 14–16.

⁹⁷ SO₂ QAPP, 65.

⁹⁸ Id. at 107.

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the reasons described in response A.1 in this document, the SO₂ QAPP was not required to be included in the docket for the EPA's proposed action. However, it was included in the attachments to Asarco's comment letter and is therefore available in the docket for the EPA's final action.

Comment B.4.1:

The Docket Records and ADEQ's Records do not include "field sheets," electronic logbooks, or other records that contemporaneously document compliance with the rule that the performance evaluation must be carried out by allowing the SO₂ monitor to analyze the audit gas test atmosphere in its normal sampling mode such that the test atmosphere passes through all filters, scrubbers, conditioners, and other sample inlet components used during normal ambient sampling and as much of the ambient air inlet system as is practicable. (See item 16 of Attachment 4, hereto, for further detail.)

Response B.4.1:

This comment appears to refer to the requirement of Appendix A, section 3.1.2.4 that "[f]or point analyzers, the [annual performance] evaluation shall be carried out by allowing the monitor to analyze the audit gas test atmosphere in its normal sampling mode such that the test atmosphere passes through all filters, scrubbers, conditioners, and other sample inlet components used during normal ambient sampling and as much of the ambient air inlet system as is practicable." However, contrary to the commenter's suggestion, Appendix A does not require PQAOs to submit "records that contemporaneously document compliance" with this requirement to the EPA. Furthermore, the EPA does not consider this requirement to be a critical, operational, or systematic criterion,⁹⁹ so a lack of documentation for this requirement is generally not a basis for invalidation of the associated data.

⁹⁹ QA Handbook, appendix D, pages 14–16.

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ADEQ's compliance with this requirement is generally documented in the SOPs for multi-gas calibrators used for audits, which are attached to the SO₂ QAPP.¹⁰⁰ The only modification to the analyzer described in these audit SOPs is the connection of the analyzer sampler lines to the calibrators, implying that the analyzer is in normal sampling mode.¹⁰¹ For SO₂, the SOPs also state that: "[t]he output sample line is connected to the analyzers filter cassette located on the back side of the analyzer."¹⁰² Therefore, the audit gas travels through the filters and sample inlet components used during normal ambient sampling.

For the reasons described in response A.1 in this document, these SOPs were not required to be included in the docket for the EPA's proposed action. However, they were included in the attachments to Asarco's comment letter and are therefore available in the docket for the EPA's final action.

Comment B.5:

. . . with respect to the SO₂ Data generated at Site 1001 and concerning the requirements of 40 C.F.R. Part 58 Appendix A and corresponding requirements of the SO₂ QAPP:

Comment B.5.a:

ADEQ's "1-Point QC Assessment and Annual PE Spreadsheet" for calendar year 2016, AMP 504, when compared to ADEQ's "Quick Look Report" for calendar year 2016, AMP 450, indicates that the annual performance evaluation did not satisfy the rule, effective April 27, 2016, that one assessment point "must be within" two to three times the method detection limit of the instruments with the monitoring network. (See item 13.a of Attachment 4, hereto, for further detail.)

¹⁰⁰ Auditing Gas Analyzers Using the EnviroNics® 6100 Multi-Gas Calibrator (SOP# QA-015), version 1.1 dated September 12, 2013; Auditing Gas Analyzers Using the API Teledyne T700 Multi-Gas Calibrator (SOP QA-020), version 1.0 (September 12, 2013). See *E.3.066_Third Third of 2014 ADEQ SO2 QAPP with Attachments-2.pdf*.

¹⁰¹ Id. section 9.3.a.

¹⁰² Id. section 9.3.a.1.

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Response B.5.a:

This comment appears to refer to the requirement of Appendix A, section 3.1.2.1 (effective April 27, 2016) that one audit level “must be within two to three times the method detection limit of the instruments within the PQAOs network.” The 2016 performance evaluation for Site 1001 was performed on February 4, 2016, prior to the effective date of this requirement.¹⁰³ The requirement in effect at that time was for “at least three consecutive audit levels.”¹⁰⁴ The 2016 performance evaluation for Site 1001 satisfied this requirement, as it employed five consecutive audit levels.¹⁰⁵

Comment B.5.b:

ADEQ's “1-point QC Assessment and Annual PE Spreadsheet” for calendar year 2017, AMP 504, indicates that no annual performance evaluation was done of the Echotech monitor that was used to generate the January 2017 SO₂ Data. (See item 11 of Attachment 4, hereto, for further detail.)

Response B.5.b:

This comment appears to refer to the requirement of Appendix A, section 3.1.2 that “[a] performance evaluation must be conducted on each primary monitor once a year.” A performance evaluation was conducted on the Ecotech monitor on February 4, 2016.¹⁰⁶ Less than one year later, on January 19, 2017, the monitor was replaced by a Teledyne T100 monitor.¹⁰⁷ A performance evaluation was conducted on the Teledyne T100 on February 9, 2017.¹⁰⁸ Therefore, no annual performance evaluation was required for the Ecotech monitor in calendar year 2017.

¹⁰³ SO₂ AMP504 (2016), *E.3.009_AMP 504 2016.xlsx*.

¹⁰⁴ Appendix A, section 3.2.2.1 (2015).

¹⁰⁵ SO₂ AMP504 (2016), *E.3.009_AMP 504 2016.xlsx*.

¹⁰⁶ Id.

¹⁰⁷ ADEQ 2017 Annual Network Plan, 4, table 1.4-1 (*E.3.005_2017 Network Plan.pdf*); ADEQ 2018 Annual Network Plan, appendix C, 12 (*E.3.006_2018 Network Plan.pdf*).

¹⁰⁸ SO₂ AMP504 (2017), *E.3.010_AMP 504 2017.xlsx*.

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Comment B.5.c:

ADEQ's "1-Point QC Assessment and Annual PE Spreadsheet" for calendar year 2017, AMP 504, when compared to ADEQ's "Quick Look Report" for calendar year 2017, AMP 450, indicates that, for the API analyzer, the annual performance evaluation did not satisfy the rule that one assessment point "must be within" two to three times the method detection limit of the instruments with the monitoring network. (See item 13.a of Attachment 4, hereto, for further detail.)

Response B.5.c:

This comment appears to refer to the requirement of Appendix A, section 3.1.2.1 that one audit level "must be within two to three times the method detection limit of the instruments within the PQAOs network." At the time of the 2017 performance evaluation, a Teledyne T100 (method 100) was used at Site 1001.¹⁰⁹ The federal method detection limit for method 100 is 0.4 ppb, so one audit level was required to be between 0.8 and 1.2 ppb (classified under audit level 1).¹¹⁰ However, the 2017 performance evaluation did not include level 1.¹¹¹ Therefore, we agree with the commenter that the 2017 performance evaluation for SO₂ at Site 1001 did not fully satisfy the requirements of Appendix A, section 3.1.2.1. However, as detailed below, based on the weight of evidence, we do not consider this failure to be grounds for data invalidation.

Under the EPA's validation template for SO₂, annual performance evaluations and the associated audit levels are classified as operational criteria.¹¹² As noted in response A.4 in this document, a violation of an operational criterion *may* be, but is not necessarily, cause for invalidation. In this instance, the relevant criterion was promulgated by the EPA on March 28,

¹⁰⁹ Id.

¹¹⁰ EPA, Technical Note- Guidance on Identifying Annual PE Audit Levels Using Method Detection Limits and the 99th Percentile (May 3, 2016) ("Guidance on Identifying Annual PE Audit Levels"), attachment A. We note that, while 0.4 ppb is the manufacturer-reported MDL, it is possible for agencies to develop their own MDLs, which may be higher than the federal MDL due to the particular conditions and equipment used by the agency to monitor ambient air. However, ADEQ did not provide an alternative MDL, so we are using the federal MDL.

¹¹¹ SO₂ AMP504 (2017), *E.3.010 AMP 504 2017.xlsx*.

¹¹² QA Handbook, appendix D, page 15.

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2016, approximately one year before the 2017 performance evaluation at Site 1001 was conducted. In the preamble to this final rule, the EPA explained that it was adding this requirement because, “[d]ue to the implementation of the NCore network, the inception of trace gas monitors, and generally lower ambient air concentrations being measured, there is a need for audit levels at lower concentrations to more accurately represent the uncertainties present in much of the ambient data.”¹¹³ However, these considerations upon which the EPA based its decision to require lower audit levels do not apply to the SO₂ monitor at Site 1001. The site is not part of the national core (“NCore”) network, which includes sites where ambient concentrations are well below the NAAQS, where the EPA has found it may be appropriate to operate higher sensitivity monitors.¹¹⁴ Site 1001, in contrast, is a source-oriented monitor that is intended to reflect the effects of the Hayden smelter on ambient air for purposes of comparison to the 75 ppb SO₂ NAAQS.¹¹⁵ Consistent with this purpose, the monitoring method used to measure SO₂ at Site 1001, “API Model 100 A SO₂ Analyzer” (Method Code 100), is not a trace gas method.¹¹⁶ Furthermore, Site 1001 does not consistently measure low ambient concentrations of SO₂. On the contrary, during the 2015–2017 design value period, this monitoring site had the highest SO₂ design value of any SO₂ monitoring site in the country (with the exception of three sites in Hawaii affected by volcanic emissions).¹¹⁷ Also, the failure to conduct audits at low

¹¹³ 81 FR 17248, 17265 (March 28, 2016).

¹¹⁴ See, e.g., 71 FR 61236, 61258 (October 17, 2006).

¹¹⁵ ADEQ 2017 Annual Network Plan, appendix C, 12 (*E.3.005_2017 Network Plan.pdf*).

¹¹⁶ Guidance on Identifying Annual PE Audit Levels, attachment A. We note that the monitoring method used at Site 1001 prior to January 19, 2017, “Ecotech EC9850T” (method code 592), was a trace method. Id. However, as noted in response B.5.b in this document, the final performance evaluation was conducted on the Ecotech EC9850T on February 4, 2016, prior to the promulgation of the requirement that one audit level must be within two to three times the method detection limit.

¹¹⁷ EPA, Sulfur Dioxide Design Values, 2017 (July 24, 2018), Table 5c. Monitoring Site Listing for Sulfur Dioxide 1-Hour NAAQS.

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concentrations (i.e., 0.8–1.2 ppb) does not undermine the certainty of measurements taken at concentrations around or above the NAAQS level of 75 ppb, which are determinative of whether the NAAQS has been attained. The ADEQ performance evaluation of Site 1001 in 2017 included assessment concentrations of 65 ppb, 125 ppb, 200 ppb, 500 ppb, and 900 ppb, all of which passed acceptance criteria, indicating the performance of the monitor at concentrations near the NAAQS and at the concentrations determining the site's design value was appropriate to produce data of sufficient quality to determine whether the area attained the NAAQS. Finally, results from an NPAP audit performed by EPA auditors of Site 1001 in 2017 included an assessment concentration of 4.2 ppb (within audit level 2), and the monitor also passed acceptance criteria at this low concentration level.¹¹⁸ Taking these factors into consideration, we find that, based on the weight of the evidence, the failure of ADEQ to fully comply with the requirement of Appendix A, section 3.1.2.1 to include one assessment point within two to three times the method detection limit of the instruments within the PQAO's network at Site 1001 in 2017 is not grounds for invalidation of the relevant data.

Comment B.6:

In proposing the finding of failure to attain, the proposed rulemaking relies on SO₂ design values derived from the annual 99th percentile of ambient daily maximum 1-hour average SO₂ concentrations for 2015, 2016, and 2017. 86 Fed. Reg. at 24834/1-2, Table 2. 40 C.F.R. Part 50 Appendix T provides that only SO₂ data that are generated in a manner consistent with the QC/QA Rules may be used in SO₂ design value calculations. The deficiencies described in Comments B.1 through B.5, above, indicate the SO₂ Data were not generated in a manner consistent with the QC/QA Rules. Therefore, the proposed finding of failure to attain is without adequate foundation in the rulemaking record.

¹¹⁸ SO₂ AMP504 (2017), *E.3.010 AMP 504 2017.xlsx*.

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Response B.6:

This comment appears to refer to 40 CFR part 50, appendix T, section 2(a), which provides that “[a]ll valid FRM/FEM¹¹⁹ SO₂ hourly data required to be submitted to [AQS], or otherwise available to EPA, meeting the requirements of part 58 of this chapter including appendices A, C, and E shall be used in design value calculations.” Of the requirements of part 58 referred to in these provisions, only those in Appendix A specifically pertain to QA. As explained in response A.5 in this document, Appendix A itself provides that “[f]ailure to conduct or pass a required check or procedure, or a series of required checks or procedures, does not by itself invalidate data for regulatory decision making.”¹²⁰ As described in responses A.6 and B.1 through B.5 in this document, the specific issues described by the commenter in comments B.1 through B.5 are not grounds for invalidating the relevant ADEQ data for regulatory decision making. Therefore, we do not agree that the proposed finding of failure to attain is without adequate foundation in the rulemaking record.

Comment B.7:

The deficiencies described in Comments B.1 through B.5, above, indicate the SO₂ Data were not generated in a manner consistent with the QC/QA Rules. Therefore, reliance on the SO₂ Data to enter a final finding of failure to attain would be arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with law.

Response B.7:

As described in response A.6 and noted in response A.7 in this document, failure to meet all requirements of Appendix A does not automatically invalidate data for regulatory decision

¹¹⁹ FRM and FEM refer to data collected under a federal reference method or federal equivalent method, respectively. See 40 CFR 50.1(f) and (g) and 53.1.

¹²⁰ Appendix A, section 1.2.3.

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making. For the reasons described in responses B.1 through B.5 in this document, the EPA has determined that the specific issues described by the commenter are not grounds for invalidation of the relevant data. Therefore, we do not agree that reliance on the data to issue a final finding of failure to attain is arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with law.

Comment C: Additional Comments Regarding the Lead Data

With respect to the Pb data relied upon in the EPA's proposed action, Asarco claims that the Pb data are affected by many of the same deficiencies also alleged with respect to the SO₂ data. Asarco also claims that the Pb data generated at the Globe Highway monitoring site ("Site 1002" or "Globe Highway Site") and the Hillcrest monitoring site ("Site 1003" or "Hillcrest Site") fail to meet other specific requirements under Appendix A, 40 CFR part 50 appendices R and G, and ADEQ's Pb QAPP. We excerpt and respond to the commenter's specific contentions below.

Comments C.1–C.2:

Appendix A states that the goal for acceptable measurement uncertainty for Pb methods is defined for precision as an upper 90% confidence limit for the CV of 20%. This goal is reiterated in ADEQ's 2013-approved "Pb Ambient Air Monitoring Network QAPP" ("**Pb QAPP**"). None of the documents comprising the Docket Records or ADEQ's Records demonstrates satisfaction of this goal for the Globe Highway Site ("**Site 1002**") or the Hillcrest Site ("**Site 1003**") or the Pb Data generated based on readings and samples from Site 1002 and Site 1003. To the extent that ADEQ's "Data Quality Indicator Reports" for Pb, AMP 256, recite confidence limit values or other values related to precision, those values are without foundation in the Docket Records and ADEQ's Records, as indicated in Comments A.2, A.3 and A.4, above. (See item 18 of Attachment 4, hereto, for further detail.)

Appendix A states that the goal for acceptable measurement uncertainty for Pb methods is defined for bias as an upper 95% confidence limit for the absolute bias of 15%. This goal is reiterated in the Pb QAPP. None of the documents comprising the Docket Records or ADEQ's Records demonstrates satisfaction of this goal for Site 1002 or Site 1003 or the Pb Data generated based on readings

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and samples from Site 1002 and Site 1003. To the extent that ADEQ's "Data Concurrences and Evaluation Reports for Lead," AMP 600, and "Data Quality Indicator Reports" for Pb, AMP 256, recite bias values or other values related to bias, those values are without foundation in the Docket Records and ADEQ's Records, as indicated in Comments A.2, A.3 and A.4, above. To the extent that ADEQ's Assessment Spreadsheets, AMP 504, include information that could be used to develop bias values, that information is without foundation in the Docket Records and ADEQ's Records, as indicated in Comments A.2, A.3 and A.4, above. (See item 19 of Attachment 4, hereto, for further detail.)

Responses C.1–C.2:

The commenter is correct that, for Pb, "[t]he goal for acceptable measurement uncertainty is defined for precision as an upper 90 percent confidence limit for the CV of 20 percent and for bias as an upper 95 percent confidence limit for the absolute bias of 15 percent."¹²¹ However, as noted in response B.1–B.2 in this document, there is no requirement for the EPA or PQAOs to "demonstrate[] satisfaction" of the precision and bias goals established in Appendix A. As noted in response A.4 in this document, these goals are considered systematic rather than critical or operational criteria.¹²² Thus, if these goals are not met "*it does not mean that the pollutant data cannot be used for NAAQS decisions*; it means that the decision makers will have less confidence that they will make the correct decision, especially around the action limit [i.e., the NAAQS]."¹²³ The precision and bias goals are thus benchmarks by which to evaluate data quality.

For Pb monitors, precision is estimated via duplicate measurements from collocated samplers.¹²⁴ Bias for flow rates is estimated based on the percent differences between the audit

¹²¹ Appendix A, section 2.3.1.3.

¹²² QA Handbook, appendix D, 49.

¹²³ QA Handbook, section 18, 10 (emphasis added).

¹²⁴ Appendix A, section 4.2.1. Pursuant to Appendix A, section 3.4.5, ADEQ is only required to operate one collocated site (at the site with the highest 3-month average concentration). Prior to operation of the Hillcrest site (Site 1003), the Globe Highway site (Site 1002) had the highest design value in the ADEQ Pb network and was therefore the collocated site. See, e.g., ADEQ 2017 Annual Network Plan, 17 (*E.3.005_2017 Network Plan.pdf*). Therefore, precision values calculated based on upon samples from Site 1002 were used to estimate precision for the entire Pb network, including Site 1003 during the 2016–2018 period.

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and measured flow rates during one-point flow rate verifications, semi-annual flow rate audits and performance evaluation programs (PEP), as reported to AQS.¹²⁵ Bias for Pb analysis audits is estimated based on the percent differences between the audit concentrations (in μg Pb per filter or strip) and the corresponding measured concentrations (in μg Pb per filter or strip), as reported to AQS.¹²⁶ Reports of these statistics are available in AQS, for example, through the AMP256.

In response to the commenter's public records request, ADEQ provided the AMP256 reports for the relevant monitors and NAAQS. For example, for Site 1003, the 2016 Pb AMP256 report lists the "CV UB" (i.e., the 90% upper bound on coefficient of variance) for precision as 3.81¹²⁷ and the "Bias UB" or "Conf. Limits Upper" (upper bound on the mean absolute value of the percent differences of regular and assessment samples) as 3.97 for flow rate verifications, 7.60 for semi-annual flow rate audits, and -12.63 for PEP. These values meet the precision and bias goals of Appendix A (i.e., for precision an upper 90 percent confidence limit for the CV of 20 percent and for bias an upper 95 percent confidence limit for the absolute bias of 15 percent). Similarly, the precision and bias values for Site 1002 for 2015–2018 and Site 1003 for 2017 and 2018 also meet these goals.¹²⁸ Therefore, we do not agree with the commenter's assertion that the precision and bias goals are not addressed in ADEQ's Records.

Furthermore, even if the precision and bias goals had not been met, this would not constitute grounds for invalidation for the reasons described in Response A.5 and in the

¹²⁵ Id. sections 3.4.1, 4.2.2, 4.2.3, and 4.2.4.

¹²⁶ Id. sections 3.4.6 and 4.2.6.

¹²⁷ Pb AMP256 (2016), "Collocation Summary" (*E.3.013 AMP256_Pb_2016.pdf*). As noted above, precision values calculated based on samples from the Globe Highway site (Site 1002) were used to estimate precision for the entire Pb network, including Hillcrest (Site 1003) during the 2015–2018 period.

¹²⁸ Pb AMP256 (2015), *E.3.012 AMP256_Pb_2015.pdf*; Pb AMP256 (2017), *E.3.014 AMP256_Pb_2017.pdf*; Pb AMP256 (2018), *E.3.015 AMP256_Pb_2018.pdf*. The Hillcrest monitoring site (Site 1003) began collecting Pb monitoring data on January 1, 2016, and therefore does not have precision or bias information in 2015.

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preceding paragraphs. In particular, we note that the 2016–2018 Pb design values for Sites 1002 and 1003 were 0.21 and 0.31 $\mu\text{g}/\text{m}^3$, roughly 40% and 100% over the NAAQS level of 0.15 $\mu\text{g}/\text{m}^3$, respectively. Accordingly, a failure to meet the precision and bias goals would not undermine confidence in our determination that the Hayden Pb NAA failed to attain the 2008 Pb standard by the October 3, 2019 attainment date.

Comment C.3:

As indicated in Comment A.2.c, above, the Docket Records and ADEQ's Records do not include certificates, required by Appendix A, that demonstrate reference gases, materials, and devices used to conduct flow checks and inform adjustments were NIST-traceable. This defect encompasses the flow measuring instruments employed to assess the flow-rate readings at the Pb sample collectors at Site 1002 and Site 1003, upon which the Pb Data are materially based. As such, this defect is also a violation of corresponding requirements of the Pb QAPP, including the QAPP's requirements of "field sheets," "NIST-traceable certifications," and other records that contemporaneously document compliance with those requirements. (See item 22 of Attachment 4, hereto, for further detail.)

Response C.3:

This comment appears to refer to Appendix A, section 2.6.3, which provides that, "Flow rate measurements must be made by a flow measuring instrument that is NIST-traceable to an authoritative volume or other applicable standard." The commenter also refers to provisions of ADEQ's 2012 Pb QAPP concerning "'field sheets,' 'NIST-traceable certifications,' and other records that contemporaneously document compliance with those requirements." However, contrary to the commenter's suggestion, Appendix A does not require PQAOs to submit "records that contemporaneously document compliance with those requirements" to the EPA. For the reasons described in response A.1 in this document, these materials were not required to be included in the docket for our proposed action. Furthermore, as explained in response A.2 in this document, it appears that ADEQ did not interpret the commenter's public records request as extending to these types of documents. In any case, for the reasons detailed in responses C.4 and

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C.5 in this document, compliance with the applicable regulatory requirements is documented in other materials referred to in our proposal and in additional documents that ADEQ provided to the commenter. Finally, we note that during our triennial TSAs, EPA staff review a selection of supporting documents, such as logbooks and certifications.¹²⁹

Comment C.4:

. . . with respect to the Pb Data generated based on readings and samples from Site 1002 and Site 1003 and concerning the requirements of 40 C.F.R. Part 58 Appendix A and corresponding requirements of the Pb QAPP:

Comment C.4.a:

The Docket Records and ADEQ's Records do not include "field sheets," electronic logbooks, or other records that contemporaneously document compliance with the rule that, for Pb high volume samplers, the minimum flow rate verification frequency is one verification every 90 days (quarter) with at least four in a year. (See item 20 of Attachment 4, hereto, for further detail.)

Response C.4.a:

This comment appears to refer to the requirement of Appendix A, section 3.4.2 for high volume samplers to have one verification every 90 days (quarter) with four per year. However, contrary to the commenter's suggestion, Appendix A does not require PQAOs to submit "records that contemporaneously document compliance" with this requirement to the EPA. The original data from the flow rate verifications, including the "assessment date," are available in the AMP504 reports for Sites 1002 and 1003. Furthermore, a summary of these data is available in the AMP256 reports, which list the "# Obs Required" (i.e., the number of observations required), the "# Obs" (i.e., the number of observations taken) and the "% Complete" (i.e., the percentage

¹²⁹ See, e.g., 2019 TSA Report, 3, describing the EPA's review of "on-site documentation (e.g., site logs, instrument logs, check sheets" and "supporting documentation for data points", 7, "The site logbooks, including records of flow checks and precision checks, were electronic," and 9, "Station logbooks (e-logbooks) and instrument logbooks were up to date and contained relevant information on operations and maintenance activities."

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of required observations actually performed). For example, in 2016, 12 verifications were performed at Site 1003, far more than the required 4 verifications.¹³⁰ This requirement was met at both Sites 1002 and 1003 during 2016–2018.¹³¹

Comment C.4.b:

The Docket Records and ADEQ's Records do not include "field sheets," electronic logbooks, or other records that contemporaneously document compliance with the rule that, if the flow rate verification for Pb high volume samplers is made in conjunction with a flow rate adjustment, then it must be made prior to the flow rate adjustment. (See item 21 of Attachment 4, hereto, for further detail.)

Response C.4.b:

The rule referred to in this comment appears to be the requirement of Appendix A, section 3.4.1 that, "[i]f the verification is made in conjunction with a flow rate adjustment, it must be made prior to such flow rate adjustment." However, contrary to the commenter's suggestion, Appendix A does not require PQAOs to provide "records that contemporaneously document compliance" with this requirement.

Compliance with this requirement is indicated in the flow rate verification procedure set forth in ADEQ's SOP "AMU-002," "Operating the Tisch HighVol+ Sampler for Total Suspended Particulate."¹³² The 2012 version of the SOP explains that, "[f]or a single point verification, the comparison of the set point and the measured flow rate from the reference standard should be less than 5% difference in error. To prevent data invalidation, anything greater than 5% difference in measured flow rate is cause for a new calibration."¹³³ Similarly,

¹³⁰ Pb AMP504 (2016), *E.3.032 AMP504_2016.xlsx*.

¹³¹ Pb AMP504 (2015), *E.3.031 AMP504_2015.xlsx*; Pb AMP504 (2017), *E.3.033 AMP504_2017.xlsx*; Pb AMP504 (2018), *E.3.034 AMP504_2018.xlsx*.

¹³² Version 1.0 of this SOP, dated October 1, 2012, is attachment D to the 2012 Pb QAPP. Version 2.0, dated August 8, 2017, is attachment A to the 2018 Pb QAPP.

¹³³ 2012 Pb QAPP, attachment D, 18.

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“[f]or a multi-point verification, the comparison of the set point and the measured flow rate from the reference standard should be less than 5% difference in error. A measured flow rate greater than this difference at any of the five points is cause for a new calibration.”¹³⁴ The 2017 SOP indicates the same procedure in a tabular format.¹³⁵ In other words, a new calibration (i.e., a flow rate adjustment) is triggered only if the initial flow rate verification fails (i.e., exceeds 5%).

For the reasons described in response A.1 in this document, these SOPs were not included in the docket for the EPA's proposed action. However, they were included in the attachments to Asarco's comment letter and are therefore available in the docket for the EPA's final action.

Comment C.4.c:

The Docket Records and ADEQ's Records do not include a record of compliance with the rule that the percent differences between the audit and measured flow rates be reported to the AQS. (See item 23 of Attachment 4, hereto, for further detail.)

Response C.4.c:

The rule referred to in this comment appears to be the following provision of Appendix A, section 3.4.1: “[t]he percent differences between the audit and measured flow rates are reported to AQS . . .”¹³⁶ However, contrary to the commenter's suggestion, Appendix A does not require PQAOs to provide “records that contemporaneously document compliance” with this requirement.

Compliance with this requirement is documented in the Pb AMP504 reports, which display the audit and measured flow rates for each flow rate verification, and the Pb AMP256

¹³⁴ Id. at 18–19.

¹³⁵ 2018 Pb QAPP, attachment A, 14.

¹³⁶ This requirement is incorporated by reference into Appendix A, section 3.4.2 for high volume samplers.

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reports, which display the "Average % D" (i.e., the average percent difference between these two rates). For the reasons described in response A.1 in this document, these documents were not included in the docket for the EPA's proposed action. However, they were provided to Asarco by ADEQ and included in the attachments to Asarco's comment letter to the EPA. They are available in the docket for the EPA's final action.

Comment C.4.d:

The Docket Records and ADEQ's Records do not include "field sheets," electronic logbooks, or other records that contemporaneously document compliance with the rule requiring a flow rate audit of the Pb high volume samplers to be conducted at least twice a year. (See Item 24 of Attachment 4, hereto, for further detail.)

Response C.4.d:

The rule referred to in this comment appears to be the requirement of Appendix A, section 3.4.3 for high volume samplers to have a flow rate audit twice a year. However, contrary to the commenter's suggestion, Appendix A does not require PQAOs to provide "records that contemporaneously document compliance" with this requirement.

The original data from the flow rate audits, including the "assessment date" for each audit are available in the AMP504 reports for Sites 1002 and 1003. Furthermore, summaries of these data are available in the AMP256 reports, which list the "# Req" (i.e., the number of audits required), the "Q" (i.e., the number of quarters in which an audit was performed), and the "% Complete" (i.e., the ratio of actual evaluations to required audits.). For example, in 2016, four audits were performed at site 1003, double the required two audits.¹³⁷ This requirement was met at both Sites 1002 and 1003 during 2015–2018.

¹³⁷ Pb AMP504 (2016), E.3.032 AMP504_2016.xlsx.

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For the reasons described in response A.1 in this document, these reports were not included in the docket for the EPA's proposed action. However, they were provided to Asarco by ADEQ and included in the attachments to Asarco's comment letter to the EPA. They are available in the docket for the EPA's final action.

Comment C.4.e:

The Docket Records and ADEQ's Records do not include "field sheets," electronic logbooks, or other records that contemporaneously document compliance with the rule that the flow rate standard used for the auditing must not be the same flow rate standard used for verifications or to calibrate the monitor. (See Item 25 of Attachment 4, hereto, for further detail.)

Response C.4.e:

This comment appears to refer to the requirement of Appendix A, section 3.4.3 that "[t]he flow rate standard used for auditing must not be the same flow rate standard used for verifications or to calibrate the monitor." However, contrary to the commenter's suggestion, Appendix A does not require PQAOs to provide "records that contemporaneously document compliance" with this requirement. Moreover, the EPA does not consider this requirement to be a critical, operational, or systematic criterion.¹³⁸ Therefore, failure to fully document compliance with this requirement would not be a basis for invalidation of the associated data.

ADEQ's compliance with this requirement is indicated in the 2012 Pb QAPP and 2018 Pb QAPP, which address the flow rate standard used for QC checks and calibrations¹³⁹ and clarify that "the DM&QA QA Auditor performs independent audits . . . using a different NIST-

¹³⁸ QA Handbook, appendix D, 47–49. The systematic criteria for field activities include a note that "[a]ll standards should have multi-point certifications against NIST Traceable standard," but do not specify that different flow rate standards must be used for auditing.

¹³⁹ See, e.g., 2012 Pb QAPP, 50, table B.10, "Standard Materials and/or Apparatus for TSP Sampler Calibration and Verification"; 2018 Pb QAPP, 50, table B.9, "Standard Materials and/or Apparatus for TSP Sampler Calibration and Verification."

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traceable calibration standard.”¹⁴⁰ For the reasons described in response A.1 in this document, the Pb QAPPs were not included in the docket for the EPA's proposed action. However, they were provided to Asarco by ADEQ and included in the attachments to Asarco's comment letter to the EPA. They are available in the docket for the EPA's final action.

Comment C.4.f:

The Docket Records and ADEQ's Records do not include complete laboratory data packages that demonstrate the requirement to audit the Pb reference or equivalent method analytical procedure each calendar quarter was satisfied. (See Item 26 of Attachment 4, hereto, for further detail.)

Response C.4.f:

This comment appears to refer to the requirement of Appendix A, section 3.4.6 for PQAOs to “audit the Pb reference or equivalent method analytical procedure using filters containing a known quantity of Pb” each quarter. However, contrary to the commenter's suggestion, Appendix A does not require PQAOs to provide “complete laboratory data packages” that demonstrate compliance with this requirement.

ADEQ's compliance with this requirement is documented in AQS reports.¹⁴¹ In particular, the Pb AMP504 reports list the dates and results of each Pb analysis audit, and the “lead audit strip analysis” tables in the Pb AMP256 reports document the overall “percent [completeness]” for each quarter. These reports demonstrate that each of these required audits were performed in 2015–2018.¹⁴² Further documentation of these audits is contained in the

¹⁴⁰ 2012 Pb QAPP, 83; 2018 Pb QAPP, 80.

¹⁴¹ We note that ADEQ contracts out performance of laboratory analyses for Pb for Sites 1002 and 1003 to the Pima County Wastewater Reclamation Laboratory (“Pima County Lab”), which manages its own quality assurance and quality control (QA/QC) program. See, e.g., 2012 Pb QAPP, 11–12, 16.

¹⁴² Pb AMP504 (2015), *E.3.031 AMP504_2015.xlsx*; Pb AMP504 (2016), *E.3.032 AMP504_2016.xlsx*; Pb AMP504 (2017), *E.3.033 AMP504_2017.xlsx*; Pb AMP504 (2018), *E.3.034 AMP504_2018.xlsx*; Pb AMP256 (2015), *E.3.012 AMP256_Pb_2015.pdf*; Pb AMP256 (2016), *E.3.013 AMP256_Pb_2016.pdf*; Pb AMP256 (2017), *E.3.014 AMP256_Pb_2017.pdf*; Pb AMP256 (2018), *E.3.015 AMP256_Pb_2018.pdf*.

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sample analysis reports labeled "Performance Evaluation (EPA Audit Strips)," which ADEQ provided to the commenter. For the reasons described in response A.1 in this document, these AQS reports and sample analysis reports were not included in the docket for the EPA's proposed action. However, they were provided to Asarco by ADEQ and included in the attachments to Asarco's comment letter to the EPA. They are available in the docket for the EPA's final action.

Comment C.4.g:

The Docket Records and ADEQ's Records do not establish that the laboratory that analyzed the Pb samples from Site 1002 and Site 1003 satisfied the rule that the Pb method audit samples must be prepared using batches of reagents different from those used to calibrate the Pb analytical equipment being audited. (See Item 27 of Attachment 4, hereto, for further detail.)

Response C.4.g:

This comment appears to refer to the requirement of Appendix A, section 3.4.6 that, when conducting an audit of a Pb reference or equivalent method analytical procedure, "[t]he audit samples must be prepared using batches of reagents different from those used to calibrate the Pb analytical equipment being audited." The EPA does not consider this requirement to be a critical, operational, or systematic criterion.¹⁴³ Therefore, failure to fully document compliance with this requirement would not be a basis for invalidation of the associated data.

Compliance with this requirement is documented in the Pima Lab's SOP for preparation of Pb audit strips.¹⁴⁴ The SOP explicitly addresses this requirement with the statement that "[a]udit strips are prepared by treating strips of unexposed filter media supplied by the client with a known Pb mass obtained from a different source than that used to make reagents for the

¹⁴³ QA Handbook, appendix D, 47-49.

¹⁴⁴ 2012 Pb QAPP, Attachment M (May 11, 2010).

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process being audited.”¹⁴⁵ For the reasons described in response A.1 in this document, this SOP was not included in the docket for the EPA's proposed action. However, it was provided to Asarco by ADEQ and included in the attachments to Asarco's comment letter to the EPA. Therefore, it is available in the docket for the EPA's final action.

Comment C.4.h:

The Docket Records and ADEQ's Records do not establish that the laboratory that analyzed the Pb samples from Site 1002 and Site 1003 satisfied the rule that the Pb method audit samples must be prepared in the following equivalent ambient Pb concentrations in $\mu\text{g}/\text{m}^3$: (i) 30–100% of Pb NAAQS; (ii) 200–300% of Pb NAAQS. (See Item 28 of Attachment 4, hereto, for further detail.)

Response C.4.h:

This comment appears to refer to the requirement of Appendix A, section 3.4.6 that, when conducting an audit of a Pb reference or equivalent method analytical procedure, audit samples must be prepared in equivalent ambient Pb concentrations of 30–100% of the Pb NAAQS (“Range 1”) and 200–300% of the Pb NAAQS (“Range 2”). The acceptable levels for these ranges are 4–40 micrograms (μg) per strip for Range 1 and 41–125 μg per strip for Range 2.¹⁴⁶ Compliance with this requirement is documented in the Pb AMP504 reports, which list the “Assessment Mass 1” and “Assessment Mass 2,” i.e., the known mass of lead on the test strip for levels 1 and 2, respectively, for each Pb analysis audit. The values listed for each Pb analysis audit performed in 2015–2018 are as follows:

| | Assessment Mass 1 | Assessment Mass 2 |
|------|-------------------|-------------------|
| 2015 | 15.69 | 67.99 |
| 2016 | 14.63 | 63.57 |

¹⁴⁵ Id. at 2. The “client” referred to in the SOP is ADEQ, which, in turn, receives the audit strips from EPA. See, e.g., “Sample Analysis Report. Performance Evaluation (EPA Audit Strips), 1st Quarter 2018” (April 11, 2018).

¹⁴⁶ EPA, AQS (Air Quality System) Transaction Format Guide, “QA - Pb Analysis Audit.” Accessed online December 3, 2021.
<https://aqs.epa.gov/aqsweb/documents/codingmanual/html/fromdatabase/QA%20Pb%20Analysis%20Audit.html>.

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| | | |
|------|------|------|
| 2017 | 15.4 | 66.7 |
| 2018 | 15.6 | 67.7 |

All of the values for Assessment Mass 1 are within the acceptable levels for Range 1 and all of the values for Assessment Mass 2 are within the acceptable levels for Range 2. Therefore, the requirement of Appendix A, section 3.4.6 was satisfied by the 2016–2018 Pb analysis audits.

For the reasons described in response A.1 in this document, these reports were not included in the docket for the EPA’s proposed action. However, they were provided to Asarco by ADEQ and included in the attachments to Asarco’s comment letter to the EPA. They are available in the docket for the EPA’s final action.

Comment C.4.i:

The Docket Records and ADEQ’s Records do not include complete laboratory data packages that demonstrate the requirement to analyze three audit samples in each of the two ranges each quarter samples are analyzed was satisfied. (See Item 29 of Attachment 4, hereto, for further detail.)

Response C.4.i:

This comment appears to refer to the requirement of Appendix A, section 3.4.6(b) to “[a]nalyze three audit samples in each of the two ranges each quarter samples are analyzed.” However, contrary to the commenter’s suggestion, Appendix A does not require PQAOs to provide “complete laboratory data packages” that demonstrate compliance with this requirement. Compliance with this requirement is documented in the Pb AMP504 reports, which list the “Assessment Date” for each Pb analysis audit, as well as the associated Assessment Mass 1 and Assessment Mass 2, as described in response C.4.h in this document. In particular, the Pb AMP504 reports show that three samples in each of the two ranges were analyzed each quarter

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during 2015–2018.¹⁴⁷ Further documentation of these audits is contained in the sample analysis reports labeled “Performance Evaluation (EPA Audit Strips),” which ADEQ provided to the commenter.

For the reasons described in response A.1 in this document, these AQS reports and sample analysis reports were not included in the docket for the EPA's proposed action. However, they were provided to Asarco by ADEQ and included in the attachments to Asarco's comment letter to the EPA. They are available in the docket for the EPA's final action.

Comment C.5:

. . . with respect to the Pb Data generated based on readings and samples from Site 1002 and Site 1003 and concerning the requirements of 40 C.F.R. Part 58 Appendix A, corresponding requirements of the Pb QAPP, and requirements of 40 C.F.R. Part 50 Appendix R and Appendix G:

Comment C.5.a:

ADEQ's Assessment Spreadsheet for calendar year 2015, AMP 504, indicates that a quarterly flow rate verification was not conducted in 2015 for Site 1003. (See item 20 of Attachment 4, hereto, for further detail.)

Response C.5.a:

This comment appears to refer to the requirement in Appendix A, section 3.4.2 for Pb high volume samplers to conduct a flow rate verification once every 90 days and at least four times per year. Site 1003 began collecting Pb monitoring data on January 1, 2016, and was therefore not subject to requirements for quarterly flow rate verifications under Appendix A, section 3.4.2 in 2015. An evaluation of the completeness criteria for the 2018 design value at Site

¹⁴⁷ Pb AMP504 (2015), *E.3.031 AMP504_2015.xlsx*; Pb AMP504 (2016), *E.3.032 AMP504_2016.xlsx*; Pb AMP504 (2017), *E.3.033 AMP504_2017.xlsx*; Pb AMP504 (2018), *E.3.034 AMP504_2018.xlsx*.

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1003, despite missing data in November and December of 2015, is discussed in our May 10, 2021 proposed rule.

Comment C.5.b:

ADEQ's "Data Quality Indicator Report" for calendar year 2015, AMP 256, and ADEQ's Assessment Spreadsheet for calendar year 2015, AMP 504, indicate that a flow rate audit was not conducted in 2015 for Site 1003. (See item 24 of Attachment 4, hereto, for further detail.)

Response C.5.b:

This comment appears to refer to the requirement in Appendix A, section 3.4.3 to audit the flow rate of Pb particulate monitors twice per year. Site 1003 began collecting Pb monitoring data on January 1, 2016 and was therefore not subject to requirements for quarterly flow rate verifications under Appendix A, section 3.4.2 in 2015. An evaluation of the completeness criteria for the 2018 design value at the Hillcrest monitoring site, is discussed in our May 10, 2021 proposed rule.

Comment C.5.c:

As indicated in Comments 4.f and 4.i, above, the Docket Records and ADEQ's Records do not include complete laboratory data packages. It is unclear whether such laboratory data packages exist. Therefore, it is questionable whether the Pb Data are valid or enjoy a presumption of validity for purposes of Pb NAAQS attainment-status determinations.

Response C.5.c:

As discussed in responses C.4.f and C.4.i in this document, Appendix A does not require PQAOs to provide "complete laboratory data packages" that demonstrate compliance with the applicable audit requirements. As described in those responses, compliance with these requirements is documented in the Pb AMP504 reports, and the sample analysis reports labeled "Performance Evaluation (EPA Audit Strips)," which ADEQ provided to the commenter.

Similarly, Appendix A does not require PQAOs to provide "complete laboratory data packages"

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to demonstrate compliance with the applicable requirements for routine ambient monitoring data. As described in other responses, compliance with these requirements is demonstrated in various documents, including the sample analysis reports labeled "ADEQ Air Sampling," which ADEQ provided to the commenter. Therefore, we do not agree with the commenter that "it is questionable whether the Pb Data are valid or enjoy a presumption of validity for purposes of Pb NAAQS attainment-status determinations."

For the reasons described in response A.1 in this document, these reports were not included in the docket for the EPA's proposed action. However, they were provided to Asarco by ADEQ and included in the attachments to Asarco's comment letter to the EPA. They are available in the docket for the EPA's final action.

Comment C.5.d:

Without limiting the foregoing, the Docket Records and ADEQ's records do not demonstrate the requirements of 40 C.F.R. Part 50 Appendix G were satisfied by the Pima County laboratory that analyzed the Pb samples from Site 1002 and Site 1003. This includes, without limitation, the absence in the Docket Records and ADEQ's records of certifications of NIST-traceability that are required by Appendix G, in relation to the Pb Data.

Response C.5.d:

It is unclear which of the several requirements or certifications in 40 CFR part 50, appendix G ("Appendix G") the commenter is referring to. Moreover, contrary to the commenter's suggestion, Appendix G does not require the PQAQO to submit certifications of NIST-traceability. Compliance with the Appendix G requirements for traceability is generally

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documented in the Pima Lab's Quality Manual.¹⁴⁸ In addition, during our triennial TSAs, EPA staff review supporting documents, including certification records.¹⁴⁹

Comment C.5.e:

Without limiting the foregoing, the summary-format "Sample Analysis Reports" produced by the Pima County laboratory that analyzed the Pb samples from Site 1002 and Site 1003 indicate a remarkable degree of Pb-content heterogeneity on each filter sample analyzed by the laboratory. This calls into question the reliability of the Pb Data for purposes of Pb NAAQS attainment-status determinations. Such Pb-content heterogeneity is indicated by the percent differences between the laboratory-determined equivalent ambient Pb concentrations of the initially-run analyses and subsequently-run analyses of two of three November 2018 Pb samples from Site 1002:

| | Analysis Date | $\mu\text{g}/\text{m}^3$ | Re-Analysis Date | $\mu\text{g}/\text{m}^3$ |
|------------------|---------------|--------------------------|------------------|--------------------------|
| TSPD04 110418 | 12/12/2018 | 0.004 | 1/25/2019 | 0.040 |
| TSPD04 111618 | 12/12/2018 | 0.038 | 1/25/2019 | 0.004 |

These equate to a difference of 850% to 900% between the results of analyses of the same filter samples. There is no indication in the Docket Records or ADEQ's Records of an assessment of the causes of such heterogeneity or its potential effect on the validity of the Pb Data for purposes of NAAQS attainment-status determinations.

Response C.5.e:

The commenter appears to be addressing sample data presented in two different sample data reports delivered from the Pima Lab to ADEQ for filters collected in November 2018. These sample data reports,¹⁵⁰ along with all monthly reports and quarterly audit strip reports from

¹⁴⁸ See, e.g., attachment H to 2018 Pb QAPP, section 24, "Measurement Traceability;" "Reference Standards, such as Class 1 weights traceable to NIST, are used for calibration only and for no other purpose."

¹⁴⁹ See, e.g., EPA, Quality Assurance Guidance Document – Conducting Technical Systems Audits of Ambient Air Monitoring Programs, 68 (November 2017). "The audit team should review certification records for all standards in use by the organization during the 3-year audit period."

¹⁵⁰ E.3.189_11 November 2018 ADEQ.pdf, E.3.188_11 November 2018 ADEQ - GHP and GHS Reanalysis.pdf.

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2015–2018, were included in the attachments to Asarco’s comment letter to the EPA.¹⁵¹ The “reanalysis” report contains values for Site 1002, for both the “primary” monitor, whose concentrations are used to report air quality for the site, and a “secondary” monitor at the site, which served as a QA collocated monitor (also referred to as a “collocated quality control monitor”), as required under Appendix A, section 3.4.4.¹⁵² As described in 40 CFR part 50, appendix R, section 3(d), the starting dataset for a Pb-TSP site consists of the measured daily concentrations recorded from the designated primary monitor; data from the primary monitor is augmented by data from collocated monitors on days when a valid 24-hour measurement is not produced from the primary monitor.

A review of the data in the two reports shows that the reanalysis was performed for samples collected on three dates each in November 2018 at the primary monitor and QA collocated monitor at Site 1002 (six samples total). The following table reproduces the data presented in these two reports in the first four columns and calculates the percent difference between the initial analysis and reanalysis values in the fifth column.

| Monitor | Sample Date | Initial Analysis Concentration ($\mu\text{g}/\text{m}^3$) | Reanalysis Concentration ($\mu\text{g}/\text{m}^3$) | Percent difference from initial to reanalysis |
|---------------|-------------|---|---|---|
| Primary | 11/04/2018 | 0.035 | 0.036 | 2.9 |
| Primary | 11/10/2018 | 0.004 | 0.004 | 0.0 |
| Primary | 11/16/2018 | 0.004 | 0.004 | 0.0 |
| QA Collocated | 11/04/2018 | 0.004 | 0.040 | 900.0 |
| QA Collocated | 11/10/2018 | 0.004 | 0.004 | 0.0 |

¹⁵¹ Both of these reports were provided by ADEQ to the commenter. The initial report (*E.3.189_11 November 2018 ADEQ.pdf*) appears to have been unintentionally omitted from the documents the commenter initially emailed to EPA staff but was provided at a later date. Email dated November 22, 2021, from George A. Tsiolis, Attorney at Law, to Ben Leers, EPA Region IX, Subject: RE: Proposed Finding of Failure to Attain - Rulemaking Docket No. EPA-R09-OAR-2021-0078.

¹⁵² ADEQ’s collocated site was later moved from Site 1002 to Site 1003.

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| | | | | |
|---------------|------------|-------|-------|----------------------|
| QA Collocated | 11/16/2018 | 0.038 | 0.004 | -89.5 ¹⁵³ |
|---------------|------------|-------|-------|----------------------|

Notably, for four of the filters, the percent difference is remarkably small (less than 3%), suggesting the filters are quite homogeneous. The two samples identified by the commenter as evidence of heterogeneity do show high percent differences. However, without further information, the EPA does not consider these high percent differences to be evidence of heterogeneity or uncertainty in the sample collection and analysis process. Rather, we consider it is most likely that an error occurred and was identified by ADEQ and/or the Pima Lab and addressed through a reanalysis of the initial filters.¹⁵⁴ The reanalysis values also show much smaller differences between the values reported for the primary and the QA collocated monitor on the same day as compared to the initial analysis (e.g., 0.036 $\mu\text{g}/\text{m}^3$ and 0.040 $\mu\text{g}/\text{m}^3$ reported for the primary and QA collocated monitor on November 4, 2018, respectively, as compared to 0.035 $\mu\text{g}/\text{m}^3$ and 0.004 $\mu\text{g}/\text{m}^3$ reported in the initial analysis). The agreement between the values reported for the primary and QA collocated monitors in the reanalysis as compared with the initial analysis further indicates that the initial values issued for the QA collocated monitor on November 4 and 16, 2018 were erroneous. Therefore, while the commenter interprets any differences between the initial and reanalysis reports as evidence of heterogeneity in filter samples, the EPA does not agree that the evidence supports heterogeneity as the most likely reason for the differences.

¹⁵³ The commenter states that the percent differences range from “850% to 900%” for the two samples. However, if calculating the percent difference as the difference between the reanalysis value and the analysis value, divided by the analysis value (and multiplied by 100%), the percent difference for this value is 89.5%. The commenter appears to have divided the difference by the reanalysis value for this sample and by the analysis value for the first sample.

¹⁵⁴ Based on the remaining reports for 2015–2018, this appears to be the only instance in which a reanalysis report was issued by the Pima Lab for ADEQ, so this reanalysis does not appear to be a routine process.

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A review of the AMP350 raw data report included in the attachments to Asarco's comment letter shows that the reanalysis concentrations were reported to AQS, with the exception of the November 10 and 16, 2018 values for the QA collocated monitor, which were invalidated and replaced with an "EC" null code (for "exceeds critical criteria").¹⁵⁵ Importantly, the November 4 and 16, 2018 samples cited by the commenter were both collected by the QA collocated monitor, rather than by the primary monitor, whose samples were actually used to calculate the design value. Therefore, even if the November 4, 2018 sample from the collocated monitor had been invalidated, as the November 16, 2018 sample was, it would not have affected the calculation of the design value.

In sum, the EPA disagrees with the commenter that the sample reanalysis results indicate a remarkable degree of heterogeneity in the Pb content of the filters. Rather, the totality of the evidence indicates that the reanalysis of the November 4, 10, and 16, 2018 filters corrected erroneous data for the QA collocated monitor in the initial report. Therefore, we do not believe that the differences between these reports indicate any widespread problem with the Pb data collected at Site 1002 or Site 1003. Moreover, for the cases where the reanalysis data differed by more than 0.001 $\mu\text{g}/\text{m}^3$ from the initial analysis, neither the data from the initial report nor the reanalysis data were used in calculating the design value for either site.

Comment C.5.f:

. . . ADEQ's "Data Concurrence and Evaluation Report for Lead" for calendar year 2017, AMP 600, states, for "Analysis Audit Summary," a "Bias" of -12.53, without foundation. If "Analysis Audit Summary" is meant to refer to the requirement to audit the Pb reference or equivalent method analytical procedure each calendar quarter, then this bias value would appear to be in excess of the bias goal of + < 10% which is stated in the Pb QAPP.

¹⁵⁵ Pb AMP350 (2015–2018), *E.3.020 AMP350 Pb 2015-2018.pdf*, *E.3.021 AMP350 Pb 2015-2018.xlsx*.

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Response C.5.f:

This comment appears to refer to the analysis audit summary for “Lead PM10 LC FRM/FEM (85129)” contained in the 2017 AMP600 report dated April 27, 2018, which indicated a bias of -12.53. However, this part of the AMP600 report addresses data from monitors measuring for Pb-PM₁₀ and does not apply to Sites 1002 and 1003, which measure for Pb-TSP and are covered under the section titled “Lead (TSP) LC (14129).” The bias statistics for the Hayden Pb-TSP monitoring sites are discussed in response C.1–C.2 in this document.

Comment C.5.g:

. . . ADEQ's “Data Concurrence and Evaluation Report for Lead” for calendar year 2018, AMP 600, states, for “Analysis Audit Summary,” a “Bias” of -10.30, without foundation. If “Analysis Audit Summary” is meant to refer to the requirement to audit the Pb reference or equivalent method analytical procedure each calendar quarter, then this bias value would appear to be in excess of the bias goal of + < 10% which is stated in the Pb QAPP.

Response C.5.g:

This comment appears to refer to the analysis audit summary for “Lead PM10 LC FRM/FEM (85129)” contained in the 2018 AMP600 report dated April 30, 2019, which indicates a bias of -10.30. However, this part of the report addresses data from monitors measuring for Pb-PM₁₀ and does not apply to Sites 1002 and 1003, which measure for Pb-TSP and are covered under the section of the report titled “Lead (TSP) LC (14129).” The bias statistics for the Hayden Pb-TSP monitoring sites are discussed in response C.1–C.2 in this document.

Comment C.6:

In proposing the finding of failure to attain, the proposed rulemaking relies on Pb design value derived from highest annual 3-month rolling average Pb concentrations for 2016, 2017 and 2018. 86 Fed. Reg. at 24833/2-3, Table 1. 40 C.F.R. Part 50 Appendix R provide that only Pb data that are generated in a manner consistent with the QC/QA Rules may be used in Pb design value

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calculations. The deficiencies described in Comments C.1 through C.5, above, indicate the Pb Data were not generated in a manner consistent with the QC/QA Rules. Therefore, the proposed finding of failure to attain is without adequate foundation in the rulemaking record.

Response C.6:

This comment appears to refer to 40 CFR part 50, appendix R, section 3(a), which provides that “[a]ll valid FRM/FEM Pb-TSP data and all valid FRM/FEM Pb-PM₁₀ data submitted to [AQS], or otherwise available to EPA, meeting the requirements of part 58 of this chapter including appendices A, C, and E shall be used in design value calculations.” Of the requirements of part 58 referred to in these provisions, only those in Appendix A specifically pertain to QA. As explained in response A.5 in this document, Appendix A itself provides that “[f]ailure to conduct or pass a required check or procedure, or a series of required checks or procedures, does not by itself invalidate data for regulatory decision making.”¹⁵⁶ As described in response A.6 and responses C.1 through C.5 in this document, we have determined that the specific issues described by the commenter in comments C.1 through C.5 are not grounds for invalidation of data for regulatory decision making. Therefore, we do not agree that the proposed finding of failure to attain is without adequate foundation in the rulemaking record.

Comment C.7:

The deficiencies described in Comments C.1 through C.5, above, indicate the Pb Data were not generated in a manner consistent with the QC/QA Rules. Therefore, reliance on the Pb Data to enter a final finding of failure to attain would be arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with law.

¹⁵⁶ Appendix A, section 1.2.3.

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Response C.7:

As described in response A.6 and noted in response A.7 in this document, failure to meet all requirements of Appendix A does not automatically invalidate data for regulatory decision making. For the reasons described in responses C.1 through C.5 in this document, the EPA has determined that the specific issues described by the commenter are not grounds for invalidation of the relevant data. Therefore, we do not agree that reliance on the data to issue a final finding of failure to attain is arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.

Comment D: Additional Comments Based on EPA's TSA

Asarco cites numerous other findings from the 2019 TSA related to alleged deficiencies in quality assurance and control practices implemented by ADEQ at Sites 1001, 1002, and 1003.

We excerpt and respond to the commenter's specific contentions below.

Comments D.1–D.4:

1. The notice of proposed rulemaking is completely silent on the potential effects of the QC/QA deficiencies identified in the 2019 TSA Report on the validity of the Data for purposes of NAAQS attainment-status determinations.
2. EPA's failure to explain in the rulemaking record why QC/QA deficiencies identified in the 2019 TSA Report are not material to the validity of the Data for purposes of NAAQS attainment-status determinations and invite public comments regarding the explanation prior to finalizing the rulemaking would be arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with law.
3. EPA's failure to explain in the rulemaking record how QC/QA deficiencies identified in the 2019 TSA Report are material to the validity of the Data for purposes of NAAQS attainment-status determinations and invite public comments regarding the explanation prior to finalizing the rulemaking would be arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with law.

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4. Asarco incorporates within these comments, as if they are Asarco's own, all of the findings in the 2019 TSA Report. If EPA takes final action on the rulemaking, then the notice of final rulemaking should categorically state whether or not any of the findings stated in the 2019 TSA report concerns, affects or calls into question the validity of the Data from Site 1001, Site 1002 or Site 1003; and, if not, then why not. A failure to do so would be arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with law.

Responses D.1–D.4:

The commenter is correct that we did not discuss the specific findings of the 2019 TSA Report in our notice of proposed rulemaking. However, we did refer to the 2019 TSA Report¹⁵⁷ and include it in the docket for our proposed rulemaking. Therefore, the commenter and other members of the public were able to review the 2019 TSA Report and comment on the relevance of its findings to our proposed determinations. Moreover, as noted previously in this document, the 2019 TSA Report itself states that, “[u]nless otherwise noted, *the findings in this report are not cause for data invalidation.*”¹⁵⁸ As described in the responses that follow, none of the findings in the 2019 TSA Report were cause for invalidation of the data used in this action.

Comment D.5:

. . . Asarco notes, in particular, the following findings in the 2019 TSA Report:

Comment D.5.a:

Finding #10 and Finding #13, discussed in Comments A.3 and A.4, above.

Response D.5.a.

As explained in response A.3 in this document, the EPA's monitoring regulations do not include traceability requirements for records, and the requirements suggested by the commenter

¹⁵⁷ See, e.g., 86 FR 24829, 24832; “In our 2018 TSA of ADEQ, we concluded that ADEQ's ambient air monitoring network meets or exceeds the requirements for the minimum number of SLAMS for all criteria pollutants, including for Pb in the Hayden NAA and for SO₂ in the Hayden and Miami NAAs.”

¹⁵⁸ 2019 TSA Report, 4 (emphasis added).

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are elements of EPA guidance and ADEQ's internal record management processes. As also explained in response A.3 in this document, while we found that ADEQ was not fully implementing its own internal requirements for records management, finding #10 of the 2019 TSA Report did not conclude that ADEQ was failing to meet any regulatory requirement concerning records management, and we did not recommend invalidation of any data based on this finding.

As explained in response A.4 in this document, the systematic criteria referred to in appendix D of the QA Handbook "are important for the correct interpretation of the data but *do not usually impact the validity of a sample or group of samples. . .*"¹⁵⁹ Additionally, information provided by ADEQ in response to the commenter's records request establishes that systematic criteria were met at Site 1001. We therefore disagree with the commenter that the data must be considered presumptively invalid as a result of finding #13 of the 2019 TSA Report.

Comment D.5.b:

Finding #4, which states: (i) "[i]n several cases the data validation process did not result in appropriate data invalidation, and improperly validated data were uploaded to AQS"; and (ii) "[d]ata were uploaded as valid into AQS that should have been invalidated due to evidence of instrument malfunction."

- 1) Included with this finding, as "[e]xamples," are three instances when "[d]ata were uploaded as valid into AQS that should have been invalidated due to evidence of instrument malfunction." The finding is vague as to whether the three "[e]xamples" constitute the universe of "several cases" to which the finding refers, or whether similar examples occurred in relation to Data from Site 1001, Site 1002 and/or Site 1003.
- 2) If EPA takes final action on the rulemaking, then the notice of final rulemaking should categorically state whether or not Finding #4 extends to Data from Site 1001, Site 1002 or Site 1003. A failure to do so would be

¹⁵⁹ Id. (emphasis added).

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arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with law.

Response D.5.b:

The examples provided in the 2019 TSA Report were the cases where a specific problem was identified. The EPA did not identify any instances of improper data validation relevant to Sites 1001, 1002 or 1003 during the 2018 TSA. We also did not identify any pervasive problems, which would have required a review of previously validated data. Therefore, finding #4 of the 2019 TSA Report did not extend to data from Sites 1001, 1002 or 1003.

Comment D.5.c:

Finding #6, which states: (i) "ADEQ made [SO₂] data quality decisions based on results from zero/span/precision checks that may have not had sufficient time to stabilize"; (ii) "stabilization times for automated checks were minimal and often insufficient"; and (iii) "daily checks" used to "make data validation decisions" were "[f]or the most part . . . taken without consideration of stability."

- 1) Included with this finding is a statement that, "[b]ecause the daily checks often did not meet stability requirements, they do not meet EPA regulatory requirements for instrument evaluation and should not be used in the decision-making process." This statement is vague as to the meaning of "the decision-making process." If EPA takes final action on the rulemaking, then the notice of final rulemaking should categorically state whether or not "the decision-making process" refers to NAAQS attainment-status determinations. A failure to do so would be arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with law. (Asarco believes "the decision-making process" can mean nothing other than NAAQS attainment-status determinations.)
- 2) Included with this finding is also a statement that "[m]annual checks were verified by the Field Technician for stabilization at each audit point." If EPA takes final action on the rulemaking, then the notice of final rulemaking should identify the hard-copy or electronic record that the verifications described in the statement actually occurred. As indicated in Comment A.2, above, such records would need to be contemporaneous with the verifications themselves.

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Response D.5.c:

Finding #6 of the 2019 TSA Report concerned data quality decisions based on results from automated Z/S/P checks that may have not had sufficient time to stabilize. In this finding, the EPA explained that these automated checks were separate from the manual Z/S/P checks that ADEQ performed to meet the requirements of Appendix A, section 3.1.1 for biweekly QC checks, which were verified for stabilization by the field technicians.¹⁶⁰ In contrast, the automated checks were generally considered informational in nature and were used by field technicians to decide whether to perform additional manual checks or calibrations.¹⁶¹ However, in some instances, the automated checks were used to make data validity decisions (e.g., to limit the amount of data invalidated when an official one point QC check was failed).¹⁶² Thus, the “decision-making process” referred to in finding #6 of the 2019 TSA Report was the process used to determine whether particular data were valid, not the process used to determine NAAQS attainment.

The EPA found the practice of using the automated checks to make data validity decisions was problematic because these checks often did not have sufficient time to stabilize.¹⁶³ However, contrary to the commenter's suggestion, this finding did not pertain specifically to SO₂, but to gaseous analyzers generally.¹⁶⁴ The finding also specifically references 40 CFR part 50, appendix D, “Reference Measurement Principle and Calibration Procedure for the Measurement of Ozone in the Atmosphere (Chemiluminescence Method)”, which does not apply

¹⁶⁰ 2019 TSA Report, 19. As noted in response B.4.d in this document, a one-point precision check, which is part of the Z/S/P verification check procedure, is synonymous with a one-point QC check, as described in Appendix A.

¹⁶¹ Id.

¹⁶² Id.

¹⁶³ Id.

¹⁶⁴ Id.

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to SO₂. Moreover, the SO₂ AMP504 reports establish that the one-point QC checks performed at Site 1001 consistently met the acceptance criterion of $\leq \pm 10\%$ difference (between the audit and measured concentrations),¹⁶⁵ which is used to determine whether the preceding data were valid.¹⁶⁶ Accordingly, there would have been no need for ADEQ to limit the amount of data invalidated due to a failed one-point QC check by using the automated checks. Thus, nothing in the record suggests that this practice noted in the finding was applied to any of the 2015-2017 SO₂ data from Site 1001.

Finally, concerning the commenter's request for contemporaneous records verifying stabilization during the regular QC checks, we reiterate that Appendix A does not require contemporaneous documentation of QC checks. ADEQ's compliance with the applicable requirements for SO₂ one-point QC checks is documented in the SOPs for the relevant monitors.¹⁶⁷

Comment D.5.d:

Finding #7, which states: (i) "ADEQ and IML [the laboratory to which ADEQ contracted out sample-filter gravimetric laboratory operations] did not adequately maintain and document custody of filters throughout the filter process; (ii) "pre-weighed filters from IML were received by the ADEQ without a signed custody document (pre-exposure CoC or equivalent)" even though chain-of-custody documentation "is required to follow filters from the pre-weight procedure to sample disposal"; and (iii) "custody between collection of exposed filters in the field and shipping to the contract laboratories was not fully documented."

- 1) Included in the finding is a statement that "[c]hain of custody is essential for data defensibility." Asarco agrees with this statement. If EPA takes final action on the rulemaking, then the notice of final rulemaking should state whether or not the chain-of custody] defects described in Finding #7

¹⁶⁵ SO₂ AMP504 (2015), *E.3.008 AMP 504 2015.xlsx*; SO₂ AMP504 (2016), *E.3.009 AMP 504 2016.xlsx*; SO₂ AMP504, (2017), *E.3.010 AMP 504 2017.xlsx*.

¹⁶⁶ The acceptance criterion is established in EPA, Guidance on Statistics for Use of 1-Point QC Checks at Lower Concentrations (May 5, 2016). This criterion is applied under ADEQ's SO₂ QAPP, 58.

¹⁶⁷ See, e.g., SOP for the Ecotech Model EC9850T Sulfur Dioxide Trace Analyzer, section 11.2, 9; "Allow the multi-gas calibrator and the analyzer to stabilize for all points."

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affect any of the Pb Data, including their reliability for purposes of NAAQS attainment-status determinations; and, if not, why not. A failure to do so would be arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with law.

- 2) If EPA enters a final finding of failure to attain the Pb NAAQS, as proposed in the notice of proposed rulemaking, then the notice of final rulemaking should explain why chain-of-custody practices of the kind found absent or deficient in Finding #7 are not relevant to Pb NAAQS attainment-status determinations or the finding of failure to attain the Pb NAAQS. A failure to do so would be arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with law.

Response D.5.d:

Finding #7 of the 2019 TSA Report is not relevant to the Pb or SO₂ data because the gravimetric laboratory procedures are only relevant to monitoring of PM_{2.5} and PM₁₀. The gravimetric lab was not involved in any analysis of Pb or SO₂.

Comment D.5.e:

Finding #12, which states “[v]alidation of contract laboratory-generated data from IML [the laboratory to which ADEQ contracted out sample-filter gravimetric laboratory operations] was not complete” because “ADEQ did not receive the CoC forms and corresponding raw data from IML.”

- 1) Included in this finding is a statement that “[t]he data validation process should include review of the CoC forms and raw data to ensure criteria were met.” If EPA takes final action on the rulemaking, then the notice of final rulemaking should explain which “criteria” cannot be demonstrated to have been met absent “review of the COC forms and raw data.” A failure to do so would be arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with law.
- 2) If EPA takes final action on the rulemaking, then the notice of final rulemaking should explain whether or not the deficiencies stated in Finding # 12 affect any of the Pb Data, including their reliability for purposes of NAAQS attainment-status determinations; and, if not, why not. A failure to do so would be arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with law.

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Response D.5.e:

Finding #12 of the 2019 TSA Report is not relevant to the Pb or SO₂ data because the gravimetric laboratory procedures are only relevant to monitoring of PM_{2.5} and PM₁₀. The gravimetric lab was not involved in any analysis of Pb or SO₂.

Comment D.5.f:

Finding #2, which states: (i) "EPA requires that QMPs," which are agency-wide Quality Management Plans, "be prepared and implemented for ambient air monitoring programs; (ii) EPA approved ADEQ's QMP in May 2016; (iii) the approved QMP "defines ADEQ's quality systems in terms of the responsibilities of the agency-wide QA/QC Program Management (AQPM) function and workgroup; (iv) [t]he AQPM function was not being implemented"; and (v) "[t]asks required to be conducted by the AQPM at the agency-wide level, such as QA oversight, review of documents, review of audits and corrective actions, review of performance evaluations, and QA training, were not being conducted."

- 1) If EPA takes final action on the rulemaking, then the notice of final rulemaking should explain whether or not the absence of an approved QMP prior to May 2016 makes the SO₂ Data and Pb Data generated prior to May 2016 unsuitable for purposes of NAAQS attainment-status determinations; and, if not, why not. A failure to do so would be arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with law.
- 2) If EPA takes final action on the rulemaking, then the notice of final rulemaking should explain whether the deficiencies stated in Finding #2 make the SO₂ Data and Pb Data unsuitable for purposes of NAAQS attainment-status determinations; and, if not, why not. A failure to do so would be arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with law.
- 3) In making the explanations requested in Comments D.5.f.1) and D.5.f.2), above, EPA should discuss, among the applicable rules, the provisions of 40 C.F.R. Part 58 Appendix A § 2.1 which pertain to QMPs; including, without limitation, the provision that states QMPs are necessary to "ensure that the monitoring results "[p]rovide data of adequate quality for the intended monitoring objectives," "[c]omply with applicable standards," and "[c]omply with statutory (and other legal) requirements.

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Response D.5.f:

As an initial matter, the reference in the 2019 TSA Report to the QMP dated May 2016 was not intended to suggest that ADEQ did not have an approved QMP prior to that date. ADEQ's previous QMP was approved by the EPA on November 19, 2010.¹⁶⁸ Thus, the SO₂ and Pb monitoring data collected prior to May 2016 were covered by the 2010 QMP.

In finding #2 of the 2019 TSA Report, the EPA noted that ADEQ's QMP "defines ADEQ's quality system in terms of the responsibilities of the agency-wide QA/QC Program Management (AQPM) function and workgroup," but that "[t]he AQPM function was not being implemented."¹⁶⁹ However, in practice, most of the tasks that the QMP assigned to a centralized QA manager (i.e., the AQPM) were actually being performed by the DM&QA Unit. As noted in response B.4.g in this document, the DM&QA Unit is independent from the Air Monitoring Unit, which collects ambient monitoring data.¹⁷⁰ The DM&QA Unit was therefore able to perform independent oversight of the monitoring program including audits of data quality, tracking corrective actions and reviewing performance evaluations.¹⁷¹ Because these critical quality management tasks were still being performed by an independent entity, the EPA did not recommend invalidation of any data based on finding #2 of the 2019 TSA Report. Rather, the EPA recommended that ADEQ "[d]evelop a QMP specific to the ambient air monitoring program and/or fully implement the currently approved QMP that includes the AQPM function."¹⁷²

¹⁶⁸ ADEQ Quality Management Plan, August 2010, 3. "Approval and Concurrences" page signed by Eugenia McNaughton, EPA Region IX Quality Assurance Manager, November 19, 2010.

¹⁶⁹ 2019 TSA Report, 14.

¹⁷⁰ See *id.*, appendix B: Organizational Chart.

¹⁷¹ *Id.* at 6.

¹⁷² *Id.* at 14.

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Because all SO₂ and Pb monitoring data relied upon in the finding of failure to attain were covered by an approved QMP, and critical quality management tasks such as audits of data quality, tracking corrective actions and reviewing performance evaluations were conducted for these data, finding #2 of the 2019 TSA Report does not make these data unsuitable for consideration in regulatory decision making.

EXHIBIT 4

**ASARCO LLC's Request for
Public Records that ASARCO LLC Uploaded
to the U.S. EPA Rulemaking Docket**

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May 19, 2021

Via Email (.pdf)

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Re: Request for Public Records – Records Underlying Design Values

Dear Ms. Sheffield and Mr. Czecholinski:

Pursuant to A.R.S. §§ 39-121 through 39-121.02, ASARCO LLC (“**Asarco**”) respectfully requests the opportunity within the next several days to review the records of the Arizona Department of Environmental Quality (“**ADEQ**”) that relate to the air quality data employed in the development of the 2016-2018 lead design values for the Hayden lead nonattainment area and the 2015-2017 1-hour design values for the Hayden sulfur dioxide (“**SO₂**”) nonattainment area, which are provided in Table 1 and Table 2 of EPA’s May 10, 2021 proposed “Finding of Failure to Attain the 2008 Lead and 2010 Sulfur Dioxide Standards; Arizona; Hayden and Miami Nonattainment Areas,” 86 Fed. Reg. 24829 (**Attachment 1** hereto) (“**Design Values**”).

Asarco needs the opportunity to review the records requested herein and specified further below within the next several days, and by no later than May 26, 2021, in order

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for Asarco to have a fair opportunity to comment on the May 10, 2021 proposal, the comment period of which ends June 9, 2021.

Specifically, Asarco requests to review ADEQ's records that document and establish that the air quality data that ADEQ submitted into the Air Quality System ("**AQS**") or otherwise to the U.S. EPA and that underlie the Design Values ("**Relevant Air Quality Data**" or "**Data**") were generated and submitted in a manner that satisfies the quality control and quality assurance requirements of:

- 40 C.F.R. Part 58 Appendix A ("**Appendix A**");
- 40 C.F.R. Part 50 Appendix G, or the requirements of 40 C.F.R. §§ 53.3, 53.4, 53.5, 53.8, 53.9 and 53.14, for the measurement of lead concentrations;
- 40 C.F.R. Part 50 Appendix A-1 or Appendix A-2, or the requirements of 40 C.F.R. §§ 53.3, 53.4, 53.5, 53.8, 53.9 and 53.14, for the measurement of SO₂ concentrations; and
- The Quality Assurance Project Plans ("**QAPP**") pursuant to which the Relevant Air Quality Data were generated.

Without limiting the foregoing, Asarco requests to review ADEQ's records that document and establish that the Relevant Air Quality Data were generated and submitted in a manner that satisfies the regulatory requirements enumerated below. Asarco recognizes that two different iterations of the rules may have been applicable to the generation and submittal of the Data. Therefore, Asarco provides citations to the rules that became effective on April 27, 2016 (81 Fed. Reg. 17248) and their analogues that were formerly effective prior to that date.

General Requirements

1. The requirement that the QAPP, pursuant to which the Relevant Air Quality Data were generated, was in existence and compliant with Appendix A §§ 2.1, 2.1.1 and 2.1.2 [formerly Appendix A §§ 1.2, 2.1 and 2.1.1] prior to the generation of those Data. Appendix A § 2.1.2 [formerly Appendix A § 2.1.2].

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2. The requirements that a technical systems audit be conducted at least every 3 years by U.S. EPA Region 9 and reported to the AQS in accordance with Appendix A § 2.5 [formerly Appendix A § 2.5].

Sulfur Dioxide Requirements

3. The rule that the goal for acceptable measurement uncertainty for SO₂ is defined for precision as an upper 90% confidence limit for the coefficient of variation (“**CV**”) of 10%. Appendix A § 2.3.1.5 [formerly Appendix A § 2.3.1.6].

4. The rule that the goal for acceptable measurement uncertainty for SO₂ is defined for bias as an upper 95% confidence limit for the absolute bias of 10%. Appendix A § 2.3.1.5 [formerly Appendix A § 2.3.1.6].

5. The requirement that gaseous pollutant concentration standards used to obtain test concentrations for SO₂ must be traceable to either a National Institute of Standards and Technology (“**NIST**”) Traceable Reference Material or a NIST-certified Gas Manufacturer’s Internal Standard, certified in accordance with one of the procedures cited in Appendix A § 2.6.1 [formerly Appendix A § 2.6.1].

6. The requirement that flow-rate measurements must be made by a flow measuring instrument that is NIST-traceable to an authoritative volume or other applicable standard and certified in accordance with the guidance cited in Appendix A § 2.6.3 [formerly Appendix A § 2.6.3].

7. The requirement that a one-point quality control (“**QC**”) check must be performed at least once every 2 weeks on each automated monitor used to measure SO₂ in accordance with Appendix A § 3.1.1(a) [formerly Appendix A § 3.2.1]; including, without limitation:

➤ The requirement, under the current rule (effective April 27, 2016), that each QC check be made by challenging the monitor with a QC check gas of known SO₂ concentration between the prescribed range of 0.005 and 0.08 parts per million; and

➤ The requirement, under the former rule (in effect prior to April 27, 2016), that each QC check be made by challenging the monitor with a QC gas check of

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known SO₂ concentration between the prescribed range of 0.01 and 0.10 parts per million.

8. The rule that SO₂ monitors must be operated in their normal sampling mode during the QC check and the test atmosphere must pass through all filters, scrubbers, conditioners and other components used during normal ambient sampling and as much of the ambient inlet system as is practicable. Appendix A § 3.1.1(b) [formerly Appendix A § 3.2.1.1].

9. The rule that the QC check must be conducted before any calibration or span adjustment to the SO₂ monitor. Appendix A § 3.1.1(b) [formerly Appendix A § 3.2.1.1].

10. The requirement to report the audit concentration of the QC gas and the corresponding measure concentration indicated by each SO₂ monitor tested in the QC check to the AQS. Appendix A § 3.1.1(d) [formerly Appendix A § 3.2.1.3].

11. The rule that a performance evaluation must be conducted on each primary SO₂ monitor once a year. Appendix A § 3.1.2 [formerly Appendix A § 3.2.2].

12. The rule that the performance evaluation should be conducted by a trained experienced technician other than the routine site operator. Appendix A § 3.1.2 [formerly Appendix A § 3.2.2].

13. The requirement that the performance evaluation should be made by challenging the monitor with audit gas standards of known concentration from at least three audit levels in accordance with Appendix A § 3.1.2.1 [formerly Appendix A § 3.2.2.1]; including, without limitation:

➤ The requirements, under the current rule (effective April 27, 2016), that: (i) one point must be within two to three times the method detection limit of the instruments with the monitoring network, (ii) the second point must be less than or equal to the 99th percentile of the SO₂ data at the site, and (iii) the third point should be around the primary SO₂ NAAQS or the highest 3-year SO₂ concentration at the site; and

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➤ The requirement, under the former rule (in effect prior to April 27, 2016), that the audit levels should represent or bracket 80 percent of ambient concentrations measured by the monitor being evaluated.

14. The rule that the standards from which the audit test gas concentrations are obtained and used for the performance evaluation must be traceable to either a NIST Traceable Reference Material or a NIST-certified Gas Manufacturer's Internal Standard, certified in accordance with one of the procedures cited in Appendix A § 2.6.1 [formerly Appendix A § 2.6.1]. Appendix A § 3.1.2.3 [formerly Appendix A § 3.2.2.3].

15. The rule that the gas standards and equipment used for the performance evaluation must not be the same as the standards and equipment used for the one-point QC check, calibrations or span evaluations. Appendix A § 3.1.2.3 [formerly Appendix A § 3.2.2.3].

16. The rule that the performance evaluation shall be carried out by allowing the SO₂ monitor to analyze the audit gas test atmosphere in its normal sampling mode such that the test atmosphere passes through all filters, scrubbers, conditioners, and other sample inlet components used during normal ambient sampling and as much of the ambient air inlet system as is practicable. Appendix A § 3.1.2.4 [formerly Appendix A § 3.2.2.4].

17. The requirement to report the evaluation concentrations of the audit gases and the corresponding measured concentration indicated or produced by each SO₂ monitor tested in the performance evaluation to the AQS. Appendix A § 3.1.2.6 [formerly Appendix A § 3.2.2.6].

Lead Requirements

18. The rule that the goal for acceptable measurement uncertainty for lead methods is defined for precision as an upper 90% confidence limit for the CV of 20%. Appendix A § 2.3.1.3 [formerly Appendix A § 2.3.1.4].

19. The rule that the goal for acceptable measurement uncertainty for lead methods is defined for bias as an upper 95% confidence limit for the absolute bias of 15%. Appendix A § 2.3.1.3 [formerly Appendix A § 2.3.1.4].

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20. The rule that, for lead high volume samplers, the flow rate verification frequency is one verification every 90 days (quarter) with four in a year. Appendix A § 3.4.2 [formerly Appendix A §§ 3.3.4.1, 3.3.2].

21. The rule that, if the flow rate verification for lead high volume samplers is made in conjunction with a flow rate adjustment, it must be made prior to the flow rate adjustment. Appendix A § 3.4.1 [formerly Appendix A § 3.2.3].

22. The rule that, for the flow rate verification, flow-rate measurements must be made by a flow measuring instrument that is NIST-traceable to an authoritative volume or other applicable standard and certified in accordance with the guidance cited in Appendix A § 2.6.3 [formerly Appendix A § 2.6.3]. Appendix A § 3.4.1 [formerly Appendix A § 3.2.3].

23. The rule that the percent differences between the audit and measure flow rates be reported to the AQS. Appendix A § 3.4.1 [formerly Appendix A § 3.2.4].

24. The requirement to conduct a flow rate audit of the lead high volume samplers twice a year. Appendix A § 3.4.3 [formerly Appendix A § 3.3.4.1, 3.3.3].

25. The rule that the flow rate standard used for the auditing must not be the same flow rate standard used for verification or to calibrate the monitor. Appendix A § 3.4.3 [formerly Appendix A §§ 3.3.4.1, 3.3.3, 3.2.4].

26. The requirement to audit the lead reference or equivalent method analytical procedure each calendar quarter. Appendix A § 3.4.6 [formerly Appendix A § 3.3.4.2].

27. The rule that the lead method audit samples must be prepared using batches of reagents different from those used to calibrate the lead analytical equipment being audited. Appendix A § 3.4.6 [formerly Appendix A § 3.3.4.2].

28. The rule that the lead method audit samples must be prepared in the following equivalent ambient lead concentrations in $\mu\text{g}/\text{m}^3$: (i) 30-100% of lead NAAQS; (ii) 200-300% of lead NAAQS. Appendix A § 3.4.6 [formerly Appendix A § 3.3.4.2].

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Attorney at Law

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29. The requirement to analyze three audit samples in each of the two ranges each quarter samples are analyzed. Appendix A § 3.4.6(b) [formerly Appendix A § 3.3.4.2(b)].

30. The requirement to report the audit concentrations (in µg lead per filter or strip) and the corresponding measured concentrations (in µg lead per filter or strip) to the AQS. Appendix A § 3.4.6(c) [formerly Appendix A § 3.3.4.2(c)].

* * * *

Without limiting the foregoing, Asarco also requests to review:

A. Any and all records of ADEQ’s correspondence with U.S. EPA concerning the utility of the Relevant Air Quality Data in light of the collocation requirements of Appendix A § 3.4.4 or other applicable collocation requirements; including, without limitation, the utility of the Data from the Hillcrest monitor (AQS ID 04-007-1003) in light of the collocation requirements;

B. The Data Certification Reports and Data Completion Reports that ADEQ submitted to U.S. EPA corresponding to the Relevant Air Quality Data, including, without limitation, those that were attached to ADEQ’s April 27, 2015; April 5, 2017; April 27, 2018; and May 1, 2019 certification and re-certification letters to U.S. EPA; and

C. The laboratory data packages that document the laboratory analyses that yielded the Relevant Air Quality Data pursuant to 40 C.F.R. Part 50 Appendix G, or the requirements of 40 C.F.R. §§ 53.3, 53.4, 53.5, 53.8, 53.9 and 53.14, for the measurement of lead concentrations.

* * * *

As used in this request, the word “records” has the meaning ascribed to it by A.R.S. §§ 39-121 through 39-121.02 and includes, but is not limited to, printed records as well as electronic records such as e-mails, e-mail attachments, and completed electronic or online forms.

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As used in this request, the word “or” should be construed as both conjunctive and disjunctive, so that a series of kinds of records joined by the word “or” shall refer to any, all or any combination of them.

Asarco would like every record responsive to this request to be provided or made available to Asarco in printed format or electronic format.

Asarco agrees in advance to pay up to three thousand dollars (\$3,000) for ADEQ’s time reasonably spent searching for the records responsive to this request, reviewing the records for disclosure, and duplicating the records responsive to this request in order to provide or make them available to Asarco as requested above.

If you have any questions about this request, please let me know at (602) 319-4021.

Thank you.

Sincerely,



George A. Tsiolis
Attorney at Law
Counsel for ASARCO LLC

Attachment 1

Proposed “Finding of Failure to Attain the 2008 Lead and 2010 Sulfur Dioxide Standards; Arizona; Hayden and Miami Nonattainment Areas,” 86 Fed. Reg. 24829 (May 10, 2021)

cc via e-mail (.pdf)

James Stewart, ASARCO LLC
Amy Veek, ASARCO LLC
Eric Hiser, Jordan Hiser & Joy, PLC
Bill Jones, Blue Sky Modeling, LLC



requirements beyond those imposed by state law. For that reason, this proposed action:

- Is not a “significant regulatory action” subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011);
- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);
- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4);
- Does not have federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- Is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the Clean Air Act; and
- Does not provide the EPA with the discretionary authority to address disproportionate human health or environmental effects with practical, appropriate, and legally permissible methods under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, the SIP is not approved to apply on any Indian reservation land or in any other area where the EPA or an Indian tribe has demonstrated that a tribe has jurisdiction. In those areas of Indian country, the proposed rule does not have tribal implications and will not impose substantial direct costs on tribal governments or preempt tribal law as specified by Executive Order 13175 (65 FR 67249, November 9, 2000).

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Nitrogen dioxide, Ozone, Reporting and recordkeeping requirements, Volatile organic compounds.

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

Dated: May 4, 2021.

Deborah Jordan,

Acting Regional Administrator, Region IX.

[FR Doc. 2021–09842 Filed 5–7–21; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA–R09–OAR–2021–0078; FRL–10022–86–Region 9]

Finding of Failure To Attain the 2008 Lead and 2010 Sulfur Dioxide Standards; Arizona; Hayden and Miami Nonattainment Areas

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing to determine that the Hayden lead (Pb) nonattainment area (NAA) failed to attain the 2008 Pb primary and secondary national ambient air quality standards (NAAQS or “standards”) by the applicable attainment date of October 3, 2019. This proposed determination is based upon monitored air quality data from November 2015–December 2018 for the 2008 Pb NAAQS. The EPA is also proposing to determine that the Hayden and Miami sulfur dioxide (SO₂) NAAs failed to attain the 2010 1-hour SO₂ primary NAAQS by the applicable attainment date of October 4, 2018, based upon monitored air quality data from January 2015–December 2017. If the EPA finalizes these determinations as proposed, the State of Arizona will be required to submit revisions to the Arizona State Implementation Plan (SIP) that, among other elements, provide for expeditious attainment of the 2008 Pb and 2010 SO₂ standards.

DATES: Any comments must arrive by June 9, 2021.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA–R09–OAR–2021–0078 at <http://www.regulations.gov>. For comments submitted at [Regulations.gov](http://www.regulations.gov), follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from [Regulations.gov](http://www.regulations.gov). The EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the

official comment and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the primary submission (*i.e.*, on the web, cloud, or other file sharing system). For additional submission methods, please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section. For the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit <https://www.epa.gov/dockets/commenting-epa-dockets>. If you need assistance in a language other than English or if you are a person with disabilities who needs a reasonable accommodation at no cost to you, please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section. **FOR FURTHER INFORMATION CONTACT:** Ben Leers, Air Planning Office (AIR–2), EPA Region IX, (415) 947–4279, Leers.Benjamin@epa.gov. **SUPPLEMENTARY INFORMATION:** Throughout this document, “we,” “us,” and “our” refer to the EPA.

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I. Background

A. The 2008 Pb and 2010 SO₂ National Ambient Air Quality Standards

Under section 109 of the Clean Air Act (CAA or “Act”), the EPA has established primary and secondary NAAQS for certain pervasive air pollutants (referred to as “criteria pollutants”) and conducts periodic reviews of the NAAQS to determine whether they should be revised or whether new NAAQS should be established. The primary NAAQS represent ambient air quality standards the attainment and maintenance of which the EPA has determined, including a margin of safety, are requisite to protect the public health.

The secondary NAAQS represent ambient air quality standards the attainment and maintenance of which the EPA has determined are requisite to protect the public welfare from any known or anticipated adverse effects associated with the presence of such air pollutant in the ambient air.

1. The 2008 Pb Standard

Under the CAA, the EPA must establish NAAQS for criteria pollutants, including Pb. Pb is generally emitted in the form of particles that are deposited in water, soil, and dust. People may be exposed to Pb by inhaling it or by ingesting Pb-contaminated food, water, soil, or dust. Once in the body, Pb is quickly absorbed into the bloodstream and can result in a broad range of adverse health effects including damage to the central nervous system, cardiovascular function, kidneys, immune system, and red blood cells. Children are particularly vulnerable to Pb exposure, in part because they are more likely to ingest Pb and in part because their still-developing bodies are more sensitive to the effects of Pb. The harmful effects to children's developing nervous systems (including their brains) arising from Pb exposure may include intelligence quotient (IQ)¹ loss, poor academic achievement, long-term learning disabilities, and an increased risk of delinquent behavior.

The EPA first established primary and secondary Pb standards in 1978 at 1.5 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) as a quarterly average.² Based on new health and scientific data, on October 15, 2008, the EPA revised the federal Pb standards to 0.15 $\mu\text{g}/\text{m}^3$ and revised the averaging time for the standards.³ Since the primary and secondary Pb standards are the same, we refer to them hereafter in this document using the singular Pb standard or NAAQS. A violation of the 2008 Pb NAAQS occurs if any arithmetic 3-month mean concentration is greater than 0.15 $\mu\text{g}/\text{m}^3$.⁴

2. The 2010 SO₂ Standard

Under the CAA, the EPA must also establish a NAAQS for SO₂. SO₂ is primarily released to the atmosphere through the burning of fossil fuels by power plants and other industrial facilities. SO₂ is also emitted from

industrial processes including metal extraction from ore and heavy equipment that burn fuel with a high sulfur content. Short-term exposure to SO₂ can damage the human respiratory system and increase breathing difficulties. Small children and people with respiratory conditions, such as asthma, are more sensitive to the effects of SO₂. Sulfur oxides at high concentrations can also react with compounds to form small particulates that can penetrate deeply into the lungs and cause health problems.

The EPA first established primary SO₂ standards in 1971 at 0.14 parts per million (ppm) over a 24-hour averaging period and 0.3 ppm over an annual averaging period.⁵ In June 2010, the EPA revised the NAAQS for SO₂ to provide increased protection of public health, providing for revocation of the 1971 primary annual and 24-hour SO₂ standards for most areas of the country following area designations under the new NAAQS.⁶ The 2010 NAAQS is 75 parts per billion (ppb) (equivalent to 0.075 ppm) over a 1-hour averaging period.⁷ A violation of the 2010 1-hour SO₂ NAAQS occurs when the annual 99th percentile of ambient daily maximum 1-hour average SO₂ concentrations, averaged over a 3-year period, exceeds 75 ppb.⁸

B. Designations, Classifications, and Attainment Dates for the 2008 Pb and 2010 SO₂ National Ambient Air Quality Standards

Following promulgation of any new or revised NAAQS, the EPA is required by CAA section 107(d) to designate areas throughout the nation as attaining or not attaining the NAAQS.

1. Hayden 2008 Pb Nonattainment Area

The initial designations for the 2008 Pb NAAQS were established in two rounds and were completed on November 22, 2010, and November 22, 2011.⁹ The EPA initially designated the Hayden, Arizona area as unclassifiable due to insufficient monitoring data.¹⁰ In June 2013, the EPA determined that quality assured, certified monitoring data collected in 2012 at the Arizona Department of Environmental Quality

(ADEQ or "State") Globe Highway monitor showed that the area was violating the Pb NAAQS. Accordingly, on May 2, 2014, the EPA proposed to redesignate the Hayden area to nonattainment for the 2008 Pb NAAQS, and on September 3, 2014, finalized the nonattainment designation, effective October 3, 2014.¹¹ Under CAA sections 172(a)(2) and 192(a), the attainment date for a Pb nonattainment area is the date by which attainment can be achieved as expeditiously as practicable, but no later than five years after the area is designated nonattainment. Therefore, the maximum attainment date for the Hayden Pb NAA is October 3, 2019.¹² The Hayden nonattainment area for the 2008 Pb NAAQS includes parts of Gila and Pinal counties.¹³

2. Hayden and Miami 2010 SO₂ Nonattainment Areas

On August 5, 2013, the EPA finalized its first round of designations for the 2010 primary SO₂ NAAQS.¹⁴ In the 2013 action, the EPA designated 29 areas in 16 states as nonattainment for the 2010 SO₂ NAAQS, including the Hayden and Miami areas in Arizona. The Hayden SO₂ NAA includes parts of Gila and Pinal counties and excludes the parts of Indian country located in the area. The Miami SO₂ NAA includes parts of Gila County and excludes parts of Indian country within the area.¹⁵ The EPA's initial round of designations for the 2010 SO₂ NAAQS including the Hayden and Miami SO₂ NAAs became effective on October 4, 2013. Pursuant to CAA sections 172(a)(2) and 192(a), the maximum attainment date for the Hayden and Miami SO₂ NAAs is October 4, 2018, five years after the effective date of the final action designating each area as nonattainment for the 2010 SO₂ NAAQS.

II. Proposed Determination and Consequences

A. Applicable Statutory and Regulatory Provisions

Section 179(c)(1) of the CAA requires the EPA to determine whether a nonattainment area attained an applicable standard by the applicable

¹ IQ is a score created by dividing a person's mental age score, obtained by administering an intelligence test, by the person's chronological age, both expressed in terms of years and months. "Glossary of Important Assessment and Measurement Terms," Philadelphia, PA: National Council on Measurement in Education. 2016.

² 43 FR 46246 (October 5, 1978).

³ 73 FR 66964 (November 12, 2008).

⁴ 40 CFR 50.16.

⁵ 36 FR 8186 (April 30, 1971).

⁶ 40 CFR 50.4(e).

⁷ 75 FR 35520 (June 22, 2010).

⁸ 40 CFR 50.17.

⁹ See 75 FR 71033 (November 22, 2010); 76 FR 72097 (November 22, 2011).

¹⁰ Arizona Department of Environmental Quality's Globe Highway monitor registered four violations of the Pb NAAQS in 2011; however, at the time of designation the data had not been quality assured and certified. Consequently, the EPA could not rely on those violations as a basis for a nonattainment designation.

¹¹ 79 FR 52205 (September 3, 2014).

¹² ADEQ's "SIP Revision: Hayden Lead Nonattainment Area" (adopted on March 3, 2017), 18, describes "October 2019" as the attainment date for the area. Accordingly, in approving this SIP revision, 83 FR 56734 (November 14, 2018), the EPA established October 3, 2019 as the applicable attainment date for this area.

¹³ For an exact description of the Hayden Pb NAA, refer to 40 CFR 81.303.

¹⁴ 78 FR 47191 (August 5, 2013).

¹⁵ For exact descriptions of the Hayden and Miami SO₂ NAAs, refer to 40 CFR 81.303.

attainment date based on the area's air quality as of the attainment date.

A determination of whether an area's air quality meets applicable standards is generally based upon the most recent three years of complete, quality-assured data gathered at established state and local air monitoring stations (SLAMS) in a nonattainment area and entered into the EPA's Air Quality System (AQS) database.¹⁶ Data from ambient air monitors operated by state and local agencies in compliance with the EPA monitoring requirements must be submitted to AQS.¹⁷ Monitoring agencies annually certify that these data are accurate to the best of their knowledge.¹⁸ All data are reviewed to determine the area's air quality status in accordance with 40 CFR part 50, Appendix R (for Pb) and Appendix T (for SO₂).

We note that when determining the attainment status of SO₂ nonattainment areas, in addition to ambient monitoring data, the EPA may also consider air quality dispersion modeling and/or a demonstration that the control strategy in the SIP has been fully implemented.¹⁹ With regard to the use of monitoring data for such determinations, the EPA's 2014 SO₂ Guidance specifically notes that "[i]f the EPA determines that the air quality monitors located in the affected area are located in the area of maximum concentration, the EPA may be able to use the data from these monitors to make the determination of attainment without the use of air quality modeling data."²⁰ This language might be read to suggest that the EPA must always assess whether the air quality monitors in the affected area are located in the area of maximum concentration prior to using monitoring data to determine an SO₂ NAA's attainment status. However, this language was intended to refer to a situation where the EPA is considering making a determination that the area has attained the NAAQS based on a finding that all of the monitoring sites within the affected area had an attaining design value for the relevant period. As described in section II.C of this notice, in this instance, the monitoring sites in the Hayden and Miami SO₂ NAAs did not have attaining design values for the relevant period. Consequently, even if the monitoring sites are not located in the area of maximum concentration, any

monitors that would be located in the area of maximum concentration could not record concentrations lower than those recorded at the existing monitors at the Hayden and Miami sites. Accordingly, since the Hayden and Miami monitors are violating the NAAQS, it is not necessary to consider whether the monitors are located in the area of maximum concentration in order to determine that the Hayden and Miami SO₂ NAAs did not attain the 2010 SO₂ NAAQS by the October 4, 2018 attainment date. However, in any future assessment of whether these areas have attained the NAAQS, the EPA may assess whether the monitors are located in the area of maximum concentration and may also consider modeling and/or control implementation information, as appropriate.

1. Interpretation of the 2008 Pb Standard

Under EPA regulations in 40 CFR 50.16 and in accordance with 40 CFR part 50 Appendix R, the 2008 Pb standard is met when the design value is less than or equal to 0.15 µg/m³ at each eligible monitoring site within the area. The Pb design value at each eligible monitoring site is the maximum valid 3-month arithmetic mean Pb concentration calculated over three years. The 3-month mean Pb concentrations are rounded to the nearest hundredth µg/m³ for comparison to the NAAQS. Data completeness requirements for a given 3-month period are met if the average of the data capture rate of the three constituent monthly means is greater than or equal to 75 percent.²¹

2. Interpretation of the 2010 SO₂ Standard

Under EPA regulations in 40 CFR 50.17 and in accordance with 40 CFR part 50 Appendix T, the 2010 1-hour annual SO₂ standard is met when the design value is less than or equal to 75 ppb. Design values are calculated by computing the three-year average of the annual 99th percentile daily maximum 1-hour average concentrations.²² When calculating 1-hour primary standard design values, the calculated design values are rounded to the nearest whole number or 1 ppb by convention. An SO₂ 1-hour primary standard design value is valid if it encompasses three consecutive calendar years of complete

data. A year is considered complete when all four quarters are complete, and a quarter is complete when at least 75 percent of the sampling days are complete. A sampling day is considered complete if 75 percent of the hourly concentration values are reported; this includes data affected by exceptional events that have been approved for exclusion by the Administrator.²³

B. Monitoring Network Considerations

Section 110(a)(2)(B)(i) of the CAA requires states to establish and operate air monitoring networks to compile data on ambient air quality for all criteria pollutants. The EPA's monitoring requirements are specified by regulation in 40 CFR part 58. These requirements are applicable to state, and where delegated, local air monitoring agencies that operate criteria pollutant monitors. The regulations in 40 CFR part 58 establish specific requirements for operating air quality surveillance networks to measure ambient concentrations of Pb, including requirements for measurement methods, network design, quality assurance procedures, and in the case of large urban areas, the minimum number of monitoring sites designated as SLAMS.

In sections 4.4 and 4.5 of Appendix D to 40 CFR part 58, the EPA specifies minimum monitoring requirements for Pb and SO₂, respectively, to operate at SLAMS. SLAMS produce data that are eligible for comparison with the NAAQS, and therefore, the monitor must be an approved federal reference method (FRM), federal equivalent method (FEM), or approved regional method (ARM) monitor.

The minimum number of required Pb SLAMS is described in section 4.5 of Appendix D to 40 CFR part 58. There must be at least one source-oriented SLAMS site located to measure the maximum Pb concentration in ambient air resulting from each non-airport Pb source that emits 0.50 or more tons per year (tpy) and from each airport that emits 1.0 tpy or more based on either the most recent National Emission Inventory (NEI) or other scientifically justifiable methods and data. According to the 2017 NEI, two non-airport sources in Gila County, Arizona exceeded the 0.50 tpy threshold and therefore required source-oriented Pb monitoring: The Asarco LLC Hayden Smelter and the Freeport-McMoRan Miami Smelter.²⁴

¹⁶ AQS is the EPA's repository of ambient air quality data.

¹⁷ 40 CFR 58.16.

¹⁸ 40 CFR 58.15.

¹⁹ EPA, Guidance for 1-Hour SO₂ Nonattainment Area SIP Submissions (April 2014) ("2014 SO₂ Guidance"), 49.

²⁰ *Id.*, 50.

²¹ See 40 CFR part 50, Appendix R sections 1(c), 4(c), and 5(b).

²² As defined in 40 CFR part 50, Appendix T section 1(c), daily maximum 1-hour values refer to the maximum 1-hour SO₂ concentration values measured from midnight to midnight that are used in the NAAQS computations.

²³ See 40 CFR part 50, Appendix T sections 1(c), 3(b), 4(c), and 5(a).

²⁴ Arizona facility-level Pb emissions data from the 2017 NEI may be accessed on the EPA NEI website at <https://www.epa.gov/air-emissions->

The minimum number of required SO₂ SLAMS is described in sections 4.4.2 and 4.4.3 of Appendix D to 40 CFR part 58. According to section 4.4.2, the minimum number of required SO₂ monitoring sites is determined by the population weighted emissions index for each state's core based statistical area. Section 4.4.3 describes additional monitors that may be required by an EPA regional administrator.

Under 40 CFR 58.10, states are required to submit annual network plans (ANP) for ambient air monitoring networks for approval by the EPA. Within the Hayden Pb, Hayden SO₂, and Miami SO₂ NAAs, ADEQ is responsible for assuring that each area meets air quality monitoring requirements. ADEQ submits annual monitoring network plans to the EPA that describe the various monitoring sites operated by ADEQ.²⁵ Each ANP discusses the status of the air monitoring network as required under 40 CFR 58.10 and addresses the operation and maintenance of the air monitoring network in the previous year. The EPA regularly reviews these ANPs for compliance with the applicable reporting requirements in 40 CFR part 58.²⁶

The EPA also conducts regular "technical systems audits" (TSAs) during which we review and inspect ambient air monitoring programs to assess compliance with applicable regulations concerning the collection, analysis, validation, and reporting of ambient air quality data.²⁷ In our 2018 TSA of ADEQ, we concluded that ADEQ's ambient air monitoring network meets or exceeds the requirements for the minimum number of SLAMS for all criteria pollutants, including for Pb in the Hayden NAA and for SO₂ in the Hayden and Miami NAAs.²⁸

1. Hayden Pb Monitoring Network

ADEQ operated two Pb SLAMS during the November 2015–December 2018 data period within the Hayden Pb NAA: Globe Highway (AQS ID 04–007–

inventories/2017-national-emissions-inventory-nei-data and are included in our docket via an Excel spreadsheet.

²⁵ See, e.g., "State of Arizona Air Monitoring Network Plan for the Year 2019." Copies of Arizona's ANPs for 2016–2019 are included in the docket.

²⁶ See, e.g., letter dated November 8, 2019, from Gwen Yoshimura, Manager, EPA Region IX, Air Quality Analysis Office, to Daniel Czecholinski, Acting Director, Air Quality Division, ADEQ. Copies of EPA letters responding to Arizona's ANPs for 2016–2019 are included in the docket.

²⁷ See 40 CFR part 58, appendix A, section 2.5.

²⁸ See letter dated April 25, 2019, from Elizabeth Adams, Director, Air Division, EPA Region IX, to Timothy Franquist, Director, Air Quality Division, ADEQ.

1002) and Hillcrest (AQS ID 04–025–8104). The Globe Highway site is located along State Route 77 in Winkelman. The Hillcrest site, which began monitoring on January 1, 2016, is located at 123 S. Hillcrest Avenue in Hayden.²⁹ The primary and secondary monitors at each Pb monitoring site are FEM monitors.

Based on our review of ADEQ's ANPs for the years 2016–2019³⁰ and the 2018 TSA of ADEQ's monitoring program, we propose to find that the monitoring network in the Hayden Pb NAA is adequate for the purpose of collecting ambient Pb concentration data for use in determining whether the Hayden Pb NAA attained the 2008 Pb NAAQS by the October 3, 2019 attainment date.

2. Hayden SO₂ and Miami SO₂ Monitoring Networks

During the 2015–2017 data period, ADEQ operated one SO₂ SLAMS in the Hayden SO₂ NAA: Hayden Old Jail (AQS ID 04–007–1001); and three SO₂ SLAMS in the Miami SO₂ NAA: Miami Ridgeline (AQS ID 04–007–0009); Miami Jones Ranch (AQS ID 04–007–0011); and Miami Townsite (AQS ID 04–007–0012). The Hayden Old Jail site is located on Canyon Drive and Kennecott Avenue in Hayden. The three SO₂ SLAMS in the Miami SO₂ NAA are located in Miami. The Miami Ridgeline site is located on 4030 Linden Street;³¹ the Miami Jones Ranch site is located on Cherry Flats Road; and the Miami Townsite site is located on Sullivan Street and Davis Canyon Road. The primary monitors at each of these sites are FEM monitors.²¹

Based on our review of ADEQ's ANPs for the years 2016–2018³² and the 2018 TSA of ADEQ's monitoring program, we propose to find that the monitoring networks in the Hayden SO₂ and Miami SO₂ NAAs are adequate for the purpose of collecting ambient SO₂ concentration data for use in determining whether each nonattainment area attained the 2010 SO₂ NAAQS by the October 4, 2018 attainment date.

²⁹ Refer to Appendices C and D of the "State of Arizona Air Monitoring Network Plan For the Year 2019" (July 2019) for detailed descriptions and locations of each Pb monitor.

³⁰ ADEQ's ANPs for 2016–2019 address the operation and maintenance of their air monitoring network for 2015–2018.

³¹ The Miami Ridgeline site was closed on September 6, 2017, with EPA approval. Letter dated September 19, 2017, from Elizabeth Adams, Acting Director, Air Division, EPA Region IX, to Timothy S. Franquist, Director, Air Quality Division, ADEQ.

³² ADEQ's ANPs for 2016–2018 address the operation and maintenance of their air monitoring network for 2015–2017.

C. Data Considerations and Proposed Determination

Under 40 CFR 58.15, monitoring agencies must certify, on an annual basis, data collected at all SLAMS and at all FRM, FEM, and ARM special purpose monitor stations that meet EPA quality assurance requirements. In doing so, monitoring agencies must certify that the previous year of ambient concentration and quality assurance data are completely submitted to AQS and that the ambient concentration data are accurate to the best of their knowledge. ADEQ annually certifies that the data it submits to AQS are quality assured, including data collected by ADEQ at monitoring sites in the Hayden Pb NAA, Hayden SO₂ NAA, and Miami SO₂ NAA.³³

1. Pb Data Considerations

As noted in Section II.A of this notice, CAA section 179(c)(1) requires the EPA to determine whether a nonattainment area attained an applicable standard by the applicable attainment date, based on the area's air quality "as of the attainment date." For the Hayden Pb NAA, for reasons discussed in Section I.B.1 of this notice, the applicable attainment date is October 3, 2019, with respect to the 2008 Pb NAAQS. In accordance with Appendix R to 40 CFR part 50, compliance with the Pb NAAQS is determined based on data from 36 consecutive valid 3-month periods (*i.e.*, 38 months, or a 3-year calendar period and the preceding November and December). Considering the applicable attainment date of October 3, 2019, for the 2008 Pb NAAQS, we must review the data collected in the Hayden Pb NAA from November 1, 2015–December 31, 2018. The Pb data collected in the Hayden Pb NAA from November 1, 2015–December 31, 2018 have been certified by ADEQ.³⁴

We have also evaluated the completeness of these data in accordance with the requirements of 40 CFR part 50 Appendix R. As detailed in 40 CFR part 50 Appendix R section 4(c)(i), a 3-month mean Pb value is determined to be valid (*i.e.*, meets data completeness requirements) if the average of the data capture rate of the three constituent monthly means is greater than or equal to 75 percent. The data collected by ADEQ at the Globe Highway monitoring site meet this

³³ See, e.g., letter from Timothy S. Franquist, Director, Air Quality Division ADEQ, to Gwen Yoshimura, Manager, Air Quality Analysis Office, EPA Region IX, certifying calendar year 2018 ambient air quality data and quality assurance data, dated May 1, 2019. Copies of annual certification letters from 2016–2019 are included in the docket.

³⁴ *Id.*

completeness criterion for each 3-month period from November 2015–December 2018. The Hillcrest monitoring site began collecting data on January 1, 2016. Three full months of data are therefore not available for the 3-month periods from November 2015–January 2016 and December 2015–February 2016. The data collected by ADEQ at the

Hillcrest monitoring site meet the Pb completeness criterion for each of the 34 available 3-month periods from January 2016–December 2018.³⁵

2. Pb Data

The Pb design values at both SLAMS within the Hayden Pb NAA for the relevant 36 consecutive 3-month

periods beginning November 2015 through December 2018 are presented in Table 1 of this notice. Table 1 demonstrates that the Pb design values for the November 2015–December 2018 data period are greater than 0.15 $\mu\text{g}/\text{m}^3$ at the Globe Highway and Hillcrest monitoring sites.

TABLE 1—2016–2018 PB DESIGN VALUES FOR THE HAYDEN PB NONATTAINMENT AREA

| Site (AQS ID) | Highest 3-month rolling average | | | Pb design value ($\mu\text{g}/\text{m}^3$) |
|-----------------------------------|---------------------------------|------|------|--|
| | 2016 | 2017 | 2018 | |
| Globe Highway (04–007–1002) | 0.14 | 0.21 | 0.15 | 0.21 |
| Hillcrest (04–007–1003) | ^a 0.31 | 0.28 | 0.23 | 0.31 |

Notes:

^a Three full months of data are not available for the first two 3-month periods (*i.e.*, November 2015–January 2016 and December 2015–February 2016) at the Hillcrest Monitoring site. However, based on the “above NAAQS level” test described in 40 CFR part 58, Appendix R, Section 4(c)(ii)(A), the February 2016 3-month rolling average of 0.31 $\mu\text{g}/\text{m}^3$ is considered valid.

Source: EPA, Design Value Report, November 3, 2020.

The 2018 annual design value site (*i.e.*, the site with the highest design value based on November 2015–December 2018 data) is the Hillcrest site with a Pb design value of 0.31 $\mu\text{g}/\text{m}^3$. Because the Hillcrest monitoring site began operation on January 1, 2016, three full months of monitoring data are not available for the 3-month periods from November 2015–January 2016 and December 2015–February 2016. The EPA applied the “above NAAQS level” test described in 40 CFR 50 Appendix R, Section 4(c)(ii)(A) to determine if the 3-month rolling average ending February 2016 could be considered valid. The 3-month period passed the diagnostic test described therein. Therefore, the February 2016 3-month rolling average of 0.31 $\mu\text{g}/\text{m}^3$ is considered valid.

For the area to attain the 2008 Pb NAAQS by October 3, 2019, the Pb design value reflecting data from November 2015–December 2018 at each eligible monitoring site must be equal to or less than 0.15 $\mu\text{g}/\text{m}^3$. As shown in Table 1, the 2018 design values at both sites in the Hayden Pb NAA are greater than 0.15 $\mu\text{g}/\text{m}^3$. Therefore, based on quality-assured and certified data for November 2015–December 2018, we are proposing to determine that the Hayden

Pb NAA failed to attain the 2008 Pb standard by the October 3, 2019 attainment date.

3. SO₂ Data Considerations

For the Miami and Hayden SO₂ NAAs, for reasons discussed in section I.B.2 of this notice, the applicable attainment date is October 4, 2018. In accordance with Appendix T to 40 CFR part 50, determinations of SO₂ NAAQS compliance are based on three consecutive calendar years of data. To determine the air quality as of the attainment date in each nonattainment area, we must review the data collected during the three calendar years immediately preceding the attainment date for the Hayden and Miami SO₂ NAAs, or January 1, 2015–December 31, 2017.

The SO₂ data for the Hayden and Miami SO₂ NAAs from January 1, 2015–December 31, 2017, have been certified by ADEQ. We have also evaluated the completeness of these data in accordance with the requirements of 40 CFR part 50, Appendix T. The data collected by ADEQ meet the quarterly completeness criterion for all 12 quarters in the three calendar years preceding the attainment date at the Hayden Old Jail and Miami Jones Ranch

SO₂ monitoring sites. The data collected by ADEQ in the three calendar years preceding the attainment date meet the quarterly completeness criteria for only 11 out of 12 quarters at the Miami Townsite SO₂ monitor and 10 out of 12 quarters at the Miami Ridgeline SO₂ monitor. The Miami Townsite SO₂ monitor collected only three quarters of complete data in 2016 because a portion of the data collected in the 1st quarter of 2016 (January 2016–March 2016) was invalidated for not meeting quality assurance requirements. In 2017, the Miami Ridgeline monitor did not meet completeness criteria for the 2nd quarter (April 2017–June 2017) because a portion of data was not collected due to a collection error and machine malfunction, nor for the 4th quarter (October 2017–December 2017) because the site shut down on September 26, 2017.³⁶

4. SO₂ Data

The 1-hour SO₂ design values at each monitoring site within the Hayden and Miami SO₂ NAAs for the 2015–2017 period are presented in Table 2. Table 2 demonstrates that the 1-hour SO₂ design values for the 2015–2017 period are greater than 75 ppb at each eligible monitoring site.

³⁵ See footnote a to Table 1 of this document for a discussion of how we considered the data in these periods after initiation of the Hillcrest monitoring site.

³⁶ See the March 22, 2021 AQS Raw Data Report for SO₂ monitors in the Hayden and Miami SO₂ NAAs showing hourly data from the Miami

Townsite and Miami Ridgeline monitors throughout 2016 and 2017.

TABLE 2—2015–2017 1-HOUR DESIGN VALUES FOR THE HAYDEN AND MIAMI SO₂ NONATTAINMENT AREAS

| Site (AQS ID) | Annual 99th percentile daily maximum 1-hour average | | | 1-hour design value (ppb) | Design value valid? |
|---------------------------------------|--|------------------|-----------------|---------------------------------|---------------------------|
| | 2015 | 2016 | 2017 | | |
| Hayden Old Jail (04–007–1001) | 246 | 359 | 280 | 295 | Yes. |
| Miami Ridgeline (04–007–0009) | 171 | 120 | ^a 99 | 130 | No. |
| Miami Townsite (04–007–0012) | 231 | ^b 110 | 135 | 159 | Yes. |
| Miami Jones Ranch (04–007–0011) | 242 | 150 | 270 | 221 | Yes. |

Notes:

^a The Miami Ridgeline monitor failed to meet completeness criteria for the 2nd quarter of 2017 (April 2017–June 2017) and for the 4th quarter of 2017 (October 2017–December 2017).

^b The Miami Townsite monitor had only three quarters of complete data in 2016 because a portion of the data collected in the 1st quarter of 2016 was invalidated for not meeting quality assurance requirements.

Source: EPA, Design Value Report, November 30, 2020.

The data in Table 2 demonstrate that one site in the Hayden SO₂ NAA and two sites in the Miami SO₂ NAA failed to attain the 2010 1-hour SO₂ NAAQS by the applicable attainment date of October 4, 2018, while a third site in the Miami NAA, the Ridgeline monitor, did not have a valid design value for this period. Though the annual 99th percentile daily maximum 1-hour average at the Miami Townsite monitor did not meet applicable completeness criteria for all three years in the 2015–2017 data period, the 3-year design value for Miami Townsite was deemed valid due to meeting the criteria in 40 CFR part 50 Appendix T, section 3(c)(i), which requires that “at least 75 percent of the days in each quarter of each of three consecutive years have at least one reported hourly value, and the design value calculated according to the procedures specified in section 5 is above the level of the primary 1-hour standard.” The 3-year design value for Miami Ridgeline is not considered valid because the site did not meet the conditions in 40 CFR part 50 Appendix T, section 3(c)(i), (ii), or (iii) to allow for incomplete design values to be considered valid.

The annual design value site in each NAA is the site with the highest design value based on 2015–2017 data. In the Hayden SO₂ NAA, the annual design value site is the Hayden Old Jail site with a 1-hour SO₂ design value of 295 ppb. In the Miami SO₂ NAA, the annual design value site is the Miami Jones Ranch site with a 1-hour SO₂ design value of 221 ppb.

For an area to attain the 2010 SO₂ NAAQS by the October 4, 2018 attainment date, the design value based upon monitored air quality data from 2015–2017 at each eligible monitoring site must be equal to or less than 75 ppb for the 1-hour standard. Table 2 shows that the design values at each monitoring site in the Hayden and Miami SO₂ NAAs exceed 75 ppb.

Therefore, based on quality-assured and certified data for the 2015–2017 data period, we are proposing to determine that both the Hayden SO₂ NAA and Miami SO₂ NAA failed to attain the 2010 1-hour SO₂ standard by the October 4, 2018 attainment date.

D. Consequences for Pb and SO₂ Nonattainment Areas Failing To Attain Standards by Attainment Dates

The consequences for Pb and SO₂ nonattainment areas for failing to attain the standards by the applicable attainment date are set forth in CAA section 179(d). Under section 179(d), a state must submit a SIP revision for the area meeting the requirements of CAA sections 110 and 172, the latter of which requires, among other elements, a demonstration of attainment and reasonable further progress and contingency measures. In addition, under CAA section 179(d)(2), the SIP revision must include such additional measures as the EPA may reasonably prescribe, including all measures that can be feasibly implemented in the area in light of technological achievability, costs, and any non-air quality and other air quality-related health and environmental impacts. In this case, the dominant source of Pb and SO₂ emissions in the Hayden Pb and SO₂ NAAs is the Asarco Hayden Smelter, and the dominant source of SO₂ emissions in the Miami SO₂ NAA is the Freeport-McMoRan Miami Smelter. Due to the unique nature of these two facilities, which are the only two batch-process primary copper smelters in the country, we do not have adequate information to propose specific additional controls at this time. However, we are seeking comment on what additional measures could be feasibly implemented at these facilities in light of technological achievability, costs, and any non-air quality and other air quality-related health and environmental impacts. We also expect

that information concerning such potential additional control measures would be collected by ADEQ as part of its development of SIP revisions to address the requirements that would be triggered by a final finding of failure to attain for these areas.

The state is required to submit the SIP revision within one year after the EPA publishes a final action in the **Federal Register** determining that the nonattainment area failed to attain the applicable Pb or SO₂ standard. We note that on November 10, 2020, the EPA published an action partially disapproving the 2010 SO₂ attainment plan for the Hayden nonattainment area.³⁷ Although a final finding of failure to attain will not eliminate the state’s obligation to address the disapproved elements of its prior plan submittal, the EPA anticipates that Arizona’s submission of a new, approvable attainment plan in response to this finding would also satisfy these obligations.

In addition to triggering requirements for a new SIP submittal, a final determination that a nonattainment area failed to attain the NAAQS by the attainment date would trigger the implementation of contingency measures adopted under 172(c)(9).

Under CAA sections 179(d)(3) and 172(a)(2), the new attainment date for each nonattainment area is the date by which attainment can be achieved as expeditiously as practicable, but no later than five years after the EPA publishes a final action in the **Federal Register** determining that the nonattainment area failed to attain the applicable Pb or SO₂ standard.³⁸

³⁷ 85 FR 71547.

³⁸ Pursuant to CAA sections 172(a)(2)(D) and 192(a), the attainment date extension provision under section 172(a)(2)(A) does not apply to the Pb or SO₂ NAAQS.

III. Proposed Action and Request for Public Comment

Under CAA section 179(c)(1), the EPA proposes to determine that the Hayden Pb NAA failed to attain the 2008 Pb standard by the applicable attainment date of October 3, 2019. Under CAA section 179(c)(1), the EPA also proposes to determine that the Hayden SO₂ NAA and the Miami SO₂ NAA failed to attain the 2010 1-hour SO₂ standard by the applicable attainment date of October 4, 2018. If finalized as proposed, the State of Arizona would be required under CAA section 179(d) to submit revisions to the SIP for the Hayden Pb NAA, Hayden SO₂ NAA, and Miami SO₂ NAA. The required SIP revision for each area must, among other elements, demonstrate expeditious attainment of the standards within the time period prescribed by CAA section 179(d). If finalized as proposed, the SIP revisions required under CAA section 179(d) would be due for submittal to the EPA no later than one year after the publication date of the final action.

The EPA is soliciting public comments on the issues discussed in this notice. We will accept comments from the public on this proposal for the next 30 days. We will consider these comments before taking final action.

IV. Statutory and Executive Order Reviews

Additional information about these statutes and Executive Orders can be found at <http://www2.epa.gov/laws-regulations/laws-and-executive-orders>.

A. Executive Order 12866: Regulatory Planning and Review, and Executive Order 13563: Improving Regulation and Regulatory Review

This action is not a significant regulatory action and therefore was not submitted to the Office of Management and Budget (OMB) for review.

B. Paperwork Reduction Act (PRA)

This action does not impose an information collection burden under the provisions of the PRA because it does not contain any information collection activities.

C. Regulatory Flexibility Act (RFA)

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA. This action will not impose any requirements on small entities. This proposed action, if finalized, would require the state to adopt and submit SIP revisions to satisfy CAA requirements and would not itself directly regulate any small entities.

D. Unfunded Mandates Reform Act (UMRA)

This action does not contain any unfunded mandate of \$100 million or more, as described in UMRA (2 U.S.C. 1531–1538) and does not significantly or uniquely affect small governments. This action itself imposes no enforceable duty on any state, local, or tribal governments, or the private sector. This action proposes to determine that the Hayden Pb NAA and the Hayden and Miami SO₂ NAAs failed to attain the NAAQS by the applicable attainment dates. If finalized, this determination would trigger existing statutory timeframes for the State to submit SIP revisions. Such a determination in and of itself does not impose any federal intergovernmental mandate.

E. Executive Order 13132: Federalism

This action does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government.

F. Executive Order 13175, Consultation and Coordination With Indian Tribal Governments

This action does not have tribal implications as specified in Executive Order 13175. The proposed finding of failure to attain the Pb and SO₂ NAAQS does not apply to tribal areas, and the proposed rule would not impose a burden on Indian reservation lands or other areas where the EPA or an Indian tribe has demonstrated that a tribe has jurisdiction within the Hayden Pb, Hayden SO₂ and Miami SO₂ nonattainment areas. Thus, this proposed rule does not have tribal implications and will not impose substantial direct costs on tribal governments or preempt tribal law as specified by Executive Order 13175. Nonetheless, the EPA has notified the San Carlos Apache Tribe of the San Carlos Reservation, which borders the eastern boundary of the Hayden Pb and Hayden SO₂ NAAs, of the proposed action.

G. Executive Order 13045, Protection of Children From Environmental Health Risks and Safety Risks

The EPA interprets Executive Order 13045 as applying only to those regulatory actions that concern environmental health or safety risks that the EPA has reason to believe may disproportionately affect children, per the definition of “covered regulatory

action” in section 2–202 of the Executive Order. This proposed action is not subject to Executive Order 13045 because the effect of this proposed action, if finalized, would be to trigger additional planning requirements under the CAA. This proposed action does not establish an environmental standard intended to mitigate health or safety risks.

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

This proposed rule is not subject to Executive Order 13211, because it is not a significant regulatory action under Executive Order 12866.

I. National Technology Transfer and Advancement Act (NTTAA)

This rulemaking does not involve technical standards.

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

The EPA believes that this action does not have disproportionately high and adverse human health or environmental effects on minority populations, low-income populations and/or indigenous peoples, as specified in Executive Order 12898 (59 FR 7629, February 16, 1994). The effect of this proposed action, if finalized, would be to trigger additional planning requirements under the CAA.

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Lead, Pollution, Sulfur dioxide.

Dated: April 23, 2021.

Deborah Jordan,

Acting Regional Administrator, Region IX.

[FR Doc. 2021–09215 Filed 5–7–21; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA–R09–OAR–2021–0176; FRL–10023–40–Region 9]

Approval of California Air Plan Revision, Imperial County Air Pollution Control District

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing to approve a revision to the Imperial County Air

UNITED STATES COURT OF APPEALS FOR THE NINTH CIRCUIT

Office of the Clerk

After Opening an Agency Case: An Introduction for Attorneys

You have received this guide because you filed a petition for review of a federal agency decision in the U.S. Court of Appeals for the Ninth Circuit. It provides information you need to know to represent a petitioner before the court.

This guide is not for immigration cases. If you opened an immigration case, please request our immigration packet.

Read this guide carefully. If you don't follow instructions, the court may dismiss your case.

This Guide Is Not Legal Advice

Court employees are legally required to remain neutral; that means they can't give you advice about how to win your case. However, if you have a question about procedure—for example, which forms to send to the court or when a form is due—this packet should provide the answer. If it doesn't, you may contact the clerk's office for more information.

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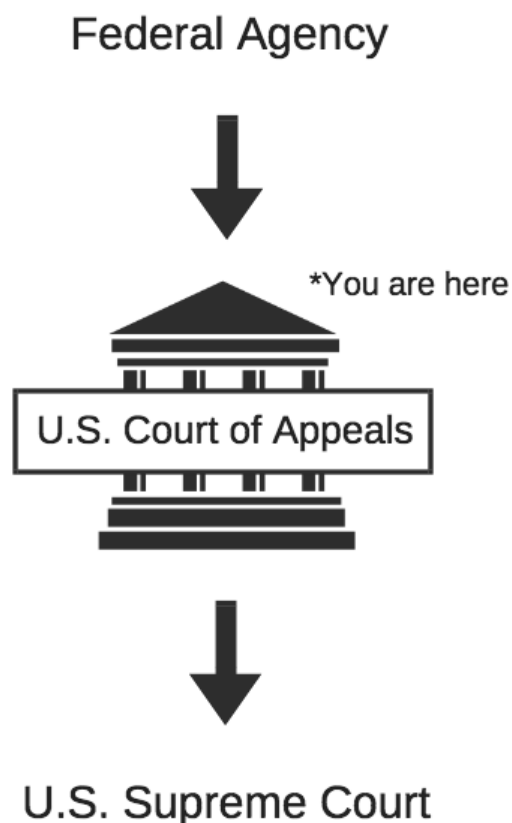
HOW AN AGENCY PETITION WORKS

The chart below shows the path of an agency petition from the agency to the highest court. Review these steps to make sure you understand where you are in the process.

Federal Agency. Cases come to the U.S. Court of Appeals from several different federal agencies. For example, a petition may arise from a final decision at the Federal Aviation Administration, National Labor Relations Board, Federal Trade Commission, or another agency. The important thing to understand is that you must have exhausted all of your options for appeal within the agency itself before filing a petition for review with the court of appeals. Many agency decisions must first be challenged in a U.S. District Court before you can come to the court of appeals.

U.S. Court of Appeals. When reviewing the federal agency decision in your case, the court of appeals (usually a panel of three judges) will carefully consider everything that has happened so far. The court will also read all the papers that you and opposing counsel file during your case. The court will look to see whether any agency, officer, or lower court has made a legal or factual mistake. You are not allowed to present new evidence or testimony on appeal.

U.S. Supreme Court. If you do not agree with the decision of the court of appeals, you can ask the United States Supreme Court to review your case. The Supreme Court chooses which cases it wants to hear. It reviews only a small number of cases each year.



Your case may not go through all of the stages shown above. For example, if the U.S. Court of Appeals resolves your case the way that you want, you won't need to file a petition in the U.S. Supreme Court.

PRACTICE RULES AND RESOURCES

This guide highlights rules that you **absolutely must follow** after filing a case. You are also responsible for reviewing and following the Federal Rules of Appellate Procedure (Fed. R. App. P.), the Ninth Circuit Rules (9th Cir. R.), and the general orders. The Federal Rules and the Ninth Circuit Rules are available at www.ca9.uscourts.gov/rules.

Practice Guides

In addition to the rules above, the following guides can support your practice before this court. You can find these and other resources on the court's website under *Legal Guides*:

- **Appellate Practice Guide.** A thorough manual of appellate practice prepared by the Appellate Lawyer Representatives.
- **Perfecting Your Appeal.** You can view this video for free at www.ca9.uscourts.gov or purchase it from the clerk's office for \$15.00.

Appellate Mentoring Program

The appellate mentoring program provides guidance to attorneys who are new to federal appellate practice or who would benefit from mentoring at the appellate level. Mentors are volunteers who have experience in immigration, habeas corpus, or appellate practice in general. If you are interested, a program coordinator will match you with a mentor, taking into account your needs and the mentor's particular strengths.

To learn more, email the court at mentoring@ca.9.uscourts.gov or go to www.ca9.uscourts.gov. On the website, select the "Attorneys" tab, look for "Appellate Mentoring Program," then choose "Information."

IMPORTANT RULES FOR ALL CASES

The rules in this section apply to all attorneys who file an agency petition in the court of appeals. You must understand and follow each one.

Ninth Circuit Bar Admission

To practice before the court of appeals, you must be admitted to the Bar of the Ninth Circuit. For instructions on how to apply, go to www.ca9.uscourts.gov. Select the "Attorneys" tab, look for "Attorney Admissions," then choose "Instructions."

Register for Electronic Filing

Unless the court gives you an exemption, you must use the Ninth Circuit's electronic filing system, called CM/ECF (Case Management/Electronic Case Files). To learn more and to register, go to www.ca9.uscourts.gov then click "Filing a Document – CM/ECF."

For additional guidance on filing documents and making payments electronically, read the Ninth Circuit Rules, especially Rule 25-5. For a complete list of the available types of filing events, see the [CM/ECF User Guide](#). To find the guide, go to "Filing a Document" as described just above, look for "Documentation & Training," then select "CM/ECF User Guide."

Complete a Mediation Questionnaire

After you file a petition for review of an agency decision, you must complete a mediation questionnaire. (9th Cir. R. 15-2.) The court uses the questionnaire to assess settlement potential.

You must file the questionnaire no later than **seven days** after the clerk's office docketed your petition. To find the form, go to www.ca9.uscourts.gov/forms.

If you want to request a conference with a mediator, call the Mediation Unit at (415) 355-7900, email ca09_mediation@ca9.uscourts.gov, or make a written request to the Chief Circuit Mediator. You may request conferences confidentially. For more information about the court's mediation program, go to www.ca9.uscourts.gov/mediation.

Meet Your Deadlines

Read all documents you get from the court. They will contain important instructions and deadlines for filing your court papers. **If you miss a deadline or fail to respond to the court as directed, the court may dismiss your case.**

Complete Your Forms Properly

Everything you send to the court must be clear and easy to read. If we can't read your papers, we may send them back to you. To make the clerk's job easier, please:

- ✓ Include your case number on all papers you send to the court or to opposing counsel.
- ✓ Number your pages and put them in order.
- ✓ If you are not filing electronically, use only one paper clip or a single staple to keep your documents organized. The clerk's office must scan your documents and extra binding makes that job difficult.

Deliver Papers the Right Way

When you deliver papers to the court or to opposing counsel, you must take certain steps to show you sent them to the right place on time.

- ✓ **Use the correct address.** Before you put anything in the mail, make sure the address is current and correct.
 - To find current addresses for the court, see “How to Contact the Court,” at the end of this guide. You may deliver a document to the court in person, but you must hand it to someone designated to receive documents in the clerk’s office.
 - To find the correct address for opposing counsel, see opposing counsel’s notice of appearance. Opposing counsel should have sent a copy of this notice to you after you filed your petition for review. The notice states opposing counsel’s name and address.
- ✓ **Attach a certificate of service.** You must attach a signed certificate of service to each document you send to the court or to opposing counsel unless all parties will be served via CM/ECF. *See* 9th Cir. R. 25-5(f).
- ✓ **Send a copy of all documents to opposing counsel.** When you file a document with the court, you must also send a copy (including any attachments) to opposing counsel unless they will be served via CM/ECF.

Keep Copies of Your Documents

Make copies of all documents you send to the court or to opposing counsel and keep all papers sent to you.

Pay the Filing Fee or Request a Waiver

The filing fee for your case is \$500.00. The fee is due when you file a petition for review. If you don’t pay the fee, you will receive a notice informing you that you have **21 days** to either pay the fee or request a waiver because the petitioner can’t afford to pay.

- **If the petitioner can afford the fee.** Submit your payment through the electronic filing system, or send a check or money order to the court. Make the check out to “Clerk, U.S. Courts.” Don’t forget to include the case number. Please note that after you pay the fee, we cannot refund it, no matter how the case turns out.

- **If the petitioner can't afford to pay.** You may ask the court to waive the fee by filing a motion to proceed in forma pauperis. See “Stage One: Opening Your Case,” below.

If you do not pay the fee or submit a waiver request by the deadline, the court will dismiss your case. (9th Cir. R. 42-1).

If You Move, Tell the Court

If your mailing address changes, you must immediately notify the court in writing. (9th Cir. R. 46-3.)

- **CM/ECF.** If you are registered for CM/ECF, update your information online at <https://pacer.psc.uscourts.gov/pscf/login.jsf>.
- **Paper filing.** If you are exempt from CM/ECF, file a change of address form with the court. You can find the form on the court's website at www.ca9.uscourts.gov/forms.

If you don't promptly change your address, including your email address, you could miss important court notices and deadlines. As noted above, missing a deadline may cause the court to dismiss your case.

HANDLING AN AGENCY CASE: THREE STAGES

This section will help you understand and manage the different parts of your case. We describe the basic documents you must file with the court and the timing of each step.

To begin, review the chart below. It introduces the three stages of a case.

1 Opening

- You file a petition for review.
- The court sends you a case schedule.
- You pay filing fees or get a waiver.
- You start compiling excerpts of record.
- You and opposing counsel may file motions.
- You respond to any court orders or motions from opposing counsel.

2 Briefing

- You submit an opening brief and excerpts of record.
- Opposing counsel submits an answering brief.
- You may submit a reply to opposing counsel's brief.

3 Decision

- The court decides your case.
- If you don't like the result, you decide whether to take further action.

Stage One: Opening a Case

By the time you receive this guide, you have already opened a case by filing a petition for review. In response, the clerk's office created the case record and gave you a case number and a briefing schedule.

If you haven't already paid the filing fee, you must do so now. See "Pay the Filing Fee or Request a Waiver," above.



The court may dismiss your case at any time. Even if you pay the fees and get a briefing schedule, the court may decide not to keep your case for a variety of legal reasons. If the court dismisses your case and you think the court was wrong, see "If You Don't Agree with a Court Decision," below.

Now is also the time to start compiling excerpts of record and to file any opening motions with the court. This section discusses each step in turn.

Preparing Excerpts of Record

The Ninth Circuit Court of Appeals does not require an appendix of record. Instead, you must file excerpts of record with your opening brief. (*See* 9th Cir. R. 17-1.) Your excerpts of record should be clear and well-organized. They should include all the documents that the court will need to understand and decide the issues in your petition.

Start putting together your excerpts of record now, before you write your opening brief. Then, as you write the brief, you can mark each record page that you reference so you can easily add the marked pages to your excerpts.

To learn the rules that govern what your excerpts should and should not include, and how to format them, read 9th Cir. R. 17-1 and 30-1. We also recommend that you read Chapter X of Appellate Practice Guide; see "Practice Guides," above.

Filing Opening Motions

Here are two common motions that you might make at the beginning of your case.

Motion to Proceed in Forma Pauperis

File this motion to ask the court to waive the petitioner's filing fee. To file your motion, you must complete and include [Form 4: Motion and Affidavit for Permission to Appeal in Forma Pauperis](#). The form is available on the court's website at www.ca9.uscourts.gov/forms. In addition, please follow the instructions in "How to Write and File Motions," below.

Motion for Injunction Pending Appeal

You can also file a motion for injunction pending appeal, sometimes called a motion for injunctive relief. This type of motion asks the court to order someone to do something or to stop doing something while your case is in progress. Be specific about what type of relief you are asking for, why the court should grant the relief, and the date by which you want the court to respond. In addition, be sure to follow the instructions in “How to Write and File Motions,” below.

Stage Two: Preparing and Filing Briefs

During the second stage of your case, you and opposing counsel will prepare and file written briefs. The required components of a brief are set out in Fed. R. App. P. 28 and 32, and 9th Cir. R. 28-2, 32-1, and 32-2. You should familiarize yourself with those rules and follow them carefully. In this section, we cover some key points of briefing practice.

Opening Brief

You will write and file the first brief in your case. In the opening brief, you must:

- state the facts of the case
- describe the relief you are seeking for the petitioner
- provide legal arguments to support your petition, and
- include citations to the excerpts of record.

Deadline for filing. You must file your opening brief and excerpts of record by the deadline stated in the briefing schedule.

If you do not file your brief on time or request an extension, the court will dismiss your case.

Tips for Writing Your Briefs

Keep these points in mind to write a better brief:

Avoid unnecessary words. Don't use 20 words to say something you can say in ten.

Think things through. Make logical arguments and back them up with legal rules.

Be respectful. You can disagree without being disagreeable. Focus on the strengths of your case, not the character of others.

Tell the truth. Don't misstate or exaggerate the facts or the law.

Proofread. Before you file, carefully check for misspellings, grammatical mistakes, and other errors.

Answering Brief

In response to your opening brief, opposing counsel may file an answering brief. If opposing counsel files an answer, they must send a copy to you.

The time scheduling order sets the deadline for the answering brief. Please note that the opening and answering brief due dates are not subject to the rules for additional time described in Fed. R. App. P. 26(c). In particular, if you file your opening brief early, it does not advance the due date for your opponent's answering brief. (*See* 9th Cir. R. 31-2.1.)

Reply Brief

You are invited to reply to opposing counsel's answering brief, but you are not required to do so. If you write a reply brief, do not simply restate the arguments in your opening brief. Use the reply brief to directly address the arguments in opposing counsel's answering brief.

You must file your reply brief within **21 days** of the date the government serves you with its answering brief.

How to File a Brief

Rules for filing briefs depend on whether or not you are required to file electronically.

CM/ECF. After we review your electronic submission, we will request paper copies of the brief that are identical to the electronic version. Do not submit paper copies until we direct you to do so. (See 9th Cir. R. 31-1.) You must also send **two copies** of the brief to any exempt or unregistered opposing counsel.

Exempt Filers Only. Please follow these steps:

- ✓ Send the original document and **six copies** of your brief to the court.
- ✓ Send **two copies** to opposing counsel.
- ✓ Attach a signed certificate of service to the original and to each copy for opposing counsel.
- ✓ Keep a copy for your records.

How to File Excerpts of Record

Submit your excerpts in PDF format using CM/ECF on the same day that you submit your brief. You must serve a paper copy of your excerpts on any unregistered party.

If the excerpts contain sealed materials, you must submit the sealed documents separately, along with a motion to file under seal. (9th Cir. R. 27-13(e).) You must serve sealed filings on all parties by mail or by email if they are registered for electronic filing, or if mutually agreed, rather than through CM/ECF.

After approving your electronic submission, the clerk will direct you to file individually bound paper copies of the excerpts of record with white covers.

To review the rules for filing excerpts, see 9th Cir. R. 30-1.

If You Need More Time to File

Usually, you may ask for one streamlined extension of up to 30 days from the brief's existing due date. (See 9th Cir. R. 31-2.2(a) for conditions.)

- **CM/ECF.** Electronic filers do not need to use a written motion; you may submit your request using the "File Streamlined Request to Extend Time to File Brief" event on CM/ECF on or before your brief's existing due date.
- **Paper filing.** Make your request by filing Form 13 on or before your brief's existing due date. You can find Form 13 on the court's website at www.ca9.uscourts.gov/forms.

If you need more than 30 days, or if the court has already given you a streamlined extension, you

must submit a written motion asking for more time. Your motion must show both diligence and substantial need. You must file your request at least **seven days** before your brief is due. The motion must meet the requirements of 9th Cir. R. 31-2.2(b). You may use Form 14 or write your own motion.

Usually, in response to an initial motion for more time, the court will adjust the schedule. (*See* Circuit Advisory Committee Note to Ninth Circuit Rule 31-2.2.) If you followed the correct procedures to ask for more time but the court doesn't respond by the date your brief is due, act as though the court has granted your request and take the time you asked for.

What Happens After You File

After you and opposing counsel have filed your briefs, a panel of three judges will evaluate the case. Sometimes the court decides a case before briefing is complete (9th Cir. R. 3-6); if that happens, we will let you know.

Judges conduct oral hearings in all cases unless all members of the panel agree that oral argument would not significantly aid the decision-making process. (Fed. R. App. P. 34(a)(2).)

Notification of oral hearings. We will notify you of the potential dates and location of an oral hearing approximately 14 weeks in advance. After you receive notice, you have **three calendar days** to inform the court of any conflicts. We distribute calendars about ten weeks before the hearing date.

Changes to oral hearing dates or location. The court will change the date or location of an oral hearing only if you show good cause for the change. If you wish to submit a request to continue a hearing, you must do so within 14 days of the hearing. Note, however, that the court grants such requests only if you can show exceptional circumstances. (9th Cir. R. 34-2.)

Oral arguments are live streamed to YouTube. Viewers can access them through the court's website. Go to www.ca9.uscourts.gov and choose "Live Video Streaming of Oral Arguments and Events."

Stage Three: The Court's Final Decision

After the judges decide your case, you will receive a memorandum disposition, opinion, or court order stating the result. If you are happy with the outcome, congratulations.

If you or opposing counsel didn't get the final results you want, either of you may take the case further. We explain your options in the section "After Your Case," below.

HOW TO WRITE AND FILE MOTIONS

This section provides general guidelines for writing and filing motions, including motions discussed elsewhere in this guide. The motion you want to make may have special rules—for example, a different page limit or deadline—so be sure that you also read its description, as noted below.

How to Write a Motion

If you want to file a motion with the court, follow these guidelines:

- ✓ Clearly state **what** you want the court to do.
- ✓ Give the legal reasons **why** the court should do what you are asking.
- ✓ Tell the court **when** you would like it done.
- ✓ Tell the court what the opposing party's position is. (Circuit Advisory Committee Note to Ninth Circuit Rule 27-1(5); 9th Cir. R. 31-2.2(b)(6).)
- ✓ If you are filing a response requesting affirmative relief, include your request in the caption. (Fed. R. App. P. 27(a)(3)(B)) and use the correct filing type.
- ✓ Don't write a motion that is more than 20 pages long unless you get permission from the court.

If you like, you may support your motion with an affidavit or declaration. (28 U.S.C. § 1746.)

Cases Scheduled for Argument or Submitted to a Panel

If your case has been (1) scheduled for oral argument, (2) argued, or (3) submitted to or decided by a panel, then the first page or cover of your motion must include the date of argument, submission, or decision and, if known, the names of the judges on the panel. (9th Cir. R. 25-4.)

How to File a Motion

To file your motion, you must follow the rules described in “Deliver Papers the Right Way,” at the beginning of this guide. Keep the following points in mind.

- **CM/ECF.** For electronic filing, follow instructions on CM/ECF. If there are any non-registered parties, you must send a hard copy to that party.
- **Paper filing.** Send the original document to the court and send a copy to opposing counsel. Remember to attach a signed certificate of service to the original and to any copies. Always keep a copy for your own records.

Note that you should not include a notice of motion or a proposed order with your motion. (Fed. R. App. P. 27(a)(2)(C)(ii) and (iii).)

What Happens After You File

The path of a motion depends on the details of your case. Certain motions—for example, a motion to dismiss the case—may automatically stay the briefing schedule. (*See* 9th Cir. R. 27-11.) The following steps are common after filing a motion.

Opposing counsel may respond. After you file a motion, opposing counsel has ten days to file a response. (*See* Fed. R. App. P. 27(a)(3)(A); Fed. R. App. P. 26(c).) In the response, opposing counsel will tell the court why it disagrees with the arguments in your motion.

You may reply to opposing counsel’s response. If opposing counsel responds, you may tell the court why you think opposing counsel’s view is incorrect. If you file a reply, don’t just repeat the arguments in your original motion. Instead, directly address the arguments in opposing counsel’s response. You usually have **seven days** to file a reply with the court, starting on the day you are served with their response. (*See* Fed. R. App. P. 27(a)(3)(B).) Normally, a reply may not be longer than ten pages.

The court decides your motion. After you and opposing counsel file all papers related to the motion, a panel of two or three judges will decide the issue.

How to Respond to a Motion from Opposing Counsel

Your opponent may also submit motions to the court. For example, opposing counsel may file a motion to dismiss the case or to ask the court to review the case more quickly than usual. If opposing counsel files a motion, you are allowed to respond with your arguments against it. Your response may not be longer than 20 pages.

Usually, you must file your response with the court no more than **ten days** from the day opposing counsel serves its motion on you.

Read More About These Motions

If you are making one of the following motions, read the section noted here:

Motion to proceed in forma pauperis in “Filing Opening Motions,” above.

Motion for injunctive relief pending appeal in “Filing Opening Motions,” above.

Motion for extension of time to file a brief in “If You Need More Time to File,” above.

Motion for reconsideration in “If You Don’t Agree With a Court Decision,” below.



Emergency Motions

An emergency motion asks the court to act within 21 days to avoid irreparable harm. Your emergency motion must meet the requirements of 9th Cir. R. 27-3.

If you need emergency relief, you must notify the Emergency Motions department in San Francisco before you file the motion. Call them at 415-355-8020 or e-mail emergency@ca9.uscourts.gov. Please note that a request for more time to file a document with the court or any other type of procedural relief does *not* qualify as an emergency motion. (See Circuit Court Advisory Committee Note to 27-3(3).)

Finally, if you absolutely must notify the court of an emergency outside of standard office hours, call 415-355-8000. This line is for true emergencies that cannot wait until the next business day—for example, imminent removal from the United States.

IF YOU DON'T AGREE WITH A COURT DECISION

If you think the court of appeals made an incorrect decision about important issues in your case, you can ask the court to take a second look. You may do this during your case—for example, if you disagree with the court's ruling on a motion. Or you may ask the court to review its final decision at the end of your case.

During Your Case: Motion for Reconsideration

If you disagree with a court order or ruling during your case, you may file a motion for reconsideration stating the reasons why you think the court's ruling was wrong. Your motion may not be longer than 15 pages.

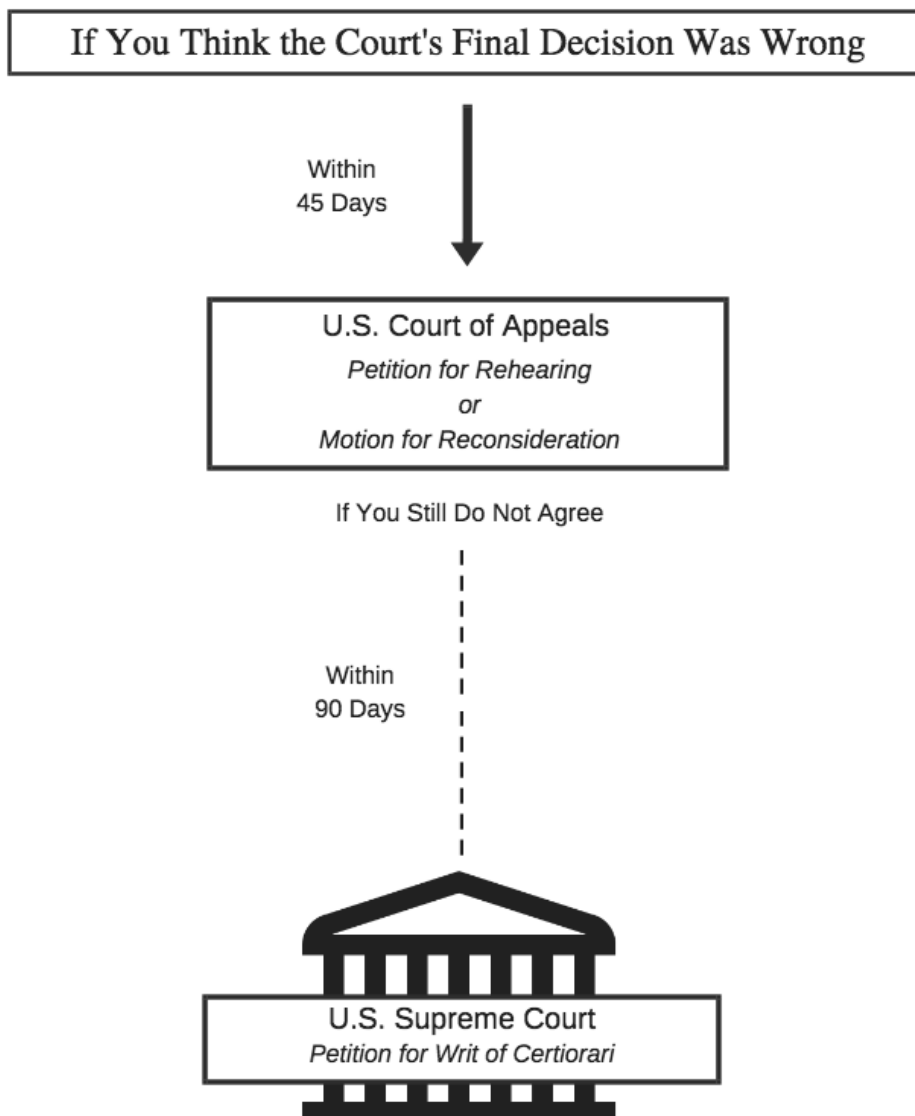
A motion for reconsideration of an order that does not end the case—that is, a non-dispositive order—is due **within 14 days** of the date stamped on the court order. (9th Cir. R. 27-10(a).) In addition to these rules, please follow the general guidelines in “How to Write and File Motions,” above.

After Your Case: Motions and Petitions

If you think the court's final decision in your case was wrong and you want to take further action, you have two options:

- File a motion for reconsideration or petition for rehearing in this court.
 - If the court decided your case in an order, then you would file a motion for reconsideration, as discussed just above. You have **45 days** (instead of 14 days) to file a motion for reconsideration of a court order that ends your case. (9th Cir. R. 27-10(a).)
 - If the court decided your case in a memorandum disposition or opinion, then you would file a petition for rehearing, discussed below.
- File a petition for writ of certiorari with the U.S. Supreme Court.

It is most common to do these things one after the other—that is, to file a petition for rehearing or motion for reconsideration in this court and then, if that doesn't succeed, petition the Supreme Court. It is technically possible to file both petitions at the same time but that is not the typical approach. Our discussion focuses on the common path.



Court of Appeals: Petition for Rehearing

To ask the court of appeals to review its final decision in your case, you must file a petition for rehearing. Before starting a petition, remember that you must have a legal reason for believing that this court's decision was incorrect; it is not enough to simply dislike the outcome. You will not be allowed to present any new facts or legal arguments in your petition for rehearing. Your document should focus on how you think the court overlooked existing arguments or misunderstood the facts of your case.

A petition for rehearing may not be longer than 15 pages. Your petition is due **within 45 days** of the date stamped on the court's opinion or memorandum disposition. To learn more about petitions for rehearing, see Fed. R. App. P. 40 and 40-1.

Most petitions for rehearing go to the same three judges who heard your original petition. It is also possible to file a petition for rehearing en banc. This type of petition asks 11 judges to review your case instead of three. The court grants petitions for rehearing en banc only in rare, exceptional cases. To learn more about petitions for rehearing en banc, see Fed. R. App. P. 35.

U.S. Supreme Court: Petition for Writ of Certiorari

If the court of appeals denies your petition for rehearing—or if it rehears your case and issues a new judgment you don't agree with—you have 90 days from the denial order or the new decision to petition the U.S. Supreme Court to hear your case. You do this by asking the Supreme Court to grant a writ of certiorari. You must file the petition with the Supreme Court directly. A writ of certiorari directs the appellate court to send the record of your case to the Supreme Court for review.

The Supreme Court is under no obligation to hear your case. It usually reviews only cases that have clear legal or national significance—a tiny fraction of the cases people ask it to hear each year. Learn the [Supreme Court's Rules](#) before starting a petition for writ of certiorari. (You can find the rules and more information about the Supreme Court at www.supremecourt.gov.)

HOW TO CONTACT THE COURT

Court Addresses: San Francisco Headquarters

| <i>Mailing Address for U.S. Postal Service</i> | <i>Mailing Address for Overnight Delivery (FedEx, UPS, etc.)</i> | <i>Street Address</i> |
|---|---|---|
| Office of the Clerk James R. Browning Courthouse U.S. Court of Appeals P.O. Box 193939 San Francisco, CA 94119-3939 | Office of the Clerk James R. Browning Courthouse U.S. Court of Appeals 95 Seventh Street San Francisco, CA 94103-1526 | 95 Seventh Street San Francisco, CA 94103 |

Court Addresses: Divisional Courthouses

| <i>Pasadena</i> | <i>Portland</i> | <i>Seattle</i> |
|---|---|---|
| Richard H. Chambers Courthouse 125 South Grand Avenue Pasadena, CA 91105 | The Pioneer Courthouse 700 SW 6th Ave, Ste 110 Portland, OR 97204 | William K. Nakamura Courthouse 1010 Fifth Avenue Seattle, WA 98104 |

Court Website

www.ca9.uscourts.gov

The court's website contains the court's rules, forms, and general orders, public phone directory, information about electronic filing, answers to frequently asked questions, directions to the courthouses, bar admission forms, opinions and memoranda, live streaming of oral arguments, links to practice manuals, an invitation to join our pro bono program, and more.