

# Source Screening Q&A

Date: 3/21/2019

## **1. What methodology did ADEQ use to perform the source screening analysis?**

Please refer to the supplemental document entitled “ADEQ 2021 Regional Haze State Implementation Plan Source Screening Methodology” for a more detailed explanation of the methodology utilized by ADEQ and the initial results from this examination.

## **2. What does being screened into the regional haze 4-factor analysis mean?**

Sources that have been identified through the screening process will need to undergo the statutory 4-factor analysis to determine if there are reasonable controls available for reducing visibility impairing pollution.<sup>1</sup> These 4-factors include:

- a. Cost of compliance for the control
- b. Time necessary to comply with the control
- c. Energy and non-air quality impacts of the control
- d. The remaining useful life of the source

Undergoing the 4-factor analysis does not necessarily mean a source will be required to install controls but it does mean ADEQ will need to evaluate controls for the source based on these 4-factors.

## **3. Why is ADEQ using 2014 emissions for source screening?**

ADEQ felt consistency was an important factor for the analytical work being performed. 2014 is the most recent, readily available emissions dataset for nonpoint sources. It also represents the base year for regional photochemical modeling of regional haze for the 2021 state implementation plan (SIP) planning effort. For these reasons, ADEQ felt that the 2014 emissions dataset was the most appropriate for the initial Regional Haze source screening effort.

## **4. How will ADEQ address sources whose 2014 emissions are not representative of current or future operations?**

For those sources identified in the initial screening that were experiencing abnormally low or high emissions in the year 2014, ADEQ will review the source’s emissions for the years 2013 – 2017 (2018 may also be reviewed, depending on availability) and may alter 2014 emissions to better represent the facility’s normal operations by using another year which more accurately

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<sup>1</sup> [42 U.S.C. §7491\(g\)\(1\)](#)

reflects “normal operation”. This includes sources that have recently installed new pollution control devices.

For those sources who have not yet finalized installation of required pollution controls and/or do not have a full calendar year of operation with new pollution controls, ADEQ will work with the source to update emissions to those that represent normal operation of the facility’s future state.

For any sources where emissions are altered to reflect operating conditions other than those in 2014, ADEQ commits to revising the source screening analysis to reflect the updated facility-wide, annual emissions.

**5. Can a facility be excluded from source screening or the 4-factor analysis if the source recently installed pollution controls through either Regional Haze requirements or some other program?**

ADEQ is continuing to evaluate the need for a source to undergo the 4-factor analysis if it has recently installed pollution controls. EPA’s 2016 Draft Regional Haze guidance states that:

*“A source subject to a federally enforceable emission limit that effectively requires it to apply the most effective control technology for a given PM species or precursor may be screened out of further analysis for that pollutant...The EPA also believes that in certain limited situations, in the second implementation period, it may be reasonable for a state to screen a source out of further consideration without determining that the emission control technology employed by a source is the most effective available. If an EGU has been modified (or newly constructed) with highly effective control technology within the 5 years prior to submission of the SIP, such as year-round operation of flue gas desulfurization (FGD) with an effectiveness of at least 90 percent or year-round operation of selective catalytic reduction with an effectiveness of at least 90 percent (in both cases calculating the effectiveness as the total for the system, including any bypassed flue gas), the state may choose to not bring the source forward from the screening step.”<sup>2</sup>*

ADEQ is currently in contact with EPA to clarify how this source screening exemption may be applied to certain Arizona sources who have recently undergone emission control installation or will do so in the future.

As ADEQ has a better understanding of the application of this exemption from EPA, we will update our source screening methodology to apply it to those appropriate Arizona sources and those sources will not be required to further undergo the 4-factor analysis.

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<sup>2</sup> EPA (2016), *Draft Guidance on Progress Tracking Metrics, Long-term Strategies, Reasonable Progress Goals and Other Requirements for Regional Haze State Implementation Plans for the Second Implementation Period*, pg. 77. [https://www.epa.gov/sites/production/files/2016-07/documents/draft\\_regional\\_haze\\_guidance\\_july\\_2016.pdf](https://www.epa.gov/sites/production/files/2016-07/documents/draft_regional_haze_guidance_july_2016.pdf)

**6. Will ADEQ utilize modeling to determine the visibility impact of sources on surrounding Class I areas?**

During the October 2018 initial stakeholder meeting, stakeholders expressed an interest in ADEQ considering visibility improvement as a focus of the control analysis. Currently, there are three visibility modeling approaches ADEQ is considering for the 2021 SIP planning effort:

- a. *On-the-books and on-the-way controls source apportionment modeling*– Performed by the Western Regional Air Partnership (WRAP) to assist States in understanding the impacts of source sectors (not individual sources) on Class I area visibility. This modeling is not a regulatory requirement for the SIP submittal.
- b. *Regional 2028 control strategy modeling* – Performed by WRAP to determine the cumulative impacts of all western States control strategies, following the 4 factor analysis. This modeling is required for the SIP submittal.
- c. *Source specific visibility modeling* – States are responsible for this modeling, if they choose to pursue it, and it can be utilized to inform source screening or the 4-factor analysis to determine the appropriateness of controls. This modeling is not a regulatory requirement for the SIP submittal.

The third modeling item listed above is optional modeling stakeholders have requested ADEQ include in its control measure analysis. In EPA's 2016 Regional Haze draft guidance, EPA left the option open for States to consider the visibility impact of a source when either: 1) screening sources for the 4-factor analysis or 2) evaluating control reasonableness during the 4-factor analysis (as an optional consideration to the statutory 4-factors). In order to determine which of these two options best suits Arizona's planning efforts and SIP submittal timeline, there are a number of factors ADEQ is currently considering.

As EPA no longer supports the use of the CALPUFF model for Regional Haze source specific control modeling and instead recommends the use of photochemical modeling, ADEQ is currently evaluating a number of potential options on how to approach this modeling:

- a. What modeling approach should be utilized (e.g. CAMx source apportionment, SCICHEM, zero-out, etc.)?
- b. Will this modeling be performed by ADEQ staff, individual sources, or a hired contractor?
- c. What version of the WRAP modeling platform is appropriate to leverage to balance model accuracy and timeliness for SIP submission?
- d. What is an appropriate threshold of visibility impact to consider significant for control implementation?
- e. What is the appropriate form to consider for the visibility threshold (e.g. average deciview impact and/or maximum deciview impact across Class I areas, total deciview or cost/deciview impact, etc.)?

These are some, but not all, of the questions ADEQ is currently considering. ADEQ cannot give a recommended approach for single source visibility impact modeling at this time; however, we invite stakeholder feedback on any or all of the considerations listed above and we will keep stakeholders informed as we develop our single source modeling approach.

**7. How will ADEQ address inconsistencies in how certain industries report fugitive source emissions?**

During review of 2014 emissions it became evident that the method by which some sources report fugitive level emissions can be wildly inconsistent. Given that fugitive emissions can represent the majority of emissions from major permitted source such as a mine, ADEQ has determined that it will be necessary to follow up with these sources to consistently and accurately account for fugitives. Currently, ADEQ is focused on further evaluating the consistency of the fugitive emissions estimates reported for major mines and cement plants in the State. ADEQ will develop a detailed approach to revising emission estimates in order to establish consistency between reported emissions from these industries, as needed.

Given that not all sources may have detailed information related to fugitive reporting for the year 2014, a more recent year emission estimate may be used. ADEQ can work with the source to determine the most accurate method for substituting these emissions or scaling them to represent 2014.

For any sources where fugitive emissions are altered, ADEQ commits to revising the source screening analysis to reflect the updated facility-wide, annual emissions.

**8. How can stakeholders become more involved moving forward?**

ADEQ currently envisions six major points of the SIP process where stakeholders can/will have key input, including:

- a. Emission inventory development/projection
- b. Source specific modeling parameters
- c. Source screening methodology
- d. Control measure analysis
- e. Rule/permit development
- f. SIP development/public process

This does not encompass all portions of the process where stakeholders may provide feedback; however, these are major aspects of the planning process where ADEQ anticipates that stakeholders may provide valuable feedback. Additionally, ADEQ does not expect feedback from all stakeholders during all portions of the process listed above; however, ADEQ invites feedback on these, and other, planning processes from any interested stakeholder.

Table 1 provides an updated tentative stakeholder feedback schedule to aid stakeholders in their timing for providing feedback. ADEQ will generally report on most of the items listed above during larger stakeholder meetings throughout 2019 and 2020. In addition, it will be necessary for ADEQ to coordinate with individual or groups of stakeholders as we continue through the planning process. As it becomes available, information related to the planning process is available on ADEQ's 2021 Regional Haze planning webpage at: <http://azdeq.gov/node/5377>. Finally, please feel free to contact ADEQ staff directly with regional haze specific questions:

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Table 1: Tentative stakeholder feedback timeline

Planning Task	Start Date	End Date	Tentative Stakeholder Feedback Deadline	Stakeholder Input
<b>2028 Emission Inventory Projections</b>	Sept 2018	Oct 2019	Q3 – 2019	Projected emissions, facility operational information
<b>2028 On-the-Books Air Quality Modeling</b>	Jan 2019	Nov 2019	Q3 – 2019	Facility specific modeling parameters
<b>Class I Area Progress &amp; Source Screening</b>	Oct 2018	Apr 2019	Q1 – 2019	Source Screening methodology feedback
<b>4-Factor Analysis</b>	Feb 2019	Dec 2019	Q3 – 2019	Technologically & economically feasible controls
<b>2028 Control Scenarios Modeling</b>	Sept 2019	Mar 2020	Q4 – 2019	Controlled modeling parameters
<b>Public Comment Period</b>	Mar 2021	May 2021	May 2021	General stakeholder feedback