



State of Oregon
Department of
Environmental
Quality

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Regional Haze Program

Responses to Facility Questions Raised During Four Factor Analysis Webinar 1/9/2020

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What Regional Haze precursors were used to calculate Q?

Q is calculated with PSEL values for PM₁₀, SO₂, and NO_x.

What data was used in selecting facilities for Four Factor Analysis letters?

Q/d analysis was conducted with 2017 PSEL values for PM₁₀, SO₂, and NO_x, and the selection of facilities were general Title V permitted facilities.

How was the Q/d list developed? What methods were used?

The goal of selecting sources for Four Factor Analysis was to capture 80% of total Q for major sources (Title V) sources. For this round of the Regional Haze Planning and Implementation Period, a Q/d greater than or equal to 5 captures 80% of the total Q from major sources for all Oregon CIAs, including sources not located in Oregon.

Which Facilities received Four Factor Analysis Letters and who are DEQ's permit writers for each facility?

Please see the document on the DEQ Regional Haze website entitled [Regional Haze Program – Oregon Facilities](#).

Where can I find presentations on the Regional Haze Program?

DEQ will provide presentations on the [Regional Haze website](#).

Why was PM₁₀ included in calculating Q?

Due to the data available from IMPROVE¹ monitors and in alignment with other WRAP states, DEQ chose to include sulfur dioxide (SO₂), nitrogen oxides (NO_x), and particulate matter (PM₁₀) in the Q/d analysis.

Please clarify expectations and the decision making process around FFA and controls.

Decisions on Four Factor Analyses will be made on a facility-by-facility basis, based on emissions, options for reducing emissions, and Class I areas impacted by each facility. Staff located at DEQ's Headquarters are leading the Oregon's current Regional Haze update, with support from regional staff.

¹ Interagency Monitoring of Protected Visual Environments: <http://vista.cira.colostate.edu/Improve/>

Please reach out to your DEQ permit writer if you have questions or would like to meet to discuss the Four Factor Analysis process.

Why did DEQ use PSELS instead of actual emissions for Q/d?

The August 2019 guidance² on the 2017 update to the Regional Haze Rule (40 CFR 51.308(f)) gives states discretion in how they approach the screening analysis to request four factor analysis from facilities.

Regional Haze requires a long-term plan for attaining natural conditions which involves establishing shorter-term reasonable progress goals. Monitoring data is used to determine if a Class I area is meeting shorter-term goals. Models are used to project into the future to see if growth, controls, and other factors will affect our planned reasonable progress.

Oregon is unique among states in its approach to permit facilities using Plant Site Emissions Limits. PSELS represent a reservation of a portion of ambient air. Monitoring data used to determine progress towards natural conditions do not take into account the “potential” emissions that could impact a Class I area. For this reason, DEQ determined that PSELS must be used for this planning exercise to ensure that the progress that we project in our modeling is real, that it represents potential emissions impacts, and that our Class I areas are maintaining reasonable progress.

Did DEQ include unassigned emissions in calculating Q?

DEQ used facilities’ PSELS for the Q/d analysis. Since a facility’s PSEL does not include their unassigned emissions, facilities should not include their unassigned emissions in their four factor analysis.

What if my facility has upgraded its equipment since 2017, and emissions and PSELS are now low enough that my Q/d is less than 5? Do I still need to conduct the requested Four Factor Analysis?

In the list of facilities on the Regional Haze webpage, the actual emissions listed were from the 2017 NEI.³ If changes have occurred since 2017 that would have a significant impact (such as bringing a Q/d below 5), we would encourage you to contact your permit writer to schedule a conversation about the potential need for an FFA.

Are there any emissions that may be excluded from the Four Factor Analysis?

What units at my facility can be excluded from an FFA?

Units that are covered under the definition of categorically insignificant activities (OAR 340-200-0020(7)) and aggregate insignificant emissions (OAR 340-200-0020(18)) may be excluded from the FFA. Please contact your permit writer to schedule a conversation if you have units that you feel should not be included in your FFA.

If I know that the cost of additional controls would be extreme, do I still need to conduct an FFA?

Specific determinations on controls are made on a case-by-case basis. Please contact your permit writer to schedule a conversation about the potential need for an FFA.

The controls I have installed are best available. Do I still need to conduct an FFA?

Specific determinations on controls are made on a case-by-case basis. Please contact your permit writer to schedule a conversation about the potential need for an FFA.

² <https://www.epa.gov/visibility/guidance-regional-haze-state-implementation-plans-second-implementation-period>

³ <https://www.epa.gov/air-emissions-inventories/2017-national-emissions-inventory-nei-data>

What dollar threshold will be considered reasonable for control costs?

A dollar threshold has not been determined at this time. Each facility is unique and there are many factors DEQ will consider when determining if additional controls at a facility will be required, including those addressed by responses to the Four Factor Analysis, Class I area modeling results, additional statutory guidance on the regional haze program, and previous regional haze control decisions.

For facilities that have conducted modeling for PSD permitting, or State NSR permitting that show no impact (< SIL) on NO_x NAAQS in the Class 1 areas (or the other pollutants included in the Regional Haze program), is that sufficient to be exempt from the four factor analysis, or is it not comparable?

Previous rounds of Regional Haze planning used air quality models to determine the visibility impacts from individual stationary sources. A FFA was required if a source exceeded specific visibility thresholds. The current round of regional haze does not include specific thresholds for individual facility and instead requires air quality authorities to review the collective impacts on Class I areas to determine reasonable progress. These changes in the Regional Haze program make it difficult to compare past visibility reviews to the current planning process.

Please include information that you feel is relevant from past visibility reviews for your current FFA and reach out to your DEQ permit writer with additional questions.

How does DEQ consider future large contributors?

DEQ's rules around NSR/PSD (OAR 340-224 and OAR 340-225) list the steps that new major sources or major modifications at an existing source will need to take to determine if additional controls will be required to reduce visibility impacts. The current Q/d analysis is a review of existing sources and is considering the collective impact from sources. In this round of Regional Haze, DEQ will be evaluating whether our current rules adequately protect the progress made towards Regional Haze in our Class I areas.

Since PM₁₀ is included in the four factor analysis, will we include fugitive sources such as storage piles, paved and unpaved roads in that analysis?

Please include fugitive emissions in your FFA. Please contact your permit writer to discuss whether a fugitive source should be included in the analysis.

For sources that have NSPS, NESHAP, BACT, or LAER limits that control the pollutants of concern, will we still require a four factor analysis for those emission units?

EPA's 2019 Regional Haze Guidance references the option for air quality authorities to consider existing control technology required by NSPS, NESHAP, BACT, and LAER (and existing control technology, in general).

NSPS and NESHAP regulations undergo periodic review by EPA to ensure the standards meet current best practices and control technology. The timing and frequency of reviews are established in the Clean Air Act. That being said, some NSPS and NESHAP regulations have not been reviewed within their required timeframes. Also, the timeframe between reviews spans many years.

BACT and LAER requirements are established at a specific point in time and may not have been reviewed for many years. In some instances more advanced controls or techniques may exist.

Through a Four Factor Analysis, a facility reviews their existing controls, uncontrolled sources, and the cost effectiveness of installing new controls. This is a case-by-case determination and requires specific knowledge about a facility. If you feel that the current controls at your facility are the best available and would like to discuss the need to conduct a Four Factor Analysis, please contact your permit writer to schedule a meeting with DEQ.

How will CAO program requirements intersect with the Regional Haze Program and the four factor Analysis?

Both programs may regulate emissions reductions through requiring controls. Each program has different criteria for determining the most appropriate controls for meeting program requirements.

Emissions units included in your Regional Haze Program FFA may also be included in your Cleaner Air Oregon risk assessment. These same emissions units may require controls to reduce risk based on risk assessment results, with the exception of gas combustion emissions units⁴.

Where overlap exists for affected emissions units in both programs, contact your permit writer in order to coordinate to discuss options and considerations.

Alternative formats

DEQ can provide documents in an alternate format or in a language other than English upon request. Call DEQ at 800-452-4011 or email deqinfo@deq.state.or.us.

⁴ Gas combustion emissions units are exempt from risk reduction requirements under OAR 340-245-0050(5).