

SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT

Proposed Certification that the San Joaquin Valley Unified Air Pollution Control District's Current Rules Address the Clean Air Act's Clean Fuels for Boilers Requirements for the 2015 8-hour Ozone Standard

May 18, 2021

Prepared by: Stephanie Ng, Air Quality Specialist

Reviewed by: Jessica Coria, Program Manager
Jonathan Klassen, Director of Air Quality Science and Planning

Background

The San Joaquin Valley Air Basin (Valley) is classified as an Extreme nonattainment area for the 2015 8-hour Ozone National Ambient Air Quality Standard (NAAQS, standard). Section 182(e)(3) of the federal Clean Air Act (CAA) directs extreme nonattainment areas to require: "that each new, modified, and existing electric utility and industrial and commercial boiler which emits more than 25 tons per year of oxides of nitrogen:

- (A) burn as its primary fuel natural gas, methanol, or ethanol (or comparable low polluting fuel), or,
- (B) use advanced technology (such as catalytic control technology or other comparably effective control methods) for reduction of emissions of nitrogen."

The San Joaquin Valley Air Pollution Control District (District) most recently addressed this requirement in the *2016 Ozone Plan for the 2008 8-hour Ozone Standard* (pages 3-14 through 3-15). The U.S. Environmental Protection Agency approved this plan on March 25, 2019 (84 FR 11,198). However, the District is required to make this demonstration for each ozone NAAQS, including the 2015 8-hour Ozone NAAQS.

Applicable District Rules

District Rules 4305, 4306, 4320, and 4352 address oxides of nitrogen (NO_x) emission limits for the boilers in this category that operate in the Valley. Most of the boilers under Rules 4305 and 4306 are fired on natural gas, and therefore satisfy the requirement of paragraph (A) above. Rule 4320 establishes more strict NO_x emission limits for units in this source category through the use of advanced technology, while also providing advanced emission reduction options, therefore satisfying the requirements of paragraphs (A) and (B) above. Liquid-fuel fired boilers are also addressed by Rules 4305, 4306, and 4320, and the applicable NO_x emission limits satisfy the requirement of paragraph (B) above. Solid-fuel fired boilers are addressed by Rule 4352 and the applicable NO_x emission limits satisfy the requirement of paragraph (B) above. Below is a brief description of each rule.

- **Rule 4305 (Boilers, Steam Generators, and Process Heaters – Phase 2)**
Rule 4305 (amended August 21, 2003) limits emissions of NO_x and carbon monoxide (CO) from boilers, steam generators, and process heaters. This rule applies to any gaseous fuel or liquid fuel fired boiler, steam generator, or process heater with a total rated heat input greater than 5 million British thermal units (Btu) per hour.
- **Rule 4306 (Boilers, Steam Generators, and Process Heaters – Phase 3) / Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr)**
Rule 4306 (amended December 17, 2020) limits emissions of NO_x and CO from boilers, steam generators, and process heaters. The rule applies to any gaseous fuel or liquid fuel fired boiler, steam generator, or process heater with a total rated heat input greater than 5 million Btu per hour. Rule 4306 applies to the same units listed under Rule 4305, but establishes requirements that are more stringent. The NO_x limits established in Rule 4306 must be met in order for a unit to legally operate in the Valley. Rule 4320 is a complementary rule to Rule 4306 and establishes stricter NO_x limits for units in this source category, which are generally technology advancing.
- **Rule 4352 (Solid Fuel Fired Boilers, Steam Generators and Process Heaters)**
Rule 4352 (amended December 15, 2011) limits emissions of NO_x and CO from solid fuel fired boilers, steam generators and process heaters. The rule applies to any boiler, steam generator or process heater fired on solid fuel. Heat may be supplied by liquid or gaseous fuels for start-ups, shutdowns, and during other flame stabilization periods, as deemed necessary by the owner/operator. Facilities use Selective Non-Catalytic Reduction (SNCR) and Selective Catalytic Reduction (SCR) control technology to reduce NO_x emissions from these units.

Given the information above, the requirements in Rules 4305, 4306, 4320, and 4352 continue to satisfy Section 182(e)(3) of the CAA, and due to this, there is no need to include additional control measures in the attainment plan for the federal 2015 ozone standard.

Conclusion and Certification

For Extreme nonattainment areas, the CAA requires the use of clean fuels or advanced control technologies for large electric utility, industrial, and commercial boilers. This requirement is fulfilled through the District Rules 4305, 4306, 4320, and 4352, which regulate NO_x emissions from existing, new or modified boilers. As such, the District is hereby certifying that the current SIP-approved Rules 4305, 4306, 4320, and 4352 satisfy the 2015 ozone standard requirements for the use of clean fuels or advanced control technology for new, modified and existing boilers.