



a member of **DAIKIN** group

SUBMITTED VIA EMAIL to jelwell@baaqmd.gov

November 1, 2021

Ms. Jennifer Elwell
Senior Air Quality Engineer
Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, CA 954105

Re: Proposed Amendments to Regulation 9 Rule 4 (Rule 9-4): Nitrogen Oxides from Fan Type Residential Central Furnaces

Dear Ms. Elwell,

Goodman Manufacturing Company, L.P. (“Goodman”) submits the following comments to the Bay Area Air Quality Management District (“BAAQMD”) in response to the proposed amendments to Rule 9-4: Nitrogen Oxides from Fan Type Residential Central Furnaces.

Goodman is a member of Daikin Group, one of the largest heating, ventilation, and air conditioning (“HVAC”) manufacturers in the world. Goodman is headquartered in Waller, Texas, and employs thousands of workers across the United States. The company manufactures residential and light commercial heating and cooling equipment, and its products are sold and installed by contractors in every American state, as well as in Canada.

Goodman Supports ULN Requirements

Goodman supports the adoption of Ultra Low NO_x (14 ng/J) emissions for furnaces as has been implemented in SCAQMD and SJVAPCD. Goodman supports the proposed implementation date of 7/1/2023, but no earlier. While there are ULN products sold into SCAQMD and SJVAPCD, there are specific product needs in the BAAQMD that necessitate the need for new products to be developed to satisfy those specific BAAQMD consumer needs.

Formula

In reviewing the draft amendments, we notice that there is an error in one of the equations in Section 401.3. The equation:

$$N = \frac{3.655 \times 10^{10} \times P}{20.9 \times Y \times Z \times E}$$

is incorrect. According to SCAQMD Rule 1111, the equation should be:

$$N = \frac{3.655 \times 10^{10} \times P}{(20.9 - Y) \times Z \times E}$$

The other equation in both Rule 9-4 and SCAQMD Rule 1111 is exactly the same.

$$N = \frac{4.566 \times 10^4 \times PU}{H \times C \times E}$$

Implementation Date

Goodman supports the use of a “sell-through” period for existing inventory after the new regulations take effect. As noted in the proposed amendments, the compliance date will reflect date of manufacture and as such, all products manufactured before the compliance date may continue to be sold in the BAAQMD.

Mobile Home Furnaces

Goodman questions the requirements for Mobile Home furnaces. The proposed amendments outline that Mobile Home furnaces are not affected by the 1/1/2029 requirement for 0 ng/J NO_x, but the rule is not clear as to what the NO_x requirements for Mobile Home furnaces are ahead of this. In addition, Goodman believe that better clarity into the definition of mobile home furnaces is needed to avoid unscrupulous installers who might use a standard 40 ng/J (or even high NO_x level) furnace in a mobile home application and claim exemption due to “mobile home” application.

Furnace Categories/Definitions

Goodman would also like to point out that the proposed amendments do not separate the different types of furnaces, which SCAQMD Rule 1111 and SJVAPCD Rule 4905 do. Goodman recommends BAAQMD to use the same definitions as currently used in SCAQMD Rule 1111.

The title change in this draft Rule 9-4 amendment includes both residential and commercial furnaces, however, the use of the word “commercial” is not used in any of the requirements. Goodman would like to see more clarity on what input ranges for commercial furnaces are included/excluded or to delete “commercial” entirely as there is no delineation in requirements.

Goodman would also like clarification that IF commercial furnaces are included in this regulation, when are they impacted by these amended regulations. Sections 301.1 and 301.2 refer to “stationary natural gas-fired residential fan type central furnaces”, whereas Section 301.2 notes “stationary gas-fired furnace”. Does this mean that commercial furnaces are not impacted by this rule until 1/1/2029? In addition, we believe that 301.2 should delete the second “natural” word in the first sentence.

Average NOx Emissions for Dual Fuel Systems

Goodman is concerned about references to average NOx emissions noted during the workshop when addressing dual fuel systems. SCAQMD does not allow for non-compliant 40ng/J furnaces in dual fuel applications (other than at high altitude) and BAAQMD should also prohibit the use of non-compliant 40ng/J NOx furnaces in dual fuel systems. Allowing these non-compliant furnaces will only make enforcement more difficult for BAAQMD and encourage violations.

Conclusion

Goodman appreciates the opportunity to provide these comments. If you have any questions regarding this submission, please do not hesitate to contact myself or Rusty Tharp, Senior Director of Regulatory Affairs (713/263-5906 or rusty.tharp@goodmanmfg.com).

Sincerely,

Nathan Walker
Senior Vice President
Tel: 713/263-5338
Email: Nathan.wlaker@goodmanmfg.com