Public Scoping Meeting for Potential Amendments to District Rule 4352 (Solid Fuel Fired Boilers, Steam Generators, and Process Heaters)

December 3, 2020

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Valley’s Air Quality Challenges

- Valley’s challenges in meeting federal air quality standards unmatched due to unique geography, meteorology, and topography
- Valley designated as “Extreme” non-attainment of the 8-hour Ozone NAAQS; “Serious” non-attainment of federal standards for fine particulate matter (PM2.5)
  - Substantial emission reductions needed to achieve federal standards – need to go beyond already strict control limits
- Combustion is a significant source of NOx emissions, primary precursor to ozone and PM2.5 formation
  - Comprehensive strategy in 2018 PM2.5 Plan includes commitment to reduce emissions from mobile sources and a number of stationary source categories, including solid fuel fired boilers, steam generators, & process heaters
Rule 4352 Overview

• Rule 4352 applies to any boiler, steam generator, or process heater fired on solid fuel
  – **Boilers** are external combustion equipment used to produce hot water or steam
  – **Process heaters** are combustion equipment that transfer heat from combustion gases to liquid or gas process streams
  – **Steam generators** are external combustion equipment that convert water to steam
Where do Solid Fuel Fired Boilers, Steam Generators, and Process Heaters Operate?

• Solid fuel fired boilers, steam generators, and process heaters are primarily used for power generation
• Units subject to Rule 4352 may be fired on a variety of solid fuels:
  – Municipal solid waste
  – Biomass
  – Coal
  – Petroleum coke
  – Tire-derived fuel
• Units currently operating in the Valley are fired on municipal solid waste or biomass

Image credit: Covanta Holding Corporation
NOx from Solid Fuel Fired Boilers, Process Heaters and Steam Generators in the Valley

All NOx Sources in the Valley (Mobile, Stationary, & Area Sources)

- Other NOx Sources: 98.3%
- Solid Fuel Fired Boilers: 1.7%

NOx Emissions from Stationary Sources

- Other Stationary Sources: 87.9%
- Solid Fuel Fired Boilers: 12.1%
Current Rule 4352 Requirements

• Rule 4352 establishes specific NOx and CO limits for categories of solid fuel fired boiler/steam generator/process heater units, with associated recordkeeping and monitoring
  – Municipal Solid Waste (165 ppmv NOx at 12% CO₂, 400 ppmv CO at 3% O₂)
  – Biomass (90 ppmv NOx at 3% O₂, 400 ppmv CO at 3% O₂)
  – All Others (65 ppmv NOx at 3% O₂, 400 ppmv CO at 3% O₂)
• All NOx and CO emission limits are based on a block 24-hour average
• Monitoring and recordkeeping requirements
Evaluation of Additional Emission Reduction Opportunities

• Per 2018 PM2.5 Plan, District pursuing the following potential opportunities to reduce NOx emissions for municipal waste-fired units to the extent that additional NOx controls are technologically and economically feasible:
  – Lowering NOx limit for units fired on Municipal Solid Waste from 165 ppmv @ 12% CO₂ to 110 ppmv @ 12% CO₂ over 24-hr period and 90 ppmv @ 12% CO₂ over annual period
  – Evaluating feasibility of even lower NOx limits

• District will also evaluate feasibility of lower NOx emission limits for other solid fuel fired units
Control Technologies Under Evaluation

- Selective Non-Catalytic Reduction
- Selective Catalytic Reduction
- Gore De-NOx Filter Bags
- Covanta LN™
Rule 4352 Evaluation Process

• District staff analyzing technological and economic feasibility of further controls, taking into account costs, cost-effectiveness, and considerations depending on specific type and purpose of unit
  – Costs and feasibility of most effective emission control technologies available
  – Review of requirements in other districts and regions

• Socioeconomic Impact Analysis will be conducted by third-party consultant to evaluate the regional economic impacts of proposed amendments

• Ongoing opportunities for public input
  – Public workshops will be scheduled in 2021
  – Regular updates will be provided at Citizens Advisory Committee (CAC), Environmental Justice Advisory Group (EJAG), and District Governing Board meetings
  – Identified as priority through AB 617 community engagement
Next Steps: Public Engagement Process for Rule 4352 Amendments

- Scoping Meeting
- Public Workshops
- Publication of Proposed Rule
- 2021 Governing Board Public Hearing

Public Participation and Comment Invited throughout Process
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