

DRAFT STAFF REPORT

VENTURA COUNTY

AIR POLLUTION CONTROL DISTRICT

**PROPOSED AMENDED RULE 71.3, TRANSFER OF REACTIVE ORGANIC
COMPOUND LIQUIDS, RULE 74.15, BOILERS, STEAM GENERATORS, AND
PROCESS HEATERS, AND RULE 74.23 STATIONARY GAS TURBINES ...**

July 9, 2024

EXECUTIVE SUMMARY

The Ventura County Air Pollution Control District (VCAPCD or District) is proposing revisions to District Rules 71.3, Transfer of Reactive Organic Liquids; 74.15, Boilers, Steam Generators and Process Heaters; and 74.23 Stationary Gas Turbines; per United States Environmental Protection Agency's (USEPA) comments received on November 16, 2023. The proposed revisions clarify existing requirements and methods of compliance demonstration for rule requirements.

BACKGROUND

Ventura County has been designated as a serious nonattainment area for the 2015 federal ambient ozone standard. The Federal Clean Air Act (CAA) requires nonattainment areas to develop and implement clean air plans to meet the National Ambient Air Quality Standards (NAAQS). The clean air plans of local air districts are incorporated into the State Implementation Plan (SIP) which is submitted to the USEPA for approval. The USEPA identified deficiencies in Rules 71.3, Transfer of Reactive Organic Compound Liquids; 74.15, Boilers, Steam Generators, and Process Heaters; and 74.23, Stationary Gas Turbines; in its review of the VCAPCD portion of the California SIP. The proposed amendments address the deficiencies related to the USEPA's startup, shutdown, and malfunction (SSM) requirements (80 FR 33840) and recordkeeping and reporting requirements (81 FR 89188).

Rule 71.3

Rule 71.3, Transfer of Reactive Organic Compound Liquids was last amended on May 11, 2021, and applies to equipment used to transfer Reactive Organic Compound (ROC) liquids with a Modified Reid Vapor Pressure (MRVP) greater than or equal to 0.5 psia. Emissions of ROCs are reduced through vapor control requirements for ROC containing liquid transfer equipment. The most recent amendment implemented Best Available Retrofit Control Technology (BARCT) as part of Assembly Bill 617 (AB 617) requirements and increased the required minimum vapor removal efficiency of transfer equipment handling ROC liquids from 90% to 95%.

Rule 74.15

Rule 74.15, Boilers, Steam Generators, and Process Heaters was last amended on February 14, 2023, and applies to boilers, steam generators, and process heaters with a rated heat input capacity equal to or greater than 5 million British thermal units (Btu) per hour. The main purpose of this rule is to limit emissions of oxides of nitrogen (NO_x), a precursor to ground-level ozone, by requiring low NO_x burners. The most recent amendment corrected deficiencies found by the USEPA during its review of the November 10, 2020 amendments.

Rule 74.23

Rule 74.23, Stationary Gas Turbines was last amended on November 12, 2019, reducing NO_x emission limits from gas turbines with a rated output equal to or greater than 0.3 megawatts (MW). The main purpose of this rule is to limit emissions of NO_x, a precursor to ground-level

ozone. The most recent amendment improved rule clarity and the ability to verify compliance with requirements in addition to implementing BARCT emission limits.

PROPOSED RULE REVISIONS

Rule 71.3

District staff propose updating methods of compliance demonstration with this rule by clarifying required test methods in Sections D and G. Staff are also proposing to require affected facilities to report all records annually. Lastly, language is included that clarifies which requirements do not apply when equipment is considered exempt in accordance with Rule 71.1, Crude Oil Production and Separation. These changes will improve district rule alignment with USEPA requirements.

Applicability (Section A)

No changes are proposed for this section.

Requirements – Loading Facilities (Section B)

District staff propose corrections to referenced sections in provision B.3.b.2 and B.4.b.2.

Requirements – ROC Liquid Delivery Vessels (Section C)

District staff propose corrections to referenced sections in provision C.1.c.

Operator Inspection and Repair Requirements (Section D)

District staff propose adding language to Subsection D.1 which clarifies acceptable reference test methods used to determine compliance with rule requirements. Additional language is proposed to be included which clarifies notification and repair requirements for operator inspections of the affected equipment.

Exemptions (Section E)

District staff propose adding sections referenced in E.2 to clarify applicability of rule requirements for equipment exempt from vapor recovery requirements of Rule 71.1.

Recordkeeping and Reporting Requirements (Section F)

District staff propose language to clarify which equipment is subject to recordkeeping requirements in Subsections F.1 and F.2. Additional language was added in Subsection F.4 to clarify record submission requirements.

Test Methods (Section G)

District staff propose updating the referenced test methods to EPA-approved versions, and their full titles have been included for clarification.

Violations (Section H)

No changes are proposed for this section.

Rule 74.15

Applicability (Section A)

No changes are proposed for this section.

Requirements (Section B)

District staff propose changes to Subsection B.3.c.2 to clarify that units which do not operate within a rolling 12-month period are exempt from tune-up requirements. Additionally, recordkeeping of test firings is proposed to be required for a rolling 24-month period and shall be available upon request by District staff.

Exemptions (Section C)

District staff propose substituting the term “provisions” with “NO_x limits” to better clarify the rule’s requirement under subsections C.2, C.4, and eliminating the exemption under Subsection C.3 which previously allowed emergency standby units to operate without an emissions limit under certain circumstances. This change improves District rule alignment with USEPA requirements. Subsection C.3 is proposed to be reserved rather than deleted to maintain the consistency in the rule’s numbering sequence and prevent the need to reissue existing permits with references to current rule requirements.

Recordkeeping and Reporting Requirements (Section D)

District staff propose the addition of Subsection D.6, which requires annual submission of records generated during each calendar year by no later than December 31 of the following calendar year. Additionally, the title of the section has been amended to reflect the added reporting requirements.

Test Methods (Section E)

District staff propose removal of language under Subsection E.4, eliminating exemptions from emissions testing during SSM events, requiring testing equipment “as found”. This change is to improve District rule alignment with USEPA requirements. Staff also propose adding the title to referenced ARB Test Method 100 Standard Test Method for Smoke Density in Flue Gases from Burning Distillate Fuels.

Violations (Section F)

No changes are proposed for this section.

Definitions (Section G)

No changes are proposed for this section.

Equipment Tuning Procedure for Forced Draft Fired Equipment (Attachment 1)

District staff propose updating the referenced test methods to the EPA-approved versions, and their full titles have been included for clarification.

Equipment Tuning Procedure for Natural Draft-Fired Equipment (Attachment 2)

No changes are proposed for this section.

Rule 74.23

Applicability (Section A)

No changes are proposed for this section.

Requirements (Section B)

District staff propose to remove obsolete provisions in Section B. Former Subsections B.1, B.2, B.6, and B.10 are sunset provisions, all of which ceased to be effective on and after January 1, 2024, and thus have been removed. Former Subsection B.7 has also been removed because the affected GE LM-2500 turbine located at P&G is now in compliance with the emission limits in Subsection B.1, formerly B.3. Similarly, former Subsection B.8 has been removed as the affected three (3) 4.0 MW Allison turbines on Platform Gail are no longer in operation with the decommissioning of the facility. Furthermore, clarifying language is also added.

Exemptions (Section C)

District staff propose changes which require the use of an emission control system to minimize emissions during start-up, planned shutdown, or unplanned load change, when feasible, and limit the NO_x emissions to 100 ppmv at 15% O₂ averaged over the thermal stabilization period. The added provisions address the USEPA's SSM requirements found in 80 FR 33840. District staff believe that the use of SCR to achieve the NO_x limit in Subsection B.1, formerly B.3, is infeasible during SSM events. Therefore, the NO_x emission limit during SSM events was set to 100 ppm at 15% O₂ based on the USEPA's AP-42 uncontrolled emissions factor of 0.32 lb/MMBtu for natural gas-fired turbines. District staff believe that the proposed changes have no impact on the subjected facilities.

Recordkeeping Requirements (Section D)

District staff propose adding Subsection D.3 to require the facility owner or operator requesting exemptions under C.2 or C.3 to maintain records of the actions taken during start-up to demonstrate compliance.

Reporting Requirements (Section E)

District staff propose adding Subsection E.2 which requires annual submission of records generated during each calendar year by December 31 of the following calendar year.

Test Methods (Section F)

District staff propose updating the referenced test methods to the EPA-approved versions, and their full titles have been included for clarification.

Violations (Section G)

No changes are proposed for this section.

Definitions (Section H)

No changes are proposed for this section.

COMPARISON OF PROPOSED RULE REQUIREMENTS WITH OTHER AIR POLLUTION CONTROL REQUIREMENTS

California Health & Safety Code Section 40727.2(a) requires districts to provide a written analysis of existing regulations prior to adopting, amending, or repealing a regulation. Section 40727.2(a) states:

“In complying with Section 40727, the district shall prepare a written analysis as required by this section. In the analysis, the district shall identify all existing federal air pollution control requirements, including, but not limited to, emission control standards constituting best available control technology for new or modified equipment, that apply to the same equipment or source type as the rule or regulation proposed for adoption or modification by the district. The analysis shall also identify any of that district's existing or proposed rules and regulations that apply to the same equipment or source type, and all air pollution control requirements and guidelines that apply to the same equipment or source type and of which the district has been informed pursuant to subdivision (b).”

A comparative analysis is presented in Appendix A, therefore the requirements of Health & Safety Code Section 40727.2(a) are satisfied.

IMPACT OF THE PROPOSED RULE REVISIONS

Emissions Impacts

There are no anticipated emission reductions associated with the proposed amendments to Rules 71.3, 74.15, and 74.23.

Cost-Effectiveness

California Health & Safety Code Section 40703 requires the APCD Board to consider and make public its findings relative to cost-effectiveness of Air Quality Management Plan (AQMP) control measures when adopting regulations. The proposed revisions to Rules 71.3, 74.15, and 74.23 are not related to any control measure. Therefore, a finding of cost-effectiveness is not required. The proposed changes are considered to be administrative in nature and as such have no cost impact on the subjected facilities.

Incremental Cost-Effectiveness Analysis

Pursuant to California Health and Safety Code Section 40920.6, incremental cost effectiveness calculations are required for rules implementing Best Available Control Technology (BACT) or is considered an “every feasible measure” to control criteria pollutants. This requirement does not apply to the proposed amendments to Rules 71.3, 74.15, and 74.23 since they do not implement BACT or “every feasible measure.”

Socio-Economic Impact

As addressed in California Health and Safety Code Section 40728.5(e), a socioeconomic analysis is not required for any rule or regulation that only adopts a requirement that is substantially similar to, or is required by, a state or federal statute, regulation, or applicable formal guidance document. This requirement does not apply to the proposed amendments to Rules 71.3, 74.15, and 74.23 since the amendments are required by federal statute.

ENVIRONMENTAL IMPACTS OF METHODS OF COMPLIANCE

Staff has determined that adoption of the proposed revisions to Rules 71.3, 74.15, and 74.23 are exempt from the requirements of the California Environmental Quality Act (CEQA) under Section 15061(b)(3) of the CEQA Guidelines because it can be seen with certainty that there is no possibility that these changes may have a significant effect on the environment. The proposed revisions to Rule 71.3, 74.15, and 74.23 are administrative in nature and no net emission increase will result from any of the proposed changes.

Appendix A - Rule Comparison

	VCAPCD Rule 71.3	40 CFR Part 60 Subpart OOOOb	EPA-453/B-16-001	VCAPCD Rule 74.15	EPA SSM Policy (80 FR 33840)	VCAPCD Rule 74.23	EPA GHG Reporting (81 FR 89188)	40 CFR Part 60 Subpart GG	40 CFR Part 60 Subpart KKKK
Applicability	ROC liquid transfer equipment when MRVP >=0.5 psia	Gas well liquid unloading equipment	Storage vessels with potential to emit ROC >= 6 TPY	Boilers, steam generators, and process heaters >= 5MMBtu/hr	Emissions during SSM of industrial equipment subject to RACT	Gas turbines with a rated output >= 0.3 MW	Facilities subject to 40 CFR Part 98	Natural gas turbines with a rated heat input >= 10MMBtu/hr constructed or modified before 2/18/05	Natural gas turbines with a rated heat input >= 10MMBtu/hr constructed or modified after 2/18/05
Requirements	Maintain leak free equipment with >95% vapor control during loading operations with bottom loaded vapor recovery	Maintain emission rate to less than 4 tpy or reduce ROC emissions by 95% through vapor control	Maintain emission rate to less than 4 tpy or reduce ROC emissions by 95% through vapor control	NOx limits for boilers and steam generators on natural gas: 9ppm NOx NOx limits for process heaters fueled with: Natural gas - 12ppmv NOx Landfill gas - 25ppm NOx Digester gas - 15 ppm NOx Liquid fuel - 40ppm NOx	Ensure enforceable emission limits during SSM	NOx limits for stationary gas turbines fueled with: Liquid fuel - 30 ppm NOx Natural gas - 2.5 ppm NOx Digester gas - 9 ppm NOx	Submit annual reports	STD = 0.0075*14.4/Y + F for electric utility stationary gas turbines w/ peak load > 100 MMBtu/hr STD = 0.0150*14.4/Y + F for all others STD is allowable NOx emission concentration in % by vol. at 15% O ₂ , Y is rated heat rate (kJ/Wh), F is NOx emission allowance (NOx % by vol.). See table in (a)(4) for equations for F	<= 50 MMBtu/hr - 42ppm NOx when firing NG >50 MMBtu/hr and <= 850 MMBtu/hr - 25 ppm NOx when firing NG >50 MMBtu/hr - 15 ppm NOx when firing NG <= 50 MMBtu/hr - 96 ppm NOx when firing alternative fuel >50 MMBtu/hr and <= 850 MMBtu/hr - 74 ppm NOx when firing alternative fuel >850 MM - 42 ppm NOx when firing alternative fuel
Reporting	Annually submit records generated pursuant to 71.3	Perform required notification, recordkeeping, and reporting required by § 60.5420	Annually report operations and compliance using Method 21	Annual submission of records generated	Reporting provisions must allow enforcement of emission limits during SSM	Annual submission of records generated	Submit annual reports generated pursuant to 40 CFR Part 98	Semiannually (Subpart A § 60.7) for continuous monitoring	Semiannually (Subpart A § 60.7) for continuous monitoring Annually if opting out of continuous monitoring
Monitoring	Quarterly inspection of loading activities using Method 21	Perform required notification, recordkeeping, and reporting required by § 60.5420	Method 21/Optical Gas Monitoring	Biennial source testing, or biannual tunings for low-use units	Monitoring provisions must allow enforcement of emission limits during SSM	In-stack continuous NOx monitoring, annual compliance	N/A	In-stack continuous NOx monitoring	In-stack continuous NOx monitoring
Recordkeeping	Maintain records of annual inspections, vapor pressure of tanks for 5 years	Perform required notification, recordkeeping, and reporting required by § 60.5420	5 years	Monthly reading of totalizing gas meter, records of tune-ups, source-tests, and permanent daily records of alternate fuel use	Recordkeeping provisions must allow enforcement of emission limits during SSM	Maintain continuous records for a period of 5 years	Maintain records for a period of 5 years	At least 2 years (Subpart A § 60.7) for continuous monitoring	At least 2 years (Subpart A § 60.7) for continuous monitoring