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Staff Supplement to CASE Report #2019-NR-MECH3-F

Date: 2017-10-25

Pages: 2

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Subject: Variable Exhaust Flow Control, 2019-NR-MECH3-F

DESCRIPTION OF PROPOSED REGULATORY CHANGES

CASE report #2019-NR-MECH3-F, titled Variable Exhaust Flow Control, proposes to make the following changes to the Standards:

- Added section 140.9(c)3 requiring exhaust systems greater than 10,000 CFM meet discharge requirements of ANSI Z9.5-2012 and one of the following:
    - 0.65 watts per cfm exhaust air power demand limit
    - Exhaust volume flow rate control based on wind speed and direction from a calibrated local anemometer
    - Exhaust volume flow rate control based on the measured contaminant concentration in the exhaust plenum from a calibrated contaminant sensor
- Added section NA7.16 which specifies the Acceptance Requirement for Code Compliance for volume flow rate controlled exhaust systems covered under sections 140.9(c)3
- Added ANSI Z9.5 definition to section 100.1

Staff agrees with the proposed changes to 140.9(c)3, NA7.16, and 100.1 and have incorporated substantively similar changes into the proposed Express Terms.

Staff does not agree with the proposed changes to 140.9(c)3B, and have instead proposed to make the following changes to 140.9(c)3B in the Express Terms:

- Staff removed the requirement for AMCA license seals on the exhaust fan and system components. The proposed language in the CASE report required:
    - AMCA 210 licensed seals for air performance of fan system components (fan nozzle, stack and wind band); and
    - AMCA 260 licensed seal for induced flow fan high plume dilution blowers.

Staff is proposing this alternative because the additional cost of AMCA licensed equipment was not considered in the cost effectiveness analysis of the CASE report. Additionally, market

availability data for AMCA licensed equipment has not been assessed and this additional requirement could make the proposed measures unfeasible.

STAFF ANALYSIS AND CONCLUSION

Staff has analyzed the submitted CASE report and reached the following conclusions for the measures included in the Express Terms:

- Based on the evidence presented in the CASE Report, the measures, as proposed, appear to be cost effective and the author appears to have appropriately followed the Energy Commission's Life Cycle Cost methodology.

- Measure costs premiums presented in the CASE Report appear reasonable and appropriate for the measure proposed.

- Measure energy savings presented in the CASE Report appear to have been appropriately modeled and appear credible.

Staff additionally find that the alternate proposal for Section 140.9(c)3B falls within the analysis of the CASE report, and is found to be feasible and cost effective based on the report's analysis of the CASE proposal for Section 140.9(c)3B, for the following reasons:

- The removal of the AMCA licensing requirements from the proposal will not add additional cost or reduce the feasibility of proposed measures.