

**SACRAMENTO METROPOLITAN  
AIR QUALITY MANAGEMENT DISTRICT**

For Agenda of **October 23, 2008**

**To:** Board of Directors  
Sacramento Metropolitan Air Quality Management District

**From:** Larry Greene  
Executive Director/Air Pollution Control Officer

**Subject:** Continued Public Hearing to Adopt a Resolution Approving Amendments to Rule 456, Aerospace Assembly and Component Coating Operations

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**Recommendations**

1. Conduct a Public Hearing;
  2. Determine that the amendments to Rule 456, Aerospace Assembly and Component Coating Operations are exempt from the California Environmental Quality Act (CEQA); and
  3. Adopt the attached resolution approving the amendments to Rule 456.
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**Executive Summary**

On September 25, 2008, the Board conducted a public hearing on proposed amendments to Rule 456, Aerospace Assembly and Component Coating Operations. Representatives from Aerojet, an aerospace company in Sacramento County, testified that the proposed amendments would cause an adverse economic impact to their business and limit Aerojet's ability to deliver solid fuel rocket motors for current and future contracts. Aerojet requested that the proposed rule amendments be revised to 1) retain an exemption of 200 gallons per year of materials not meeting the VOC standards, and 2) allow the continued use of enclosed gun cleaners, in lieu of meeting the solvent VOC limits, for the cleaning of application equipment used to apply adhesives and liner coatings to the inside of rocket motors.

The Board continued the public hearing until October 23, 2008 and directed Staff to work with Aerojet to resolve these issues and revise the proposed rule amendments as appropriate. Staff has requested and received further information from Aerojet, and held a meeting with Aerojet on October 6, 2008. Staff has made revisions to the rule to address Aerojet's concerns without relaxing the current standards or interfering with the federal requirement to implement Reasonably Available Control Technology for this source category, and Aerojet has stated that it supports the revised rule.

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## Attachments

The table below identifies the attachments to this memo.

Item	Attachment	Page Number
Board Resolution for Rule 456	A	6
Draft Rule 456	B	9
Aerojet Correspondence	C	25
September 2008 Board Package	D	50

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## Background

In the 2003 Triennial Report, the District committed to adopt more stringent solvent cleaning standards to satisfy state plan requirements for "all feasible measures." South Coast Air Quality Management District Rule 1171, Solvent Cleaning Operations, was identified as the most stringent feasible measure to reduce emissions from solvent cleaning. These requirements have also been adopted by the San Joaquin Valley Unified Air Pollution Control District. Amendments to Rule 456, Aerospace Assembly and Component Coating Operations, will fulfill the District's state plan commitment, and will achieve emission reductions that will help the District attain the federal 8-hour ozone standard.

Section 182(b)(2) of the federal Clean Air Act requires that District rules implement Reasonably Available Control Technology (RACT) for all major sources of VOCs as well as VOC sources that are covered by a Control Techniques Guideline (CTG) document issued by U.S. EPA. In December 1997, U.S. EPA issued a CTG for aerospace coating operations that established minimum requirements for RACT. The revised amendments to Rule 456 satisfy the RACT requirement.

At the September 25, 2008 public hearing, Staff proposed amendments to Rule 456. This rule limits VOC emissions from aerospace assembly and coating operations, which include coating removal (stripping), surface preparation and cleaning, and application equipment cleanup material. The proposed amendments were released for public comment on April 1, 2008, and included:

- Lowering the solvent VOC limits for the cleaning of spray guns used in coating operations from 200 g/l to 25 g/l;
- Adding a sunset date for the option of using an enclosed gun cleaner in lieu of complying with the 25 g/l VOC limit for the cleaning of spray guns used in coating operations;
- Revising the low usage exemption to lower the usage limit from 200 gallons to 55 gallons;
- Adding a definition of "electrostatic spray;"
- Revising the duration of records requirement from three to five years to be consistent with other District rules; and
- Updating the test methods to specify the most current test methods.

Representatives from Aerojet, an aerospace company in Sacramento County, submitted new comments three days before the hearing and provided new information in their hearing testimony indicating that the proposed amendments would cause an adverse economic impact to their business and limit Aerojet's ability to deliver solid fuel rocket motors for current and future contracts. Aerojet is one of only two manufacturers of solid rocket motors in the U.S., and the only one operating in California. Aerojet's representatives stated that current anticipated contracts to deliver solid rocket motors for the SM-1 and HAWK missile programs will require the use of a noncompliant adhesive material (known as FM47) in an amount that would exceed the proposed exemption level of 55 gallons per year. FM47 is required to be used as a liner adhesive under the military specifications for the SM-1 and HAWK rocket motors, and there are currently no qualified substitute materials. Aerojet estimates that restricting the usage of FM47 to 55 gallons per year would cause an economic loss of approximately \$100 million, including lost revenue and costs to requalify substitute adhesives, and would force the layoff of 150 employees.

Aerojet currently complies with the solvent cleaning requirements of Rule 456 by using enclosed gun cleaners to clean the equipment used to apply adhesives and liner material to the inside of the rocket motors. Aerojet's representatives stated that significant technical problems and costs would be incurred if the use of enclosed gun cleaners was no longer allowed as a compliance option for cleaning application equipment. Aerojet uses six different solvents in the cleaning of liner/adhesive application equipment, and the cost to requalify substitute solvents is approximately \$250,000 per solvent for a total cost of \$1.5 million. Aerojet stated that the search for suitable replacement solvents is further complicated because their policies prevent the use of certain solvent that pose risks to worker safety due to high flammability or toxicity. In particular, Aerojet's Fire Marshall testified that the use of acetone, an exempt compound with a high flammability and low flash point, would require extensive changes to buildings and ventilation systems.

Aerojet requested that the proposed rule amendments be revised to: 1) retain an exemption of 200 gallons per year for materials not meeting the VOC standards, and 2) allow the continued use of enclosed gun cleaners, in lieu of meeting the solvent VOC limits, for the cleaning of application equipment used to apply adhesives and liner coatings to the inside of rocket motors.

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### **Proposed Revisions to Rule Amendments**

Staff sent a letter to Aerojet on September 26, 2008, requesting additional information on the use of FM47 adhesive and the cleaning of application equipment for adhesives/liner materials. Aerojet responded to Staff's request in a letter dated October 3, 2008. (These letters are included in Attachment C.) Staff also met with Aerojet representatives on October 6, 2008.

After reviewing the information provided by Aerojet, Staff has revised the proposed amendments to Rule 456. Staff has revised the original proposal to:

- Modify the low usage exemption (Section 110) to:
  - allow the use of up to 200 gallons per year of rocket motor adhesive that does not meet the VOC limits specified in the rule, provided that the VOC content of the rocket motor adhesive does not exceed 890 g/l;
  - limit the usage of all other materials that do not meet the VOC limits specified in the rule to a total of 55 gallons per year; and
  - limit the usage of all materials, including rocket motor adhesives, that do not meet the VOC limits specified in the rule to a total of 200 gallons per year.
- Add an exemption (Section 114) that allows application equipment used in a rocket motor lining process to be cleaned in an enclosed gun cleaner instead of using solvent that meets the VOC content limits specified in the rule; and
- Add a definition (Section 245) of "rocket motor lining process" as the application of adhesive or any other material to the inside of the solid rocket motor casing to promote adhesion or to provide insulation from the propellant.

The proposed revisions meet the federal RACT requirements and do not relax current standards. The revised proposal will reduce the emission benefits of the proposed amendments by approximately 2 pounds per year of VOC.

The proposed revisions address Aerojet's concerns about the costs and downtime for requalifying replacement materials and the potential loss of revenue associated with the amendments to Rule 456, and will reduce the number of buildings and ventilation systems that may need to be modified to use acetone or other exempt solvents safely. At the meeting on October 6, 2008, Aerojet's representatives indicated that they would support the proposed revisions.

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## **Environmental Review and Compliance**

Staff finds that the proposed rule is exempt from the California Environmental Quality Act as an action by a regulatory agency for protection of the environment (Class 8 Categorical Exemption, Section 15308 State CEQA Guidelines) and because it can be seen with certainty that there is no possibility that the activity in question may have a significant adverse effect on the environment (Section 15061(b)(3), State CEQA Guidelines).

California Public Resources Code (Section 21159) requires an environmental analysis of the reasonably foreseeable methods of compliance. Compliance is expected to be achieved by the replacement of current cleaning solvents with compliant products. Compliant products may contain higher levels of exempt compounds, but these exempt compounds are generally less toxic than the VOC solvents they replace. Some replacement compounds may have greater flammability and lower flash points than currently used materials, but worker safety is sufficiently protected by state and federal Occupational Safety and Health Administration regulations. The proposed rule will not

increase emissions and will not cause any other significant adverse effects on the environment; therefore Staff has concluded that no environmental impacts will be caused by compliance with the proposed rules.

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### **Conclusion**

The proposed amendments will achieve VOC emission reductions that will help the District attain the federal 8-hour ozone standard, and will fulfill a state plan commitment to adopt more stringent solvent cleaning standards based on "all feasible measures." The proposed amendments will also satisfy federal RACT and other requirements that will allow EPA to approve it for inclusion in the SIP. Staff recommends that the Board determine that the proposed rule is exempt from CEQA and approve the attached resolution adopting the rule as proposed.

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Respectfully submitted,

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Larry Greene  
Executive Director/Air Pollution Control Officer

Approved as to form:

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Kathrine Pittard  
District Counsel

Attachments