



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION IX  
75 Hawthorne Street  
San Francisco, CA 94105

April 5, 1999

Ms. Elaine Chang  
Assistant Deputy Executive Officer  
Office of Planning, Rule Development and Area Sources  
South Coast Air Quality Management District  
21865 E. Copley Drive  
Diamond Bar, CA 91765-4182

Subject: Approval of Protocol for Determination of Particulate and Volatile Organic Compound Emissions From Restaurant Operations

Dear Ms. Chang:

South Coast Air Quality Management District's (SCAQMD) provided the following protocol to EPA Region 9 for review and approval.

Protocol for Determination of Particulate and Volatile Organic Compound Emissions From Restaurant Operations (November 14, 1997)

A review of the protocol was conducted by EPA Region 9 and Rima Dishakjian of the Emission Measurement Center. This protocol uses test methods similar to EPA methods 5 and 25a to determine particulate and VOC emissions from restaurant operations. EPA has no technical comments and approves the SCAQMD protocol for use in SIP approved rules in California. The attachment provides minor administrative observations made while reviewing the protocol.

EPA welcomes the opportunity to review SCAQMD's protocol for determining restaurant emissions. If you have any questions, please do not hesitate to have your staff contact Stanley Tong at (415) 744-1191.

Sincerely,

A handwritten signature in black ink, appearing to read "Duane James".

Duane James  
Chief, Enforcement Office

cc: Bill Lamason, EMC  
Rima Dishakjian, EMC  
John Higuchi, SCAQMD  
Cindy Castronovo, CARB  
Barbara Cook, CARB

## Administrative Observations on Restaurant Testing Protocol

1. Appendix A: Field Calculation Reference Sheet to determine the number of traverse points:  
1a. The duct diameters chart is missing the numerical values for the upper legend of the graph showing the upstream distance (Distance A).

1b. The lower legend should read Duct Diameters "Downstream" rather than "Upstream" from flow disturbance (Distance B).

1c. Table 1-2 Location of Traverse Points in Circular Stacks, the last value for 24 traverse points on a diameter should read 98.9 rather than 96.9

2. Appendix D: VOC Method; Page 7 section 3.2.5

The protocol indicates to assemble the impinger train similarly to Rule 1138 particulate train. Rule 1138 does not provide details on a train.

District staff indicated the wording should state: Rule 1138 protocol particulate train.

3. Appendix D: VOC Method, Page 13 section 4.1

The publication date of T0-11 should be corrected to June 1988.

4. Page 1, last paragraph on page.

The Executive Officer has authority to modify the testing guidelines following an equivalency determination.

District staff indicated the Executive Officer authority is to allow modifications to the cooking parameters discussed in this appendix, such as fat content of the meat. We recommend that this clarifying comment be added to the paragraph.

5. Page 15 section 6.4 top of page

The paragraph states to store cooked meat samples that cannot be immediately tested for moisture content at -5 °F. The temperature appears to be lower than normally necessary.

District staff indicated this should be -5 °C.



# South Coast Air Quality Management District

21865 E. Copley Drive, Diamond Bar, CA 91765-4182  
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May 18, 1999

Duane James  
Chief, Enforcement Office  
United States Environmental Protection Agency, Region IX  
75 Hawthorne Street  
San Francisco, CA 94105

**REFERENCE:** Protocol for Determination of Particulate and Volatile Organic  
Compound Emissions From Restaurant Operations

Dear Mr. *Duane* James:

Thank you for your review of the "Protocol for Determination of Particulate and Volatile Organic Compound Emissions From Restaurant Operations (November 14, 1997)". With the exception of Item #5, all the comments accompanying your April 5, 1999 letter have been incorporated by District staff into the test protocol. From discussions with staff at the University of Riverside, the temperature of the frozen meat patties should be maintained at -5°F rather than -5°C. The amended protocol is enclosed with this letter.

Should you have any questions regarding this matter, please don't hesitate to call Glenn Kasai at (909) 396-2271.

Sincerely,

John Higuchi  
Manager, Monitoring & Source Test Engineering

enclosure:

JEH:GK/gk

cc: Elaine Chang (Planning) w/o enclosure  
Laki Tisopulos (Planning) w/o enclosure  
P. Perryman (SSC) w/o enclosure  
G. Quinn (SSC) w/o enclosure  
J. Whynot (SSC) w/o enclosure

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