AGENDA # 31

South Coast
AIR QUALITY MANAGEMENT DISTRICT
21865 E. Copley Drive, Diamond Bar, CA 91765-4182 (909) 396-2000

September 9, 1994

South Coast Air Quality
Management District Board

Public Hearing to Amend
Appendix A - Protocol for Oxides of Sulfur to Rule 2011 - Requirements for Monitoring, Reporting and Recordkeeping for Oxides of Sulfur Emissions and Appendix A - Protocol for Oxides of Nitrogen to Rule 2012 - Requirements for Monitoring, Reporting and Recordkeeping for Oxides of Nitrogen Emissions

The proposed amendments to Appendix A of Rules 2011 and 2012 will affect the Missing Data Procedures and Bias Test sections of the RECLAIM Oxides of Sulfur (SO_X) and Oxides of Nitrogen (NO_X) Protocols for Monitoring, Reporting, and Record Keeping.

The proposed amendment to the Missing Data Procedures will allow facilities to generate Continuous Emission Monitoring System (CEMS) missing data for NOx and SOx concentration, fuel gas total sulfur content and flow rate from historical data based upon promulgated EPA procedures. This will make it possible for facilities affected both by RECLAIM and EPA's Title IV (Acid Rain) Program to use a common procedure if certain CEMS testing requirements are met. The proposed amendment to the Bias Test will incorporate the option for a facility to use a bias adjustment factor, should the CEMS not pass the Bias Test. This will allow facilities to conduct only one set of tests rather than at least two, and use bias adjustment factors to correct for under reporting of emissions if the Bias Test requirement of RECLAIM is not satisfied.

The proposed amendments do not significantly affect air quality or emissions limitations. They provide another option, already approved by EPA, for meeting performance requirements for CEMS and estimating emissions when CEMS data is missing. Neither proposed amendment will affect any of the findings previously found pursuant to Health and Safety Code Section 39616 when these rules were originally adopted.

The proposed Missing Data Procedures amendment will further increase the flexibility in the use of available computer programs for Acid Rain, and facilities affected both by RECLAIM and Acid Rain may elect to use a common software package if certain CEMS testing requirements are met. The proposed Bias Test amendment benefits both the District and the affected facilities, and is consistent with EPA's Acid Rain program.

Staff has reviewed the proposed amendments and has determined with certainty that the proposed amendments are exempt from the requirements of the California Environmental Quality Act (CEQA). The proposed amendments will not increase emissions nor will they have significant adverse impact on the environment. Therefore, a Notice of Exemption has been prepared pursuant to state CEQA Guidelines Section 15002 (k)(1) [District CEQA Guidelines Section 1.2 (k)(1)]. The proposed amendments are also exempt from CEQA pursuant to state CEQA Guidelines Section 15061 (b) (3) - Review for Exemption [District CEQA Guidelines Section 5.1 (b)(3)], and state CEQA Guidelines Section 15308 - Class 8 - Actions by Regulatory Agencies for the Protection of the Environment [District Guidelines Section 19.12]. The Notice of Exemption will be filed with the county clerks immediately following the adoption of the proposed amendments. Both of these amendments should result in savings for many of the major source RECLAIM facilities.

THEREFORE IT IS RECOMMENDED THAT YOUR BOARD

--Certify the Notice of Exemption in accordance with the attached resolution.

--Amend the Missing Data Procedures and the Bias Test sections of Appendix A of RECLAIM Rules 2011 and 2012.

Respectfully,

James M. Lents, Ph.D.
Executive Officer

CSL:JEH:DS:ao

RESOLUTION NO. 94 -

A Resolution of the Governing Board of the South Coast Air Quality Management District certifying that Proposed Amended Appendix A - Protocol for Oxides of Sulfur to Rule 2011 - Requirements for Monitoring, Reporting and Recordkeeping for Oxides of Sulfur Emissions and Proposed Amended Appendix A - Protocol for Oxides of Nitrogen to Rule 2012 - Requirements for Monitoring, Reporting and Recordkeeping for Oxides of Nitrogen Emissions, are exempt from the California Environmental Quality Act (CEQA);

A Resolution of the Governing Board of the South Coast Air Quality Management District amending Appendix A - Protocol for Oxides of Sulfur to Rule 2011 - Requirements for Monitoring, Reporting and Recordkeeping for Oxides of Sulfur Emissions and Proposed Amended Appendix A - Protocol for Oxides of Nitrogen to Rule 2012 - Requirements for Monitoring, Reporting and Recordkeeping for Oxides of Nitrogen Emissions.

WHEREAS, the Governing Board of the South Coast Air Quality Management District obtains its authority to adopt, amend, or repeal rules and regulations from Sections 39002, 39616, 40000, 40001, 40440, 40440.1, 40441, 40463, 40702, and 40725 through 40728.5 of the California Health and Safety Code; and

WHEREAS, the Governing Board of the South Coast Air Quality Management District has determined that a need exists to amend Appendix A - Protocol for Oxides of Sulfur to Rule 2011 - Requirements for Monitoring, Reporting and Recordkeeping for Oxides of Sulfur Emissions and Appendix A - Protocol for Oxides of Nitrogen to Rule 2012 - Requirements for Monitoring, Reporting and Recordkeeping for Oxides of Nitrogen Emissions; and

WHEREAS, the Governing Board of the South Coast Air Quality Management District has determined that Appendix A - Protocol for Oxides of Sulfur to Rule 2011 - Requirements for Monitoring, Reporting and Recordkeeping for Oxides of Sulfur Emissions and Appendix A - Protocol for Oxides of Nitrogen to Rule 2012 - Requirements for Monitoring, Reporting and Recordkeeping for Oxides of Nitrogen Emissions, as proposed to be amended, is written or displayed so that its meaning can be easily understood by the persons directly affected by it; and

WHEREAS, the Governing Board of the South Coast Air Quality Management District has determined that is in harmony with, and not in conflict with or contradictory to, existing statutes, court decisions, or state or federal regulations; and

WHEREAS, a public hearing has been properly noticed in accordance with the provisions of Health and Safety Code Section 40725; and

WHEREAS, the Governing Board of the South Coast Air Quality Management District in amending these rules, references the following statutes which the District hereby implements, interprets, or makes specific: Title 42 U.S.C. Sections 7410, 7502, 7503, 7511a; Health and Safety Code Sections 39002, 39616, 40001 (rules to achieve ambient air quality standards), 40440(a) (rules to carry out the Air Quality Management Plan), 40440(c) (cost effectiveness), and 40702; and

WHEREAS, the Proposed Amended Appendix A - Protocol for Oxides of Sulfur to Rule 2011 - Requirements for Monitoring, Reporting and Recordkeeping for Oxides of Sulfur Emissions and Proposed Amended Appendix A - Protocol for Oxides of Nitrogen to Rule 2012 - Requirements for Monitoring, Reporting and Recordkeeping for Oxides of Nitrogen Emissions will not significantly affect air quality or emissions limitations and therefore no socio-economic impact assessment is required; and

WHEREAS, the Governing Board of the South Coast Air Quality Management District has determined that Proposed Amended Appendix A - Protocol for Oxides of Sulfur to Rule 2011 - Requirements for Monitoring, Reporting and Recordkeeping for Oxides of Sulfur Emissions and Proposed Amended Appendix A - Protocol for Oxides of Nitrogen to Rule 2012 - Requirements for Monitoring, Reporting and Recordkeeping for Oxides of Nitrogen Emissions will not result in increased cost to the industry; and

WHEREAS, the Governing Board of the South Coast Air Quality Management District has determined that Proposed Amended Appendix A - Protocol for Oxides of Sulfur to Rule 2011 - Requirements for Monitoring, Reporting and Recordkeeping for Oxides of Sulfur Emissions and Proposed Amended Appendix A - Protocol for Oxides of Nitrogen to Rule 2012 - Requirements for Monitoring, Reporting and Recordkeeping for Oxides of Nitrogen Emissions do not impose the same requirements as any existing state or federal regulation and the amendments are necessary and proper to execute the power and duties granted to, and imposed upon the District; and

WHEREAS, the Proposed Amended Appendix A - Protocol for Oxides of Sulfur to Rule 2011 - Requirements for Monitoring, Reporting and Recordkeeping for Oxides of Sulfur Emissions and Proposed Amended Appendix A - Protocol for Oxides of Nitrogen

to Rule 2012 - Requirements for Monitoring, Reporting and Recordkeeping for Oxides of Nitrogen Emissions will not affect the findings previously made under Health and Safety Code Section 39616 when the rules were originally adopted; and

WHEREAS, the Governing Board of the South Coast Air Quality Management District has held a public hearing in accordance with all provisions of law; and

WHEREAS, the Governing Board of the South Coast Air Quality Management District has determined that there is a problem that Proposed Amended Appendix A - Protocol for Oxides of Sulfur to Rule 2011 - Requirements for Monitoring, Reporting and Recordkeeping for Oxides of Sulfur Emissions and Proposed Amended Appendix A - Protocol for Oxides of Nitrogen to Rule 2012 - Requirements for Monitoring, Reporting and Recordkeeping for Oxides of Nitrogen Emissions, will alleviate, i.e., exceedances of federal NOx, ozone and PM_{10} standards and that these above mentioned amendments will promote the attainment of state and federal ambient air quality standards; and

WHEREAS, the Governing Board has reviewed the proposed project and has determined with certainty that it is exempt from the requirements of the California Environmental Quality Act (CEQA) because the Proposed Amended Appendix A - Protocol for Oxides of Sulfur to Rule 2011 - Requirements for Monitoring, Reporting and Recordkeeping for Oxides of Sulfur Emissions and Proposed Amended Appendix A - Protocol for Oxides of Nitrogen to Rule 2012 - Requirements for Monitoring, Reporting and Recordkeeping for Oxides of Nitrogen Emissions involve changes in procedure and will not affect emissions whatsoever.

NOW, THEREFORE, BE IT RESOLVED, that the Governing Board of the South Coast Air Quality Management District does hereby certify the Notice of Exemption for Proposed Amended Appendix A to Rule 2011 and Proposed Amended Appendix A to Rule 2012 - Protocol for Oxides of Nitrogen to Rule 2012, completed in compliance with state CEQA Guidelines Section 15002 (k)(1) - Review for Exemption [District CEQA Guidelines Section 1.2 (k)(1)], state CEQA Guidelines Section 15061 (b)(3) - Review for Exemption [District CEQA Guidelines Section 5.1(b)(3)], and Section 15308 - Actions by Regulatory Agencies for the Protection of the Environment [District CEQA Guidelines Section 19.12), and that it was presented to the District Board, whose members reviewed and considered the information therein prior to acting on Proposed Amended Appendix A to Rule 2011 and Proposed Amended Appendix A - to Rule 2012; and

BE IT FURTHER RESOLVED, that the Governing Board of the South Coast Air Quality Management District does hereby amend, pursuant to the authority granted by

law, Appendix A - Protocol for Oxides of Sulfur to Rule 2011 - Requirements for Monitoring, Reporting and Recordkeeping for Oxides of Sulfur Emissions and Appendix A - Protocol for Oxides of Nitrogen to Rule 2012 - Requirements for Monitoring, Reporting and Recordkeeping for Oxides of Nitrogen Emissions, as set forth in the attached and incorporated herein by this reference.

Attachments

AYES:

NOES:

ABSENT:

DATE_____

_____
CLERK OF THE DISTRICT BOARD

South Coast
AIR QUALITY MANAGEMENT DISTRICT
21865 E. Copley Drive, Diamond Bar, CA 91765-4182 (909) 396-2000

August 17, 1994

SUBJECT: **NOTICE OF EXEMPTION FROM THE CALIFORNIA ENVIRONMENTAL QUALITY ACT**

PROJECT TITLE: **PROPOSED AMENDED APPENDIX A TO RULES 2011 - REQUIREMENTS FOR MONITORING, REPORTING, AND RECORDKEEPING FOR OXIDES OF SULFUR (SO_X) EMISSIONS, AND 2012 - REQUIREMENTS FOR MONITORING, REPORTING, AND RECORDKEEPING FOR OXIDES OF NITROGEN (NO_X) EMISSIONS**

Pursuant to state California Environmental Quality Act (CEQA) Guidelines, the South Coast Air Quality Management District (SCAQMD) is the Lead Agency and will prepare a Notice of Exemption for the project identified above.

Section 15002(k)(1) of the state CEQA Guidelines [Section 1.2(k)(1) of the SCAQMD CEQA Guidelines] provides that when the lead agency determines that a project is not subject to CEQA at all, a Notice of Exemption may be prepared and the process need go no further. It has been concluded with certainty that the proposed amendments to Appendix A of Rules 2011 and 2012 have no potential for causing a significant effect on air quality or any other environmental areas and, therefore, the amendments are exempt from CEQA. The proposed amendments are also exempt from CEQA pursuant to state CEQA Guidelines Section 15061 (b)(3) - Review for Exemption [SCAQMD CEQA Guidelines Section 5.1 (b)(3)], and state CEQA Guidelines Section 15308 - Class 8 - Actions by Regulatory Agencies for the Protection of the Environment [District CEQA Guidelines Section 19.12].

The Notice of Exemption will be filed by the SCAQMD with the county clerks of Los Angeles, Riverside, San Bernardino, and Orange counties immediately following the adoption of the proposed amendments.

Any questions regarding this Notice of Exemption should be sent to Jonathan D. Nadler (c/o Office of Planning and Policy) at the above address. Mr. Nadler can also be reached at (909) 396-3071.

Date: 8/17/94 **Signature:** Jonathan D. Nadler for
Steve Smith, Ph.D.

Title: Program Supervisor

Reference: California Code of Regulations, Title 14

NOTICE OF EXEMPTION

To: *Clerks of the Board*
Counties of Orange,
Riverside, Los Angeles
and San Bernardino

From: *South Coast Air Quality*
Management District
21865 E. Copley Drive
Diamond Bar, CA 91765

Project Title: *Proposed Amended Appendix A to Rule 2011, "Protocol for Monitoring, Reporting and Recordkeeping for Oxides of Sulfur (SOx) Emissions", and Proposed Amended Appendix A to Rule 2012, "Protocol for Monitoring, Reporting and Recordkeeping for Oxides of Nitrogen (NOx) Emissions".*

Project Location:
South Coast Air Quality Management District - Counties of Los Angeles, Orange, Riverside and the South Coast Air Basin portions of San Bernardino County

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Description of Nature, Purpose, and Beneficiaries of Project:
The proposed amendments to Appendix A of Rules 2011 and 2012 will affect the Missing Data Procedures and Bias Test sections of the protocols identified above. The proposed amendments to the Missing Data Procedures will allow facilities to generate continuous emission monitoring system (CEMS) missing data for pollutant gas concentration, fuel gas total sulfur content and flow rate from historical data. This will make it possible for facilities affected by both RECLAIM and EPA's Title IV (Acid Rain) Program to use a common procedure if certain CEMS testing requirements are met. The proposed amendment to the Bias Test will incorporate the option for a facility to use a bias adjustment factor, should the CEMS not pass the Bias Test. This will allow facilities to conduct only one set of tests rather than at least two, and use the bias adjustment factors to correct for under reporting of emissions if the Bias Test requirement of RECLAIM is not satisfied.

Name of Public Agency Approving Project:
South Coast Air Quality Management District

Name of Person or Agency Carrying Out Project
South Coast Air Quality Management District

Exempt Status:
Three Step Process:
State CEQA Guidelines Section 15002 (k)(1) [SCAQMD CEQA Guidelines Section 1.2 (k)(1)]
Review for Exemption:
State CEQA Guidelines Section 15061 (b)(3) [SCAQMD CEQA Guidelines Section 5.1 (b)(3)]
Categorical Exemption:
State CEQA Guidelines Section 15308 (Class 8) [SCAQMD CEQA Guidelines Section 19.12]

Reasons why project is exempt:
The amendments modify the Missing Data Procedures and Bias Testing requirements for facilities in the NOx and SOx RECLAIM program. The SCAQMD has concluded with certainty that the amendments will not have a significant adverse impact on air emissions or any other environmental area.

Contact Person:	**Area Code**	**Telephone**	**Extension**
Jonathan D. Nadler	*(909)*	*396-3071*	*N/A*

If filed by applicant: *N/A*

1. Attach certified document of exemption finding.
2. Has a notice of exemption been filed by the public agency approving the project? Yes__ No__

Signature *To be signed upon certification*
Steve Smith, Ph.D.
Program Supervisor

Date Received for Filing_____

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SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Staff Report for
Proposed Amended Appendix A to RECLAIM Rules 2011 and 2012

May 20, 1994
(SR2011-App.A_94, SR2012-App.A_94)

Assistant Deputy Executive Officer
Technical Support Services
Nick Nikkila

Director
Applied Science and Technology
Chung Liu

Manager
Source Testing and Engineering
John Higuchi

Supervising Air Quality Engineer
Source Testing and Engineering
Arun Roy Chowdhury

Author: Dipankar Sarkar - Air Quality Engineer I

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
GOVERNING BOARD

Chairman: HENRY W. WEDAA
Cities Representative, County of Orange

Vice Chairman: JON D. MIKELS
San Bernardino County Representative

Members:

STEPHEN ALBRIGHT
Governor's Appointee

MICHAEL D. ANTONOVICH
Supervisor, County of Los Angeles

WILLIAM A. BURKE, Ed.D.
Speaker of the Assembly, Appointee
Los Angeles

MARVIN BRAUDE
Councilman, City of Los Angeles

LEONARD PAULITZ
Councilman, County of San Bernardino

VACANT
Cities Representative, Los Angeles County, Eastern Region

MEE HAE LEE
Senate Rules Committee, Appointee

HARRIETT WIEDER
Supervisor, County of Orange

S. ROY WILSON, Ed.D
Cites Representative, County of Riverside

A. NORTON YOUNGLOVE
Supervisor, County of Riverside

EXECUTIVE OFFICER

JAMES M. LENTS, Ph.D.

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I. EXECUTIVE SUMMARY

The proposed amendments to Volumes IV and V of RECLAIM, Protocol - Oxides of Sulfur and Protocol - Oxides of Nitrogen, affect all Major Source RECLAIM facilities. This amendment affects the Missing Data Procedures (Chapter 2, Subdivision E) and Bias Test (Attachment B) sections of the two protocols. The proposed Bias Test amendment will allow facilities to conduct only one set of tests and use Bias Adjustment Factors (BAF) to correct for underreporting of emissions if the Bias Test requirement of RECLAIM is not met. The proposed Missing Data Procedures amendment will allow facilities to generate missing data for pollutant gas concentration, fuel gas total sulfur content and flow rate from historical data, and those facilities affected by both RECLAIM and EPA's Title IV (Acid Rain) program will be allowed to use a common procedure if certain CEMS testing requirements are met.

Staff has reviewed the proposed amendments to Appendix A of Rules 2011 and 2012 and has determined with certainty that the amendments are exempt from the requirements of the California Environmental Quality Act (CEQA). The amendments will not increase emissions nor will they have a significant adverse impact on the environment. Therefore, a Notice of Exemption has been prepared pursuant to state CEQA Guidelines Section 15002 (k)(1) [District CEQA Guidelines Section 1.2 (k)(1)]. The proposed amendments are also exempt from CEQA pursuant to state CEQA Guidelines Section 15061 (b)(3) - Review for Exemption [SCAQMD CEQA Guidelines Section 5.1 (b)(3)] and state CEQA Guidelines Section 15308 - Class 8 - Actions by Regulatory Agencies for the Protection of the Environment [District CEQA Guidelines Section 19.12]. The Notice of Exemption will be filed with the county clerks immediately following the adoption of the proposed amendments.

II. BACKGROUND

The bias test requirement for CEMS under RECLAIM requires that a CEMS pass the bias test by meeting either of the following criteria:

Requirement (a) the absolute value of the mean difference ($|\bar{d}|$) is less than the confidence coefficient (|cc|), or

Requirement (b) the absolute value of the mean difference ($|\bar{d}|$) is less than 1 ppmv.

According to RECLAIM protocols, if the above requirement is not met, the facility will have to improve the performance of the CEMS and conduct a retest until the requirement is met.

The relative accuracy (RA) requirements under RECLAIM for concentration, flow rate, and mass emission rate are 20%, 10%, and 20%, respectively. The protocols allow facilities to use Acid Rain's missing data procedure for pollutant gas concentration and fuel gas sulfur content if all three RA requirements are less than 10%. If all three RA requirements are not less than 10%, the facilities are required to use RECLAIM's missing data procedures.

III. SUMMARY OF PROPOSED AMENDMENTS

The current Bias Test requires facilities to perform additional tests until data bias requirements are met. There is potentially no limit on the number of tests that a facility would have to conduct to pass the Bias Test. Allowing the use of the BAF will allow facilities to meet the RECLAIM CEMS testing requirements with one set of tests, and will result in reducing CEMS testing costs. The use of the BAF will prevent underreporting of emissions if the CEMS measurements are biased low as compared to the reference method. This approach is consistent with that of Acid Rain.

The proposed missing data procedures under RECLAIM will allow facilities to use Acid Rain's missing data procedures for concentration and flow rate, and allow NO_x facilities to use Acid Rain's missing data procedure for SO_2 (in lb/hr) if all three RA tests results are less than 10%. Under current rules, all facilities even those under both RECLAIM and Acid Rain could not use Acid Rain missing data provisions in their entirety, requiring them to provide two separate software systems to handle missing data procedures. The proposed amendment will greatly increase the flexibility of generating missing data. This amendment will encourage facilities to minimize the uncertainty and errors in CEMS data, lead to greater consistency with the Acid Rain program, improve the quality of the emissions data, increase the flexibility for the facility permit holders, and reduce costs of CEMS installation, operation and testing.

IV. IMPACTS

The proposed Bias Test amendment is desirable both to the District and to the permit holders, and is consistent with EPA's. Acid Rain program. To implement this approach, the procedures specified in the current version of the protocols will likely have to be modified. The estimated savings per unit is $12,000.00 - $15,000.00 per additional set of tests needed to meet the bias requirement.

The proposed Missing Data Procedures amendment will increase the flexibility in the use of more commonly available computer programs for Acid Rain, and facilities affected by RECLAIM and Acid Rain will be allowed to use a common software

package if certain RA requirements are met. The estimated savings per unit is $5,000.00 - $10,000.00 per unit.

The District has determined that the above proposed amendments have no socio-economic impact and have no potential for causing any effect on the environment.

V. APPENDIX:

Appendix A to Rule 2011 "Protocol for Monitoring, Reporting, and Recordkeeping for Oxides of Sulfur (SO_x) Emissions":
Chapter 2, Subdivision E
Chapter 2, Attachment B

Appendix A to Rule 2012 "Protocol for Monitoring, Reporting, and Recordkeeping for Oxides of Nitrogen (NO_x) Emissions":
Chapter 2, Subdivision E
Chapter 2, Attachment B

Appendix A to Rule 2011 "Protocol for Monitoring, Reporting, and Recordkeeping for Oxides of Sulfur (SO_x) Emissions":
Chapter 2, Subdivision E
Chapter 2, Attachment B

E. MISSING DATA PROCEDURES

1. Procedures for Missing SO_x Concentration, ~~Data~~ or Fuel Gas Total Sulfur Content Data.

For each equipment, whenever a valid hour of SO_x pollution concentration or fuel gas total sulfur content data has not been obtained or recorded, the Facility Permit holder shall provide substitute data using the procedure below. Alternatively, a facility may provide SO_x pollution concentration missing data using the procedure in 40 CFR Part 75 Subpart D if the relative acccuracy of the pollutant analyzer, flow measurement system, and emission rate measurement during the last CEMS certification test and/or RATA are all less than 10%.

~~For each equipment, whenever a valid hour of SOx pollution concentration data has not been obtained or recorded, the Facility Permit holder shall provide substitute data using the procedures in 40 CFR Part 75 Subpart D if the relative accuracy of the pollutant analyzer, flow measurement system, and emission measurement is less than 10%, or use the procedure below.~~

a. The Facility Permit holder shall calculate on a daily basis the percent data availability from the SO_x pollutant concentration monitoring analyzer or the fuel gas sulfur content monitoring analyzer according to the following procedures.

i. Calculate on a daily basis a rolling percentage of the operating hours of each equipment that each concentration monitoring system was available for the previous 90 days.

ii. Record on a daily basis the percent annual concentration monitor availability using the following equation:

$$W = Y/Z \times 100 \qquad \text{(Eq.13)}$$

where:

W= the percent annual monitor availability

Y = the total operating hours for which the monitor provided quality-assured data during the previous 365 days

Z = the total operating hours of the affected piece of equipment during the previous 365 days.

Example Calculation:

Y = 1,680 hrs
Z = 2,160 hrs
W = Y/Z x 100
W = (1,680/2,160) x 100
W = 78%

b. Whenever data from the pollutant concentration monitor have been available and recorded for 95 percent or more of the total operating hours of the affected piece of equipment during the previous 365 days, the Facility Permit holder shall calculate substitute data for each hour according to the following procedures.

i. For a missing data period less than or equal to 24 hours, substitute data shall be calculated using the 1N Procedure in Attachment A.

ii. For a missing data period greater than 24 hours, substitute data shall be calculated using the maximum hourly concentration recorded by the concentration monitor for the previous 30 days.

c. Whenever data from the concentration monitor have been available for 90-percent or more but less than 95-percent of the total operating hours of the affected piece of equipment during the previous 365 days, the Facility Permit holder shall calculate substitute data for each hour according to the following procedures.

i. For a missing data period of less than or equal to 3 hours, substitute data shall be calculated using the average of the recorded concentration for the hour immediately before the missing data period and the hour immediately after the missing data period.

ii. For a missing data period of more than 3 hours but less than or equal to 24 hours, substitute data shall be calculated using the maximum hourly concentration recorded by the concentration monitor for the previous 30 days.

iii. For a missing data period of greater than 24 hours, substitute data shall be calculated using the maximum hourly concentration recorded by the concentration monitor for the previous 365 days.

iv. Whenever data from the concentration monitor have been available for less than 90 percent of the total operating hours of the affected piece of equipment during the previous 365 days, substitute data shall be calculated using the highest hourly concentration recorded during the service of the monitoring system.

d. For missing data periods where there is no prior CEMS data available:

i~~1~~. for less than or equal to 24 hours, the mass emissions shall be calculated using totalized fuel usage and the starting emission factor specified in Table 2 of Rule 2002 or any alternative emission factor used in the determination of initial allocations; or

ii~~2~~. for less than or equal to 24 hours and where fuel usage is not available, the mass emissions shall be calculated using the equipment maximum rated capacity, 100 percent equipment uptime, and the starting emission factor specified in Table 2 of Rule 2002.

2. Procedures for Missing Stack Exhaust Gas Flow Rate Data

~~For each equipment, the Facility Permit holder shall provide substitute data as described below whenever a valid hour of flow data has not been obtained and recorded.~~

For each equipment, whenever a valid hour of stack exhaust gas flow rate data has not been obtained or recorded, the Facility Permit holder shall provide substitute data using the procedure below. Alternatively, a facility may provide stack exhaust gas flow rate missing data using the procedure in 40 CFR Part 75 Subpart D if the relative acccuracy of the pollutant analyzer, flow measurement system, and emission rate measurement during the last CEMS certification test and/or RATA are all less than 10%.

a. For each affected piece of equipment, the Facility Permit holder shall provide substitute data as described below whenever a valid hour of flow data has not been obtained and recorded.

b. The Facility Permit holder shall calculate on a daily basis the percent data availability from the flow monitoring system according to the following procedures.

i. Calculate on a daily basis a rolling percentage of the operating hours of each equipment that each flow monitoring system was available for the previous 365 days.

ii. Record on a daily basis the percent annual flow monitor availability using the following equation:

$$W = Y/Z \times 100 \qquad \text{(Eq. 14)}$$

Example Calculation:		
Y	=	1,680 hrs
Z	=	2,160 hrs
W	=	Y/Z x 100
W	=	(1,680/2,160) x 100
W	=	78%

where:

W = the percent annual flow monitor availability

Y = the total operating hours for which the monitor provided quality-assured data during the previous 365 days

Z = the total operating hours of the affected piece of equipment during the previous 365 days.

c. Whenever data from the flow monitor have been available and recorded for 95 percent or more of the total operating hours of the equipment during the previous 365 days, the Facility Permit holder shall calculate substitute data for each hour according to the following procedures.

i. For a missing data period less than or equal to 24 hours, substitute data shall be calculated using the 1N Procedure in Attachment-A.

ii. For a missing data period greater than 24 hours, substitute data shall be calculated using the maximum hourly flow recorded by the flow monitor for the previous 30 days.

d. Whenever data from the flow monitor have been available for 90-percent or more but less than 95-percent of the total operating hours of the equipment during the previous 365 days, the Facility Permit holder shall calculate substitute data for each hour according to the following procedures.

i. For a missing data period of less than or equal to 3 hours, substitute data shall be calculated using the average of the recorded flow rate for the hour immediately before the missing data period and the hour immediately after the missing data period.

ii. For a missing data period of more than 3 hours but less than or equal to 24 hours, substitute data shall be calculated using the maximum hourly flow rate recorded by the flow monitor for the previous 30 days.

iii. For a missing data period of greater than 24 hours, substitute data shall be calculated using the maximum hourly flow rate recorded by the flow monitor for the previous 365 days.

iv. Whenever data from the flow monitor have been available for less than 90 percent of the total operating hours of the equipment during the previous 365 days, substitute data shall be calculated using the highest hourly flow rate recorded during the service of the monitoring system.

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ATTACHMENT B

BIAS TEST

~~A. PROCEDURE~~

~~Test~~ The bias of the data shall be determined based on the relative accuracy (RA) test data sets and the relative accuracy test audit (RATA) data sets for SO_x pollutant concentration monitors, fuel gas sulfur content monitors, flow monitors, and emission rate measurement systems using the procedures outlined below.

1. Calculate the mean of the difference using Equation 2-1 of 40 CFR, Part 60, Appendix B, Performance Specification 2. To calculate bias for ~~an~~ SO_x pollutant concentration monitor, "d" shall, for each paired data point, be the difference between the SO_x concentration values (in ppmv) obtained from the reference method and the monitor. To calculate bias for a fuel gas sulfur content monitor, "d" shall, for each paired data point, be the difference between the fuel gas sulfur concentration values (in ppmv) obtained from the reference method and the monitor. To calculate bias for a flow monitor, "d" shall, for each paired data point, be the difference between the flow rate values (in dscfh) obtained from the reference method and the monitor. To calculate bias for an emission rate measurement system, "d" shall, for each paired data point, be the difference between the emission rate values (in lb/hr) obtained from the reference method and the monitoring system.

2. Calculate the standard deviation, S_d, of the data set using Equation 2-2 of 40 CFR, Part 60, Appendix B, Performance Specification 2.

3. Calculate the confidence coefficient, cc, of the data set using Equation 2-3 of 40 CFR, Part 60, Appendix B, Performance Specification 2.

4. The monitor passes the bias test if it meets either of the following criteria:

   a. the absolute value of the mean difference is less than |cc|.

   b. the absolute value of the mean difference is less than 1 ppmv.

5. Alternatively, if the monitoring device fails to meet the bias test requirement, the Facility Permit holder may choose to use the bias adjustment procedure as follows:

a. If the CEMS is biased high relative to the reference method, no correction will be applied.

b. If the CEMS is biased low relative to the reference method, the data shall be corrected for bias using the following procedure:

$$CEM_i^{adjusted} = CEM_i^{monitored} \times BAF \qquad \text{(Eq. B-1)}$$

where:

$CEM_i^{adjusted}$ = Data value adjusted for bias at time i.

$CEM_i^{monitored}$ = Data provided by the CEMS at time i.

BAF = Bias Adjustment Factor.

$$BAF = 1 + (|\bar{d}|/\overline{CEM}) \qquad \text{(Eq. B-2)}$$

where:

$\bar{d}$ = Arithmetic mean of the difference between the CEMS and the reference method measurements during the determination of bias..

$\overline{CEM}$ = Mean of the data values provided by the CEMS during the determination of bias.

If the bias test failed in a multi-level RA or RATA, calculate the BAF for each operating level. Apply the largest BAF obtained to correct for the CEM data output using equation B-1. Apply this adjustment to all monitoring data and emission rates from the time and date of the failed bias test until the date and time of a RATA that does not show bias. These adjusted values shall be used in all forms of missing data computation, and in calculating the mass emission rate.

The BAF is unique for each CEMS. If backup CEMS is used, any BAF applied to primary CEMS shall be applied to the backup CEMS unless there are RATA data for the backup CEMS within the previous year.

Appendix A to Rule 2012 "Protocol for Monitoring, Reporting, and Recordkeeping for Oxides of Nitrogen (NO_x) Emissions":
Chapter 2, Subdivision E
Chapter 2, Attachment B

E. MISSING DATA PROCEDURES

1. Procedures for Missing NO_x Concentration Data

For each equipment, whenever a valid hour of NO_x pollution concentration data has not been obtained or recorded, the Facility Permit holder shall provide substitute data using the ~~procedures in 40 CFR Part 75 Subpart D if the relative accuracy of the pollutant analyzer, flow measurement system, and emission measurement is less than 10%, or use the procedure below.~~ procedure below. Alternatively, a facility may provide NO_x pollution concentration missing data using the procedure in 40 CFR Part 75 Subpart D for SO_2 emissions (in lb/hr) if the relative acccuracy of the pollutant analyzer, flow measurement system, and emission rate measurement during the last CEMS certification test and/or RATA are all less than 10%.

a. The Facility Permit holder shall calculate on a daily basis the percent data availability from the NO_x pollutant concentration monitoring analyzer according to the following procedures.

i. Calculate on a daily basis a rolling percentage of the operating hours of each equipment that each concentration monitoring system was available for the previous 90 days.

ii. Record on a daily basis the percent annual concentration monitor availability using the following equation:

$$W = Y/Z \times 100 \qquad \text{(Eq.13)}$$

where:

W = the percent annual monitor availability

Y = the total operating hours for which the monitor provided quality-assured data during the previous 365 days

Z = the total operating hours of the affected piece of equipment during the previous 365 days.

Example Calculation:

Y = 1,680 hrs
Z = 2,160 hrs
W = Y/Z x 100
W = (1,680/2,160) x 100
W = 78%

b. Whenever data from the pollutant concentration monitor have been available and recorded for 95 percent or more of the total operating

hours of the affected piece of equipment during the previous 365 days, the Facility Permit holder shall calculate substitute data for each hour according to the following procedures.

i. For a missing data period less than or equal to 24 hours, substitute data shall be calculated using the 1N Procedure in Attachment A.

ii. For a missing data period greater than 24 hours, substitute data shall be calculated using the maximum hourly concentration recorded by the concentration monitor for the previous 30 days.

c. Whenever data from the concentration monitor have been available for 90-percent or more but less than 95-percent of the total operating hours of the affected piece of equipment during the previous 365 days, the Facility Permit holder shall calculate substitute data for each hour according to the following procedures.

i. For a missing data period of less than or equal to 3 hours, substitute data shall be calculated using the average of the recorded concentration for the hour immediately before the missing data period and the hour immediately after the missing data period.

ii. For a missing data period of more than 3 hours but less than or equal to 24 hours, substitute data shall be calculated using the maximum hourly concentration recorded by the concentration monitor for the previous 30 days.

iii. For a missing data period of greater than 24 hours, substitute data shall be calculated using the maximum hourly concentration recorded by the concentration monitor for the previous 365 days.

iv. Whenever data from the concentration monitor have been available for less than 90 percent of the total operating hours of the affected piece of equipment during the previous 365 days, substitute data shall be calculated using the highest hourly concentration recorded during the service of the monitoring system.

d. For missing data periods where there is no prior CEMS data available:

~~i~~1. for less than or equal to 24 hours, the mass emissions shall be calculated using totalized fuel usage and the starting emission factor specified in Table 2 of Rule 2002 or any alternative

emission factor used in the determination of initial allocations; or

ii~~2~~. for less than or equal to 24 hours and where fuel usage is not available, the mass emissions shall be calculated using the equipment maximum rated capacity, 100 percent equipment uptime, and the starting emission factor specified in Table 2 of Rule 2002.

2. Procedures for Missing Stack Exhaust Gas Flow Rate Data

~~For each equipment, the Facility Permit holder shall provide substitute data as described below whenever a valid hour of flow data has not been obtained and recorded.~~

For each equipment, whenever a valid hour of stack exhaust gas flow rate data has not been obtained or recorded, the Facility Permit holder shall provide substitute data using the procedure below. Alternatively , a facility may provide stack exhaust gas flow rate data using the procedure in 40 CFR Part 75 Subpart D if the relative acccuracy of the pollutant analyzer, flow measurement system, and emission rate measurement during the last CEMS certification test and/or RATA are all less than 10%.

a. For each affected piece of equipment, the Facility Permit holder shall provide substitute data as described below whenever a valid hour of flow data has not been obtained and recorded.

b. The Facility Permit holder shall calculate on a daily basis the percent data availability from the flow monitoring system according to the following procedures.

i. Calculate on a daily basis a rolling percentage of the operating hours of each equipment that each flow monitoring system was available for the previous 365 days.

ii. Record on a daily basis the percent annual flow monitor availability using the following equation:

$$W = Y/Z \times 100 \qquad \text{(Eq. 14)}$$

Example Calculation:

Y	=	1,680 hrs
Z	=	2,160 hrs
W	=	Y/Z x 100
W	=	(1,680/2,160) x 100
W	=	78%

where:

W = the percent annual flow monitor availability

Y = the total operating hours for which the monitor provided quality-assured data during the previous 365 days

Z = the total operating hours of the affected piece of equipment during the previous 365 days.

c. Whenever data from the flow monitor have been available and recorded for 95 percent or more of the total operating hours of the equipment during the previous 365 days, the Facility Permit holder shall calculate substitute data for each hour according to the following procedures.

i. For a missing data period less than or equal to 24 hours, substitute data shall be calculated using the 1N Procedure in Attachment-A.

ii. For a missing data period greater than 24 hours, substitute data shall be calculated using the maximum hourly flow recorded by the flow monitor for the previous 30 days.

d. Whenever data from the flow monitor have been available for 90-percent or more but less than 95-percent of the total operating hours of the equipment during the previous 365 days, the Facility Permit holder shall calculate substitute data for each hour according to the following procedures.

i. For a missing data period of less than or equal to 3 hours, substitute data shall be calculated using the average of the recorded flow rate for the hour immediately before the missing data period and the hour immediately after the missing data period.

ii. For a missing data period of more than 3 hours but less than or equal to 24 hours, substitute data shall be calculated using the maximum hourly flow rate recorded by the flow monitor for the previous 30 days.

iii. For a missing data period of greater than 24 hours, substitute data shall be calculated using the maximum hourly flow rate recorded by the flow monitor for the previous 365 days.

iv. Whenever data from the flow monitor have been available for less than 90 percent of the total operating hours of the equipment during the previous 365 days, substitute data shall be

calculated using the highest hourly flow rate recorded during the service of the monitoring system.

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ATTACHMENT B

BIAS TEST

~~A. PROCEDURE~~

~~Test~~ The bias of the data shall be determined based on the relative accuracy (RA) test data sets and the relative accuracy test audit (RATA) data sets for NO_X pollutant concentration monitors, flow monitors, and emission rate measurement systems using the procedures outlined below.

1. Calculate the mean of the difference using Equation 2-1 of 40 CFR, Part 60, Appendix B, Performance Specification 2. To calculate bias for ~~an~~ NO_X pollutant concentration monitor, "d" shall, for each paired data point, be the difference between the NO_X concentration values (in ppmv) obtained from the reference method and the monitor. To calculate bias for a flow monitor, "d" shall, for each paired data point, be the difference between the flow rate values (in dscfh) obtained from the reference method and the monitor. To calculate bias for an emission rate measurement system, "d" shall, for each paired data point, be the difference between the emission rate values (in lb/hr) obtained from the reference method and the monitoring system.

2. Calculate the standard deviation, S_d, of the data set using Equation 2-2 of 40 CFR, Part 60, Appendix B, Performance Specification 2.

3. Calculate the confidence coefficient, cc, of the data set using Equation 2-3 of 40 CFR, Part 60, Appendix B, Performance Specification 2.

4. The monitor passes the bias test if it meets either of the following criteria:

   a. the absolute value of the mean difference is less than |cc|.

   b. the absolute value of the mean difference is less than 1 ppmv.

5. Alternatively, if the monitoring device fails to meet the bias test requirement, the Facility Permit holder may choose to use the bias adjustment procedure as follows:

   a. If the CEMS is biased high relative to the reference method, no correction will be applied.

b. If the CEMS is biased low relative to the reference method, the data shall be corrected for bias using the following procedure:

$$CEM_i^{adjusted} = CEM_i^{monitored} \times BAF \qquad \text{(Eq. B-1)}$$

where:

$CEM_i^{adjusted}$ = Data value adjusted for bias at time i.

$CEM_i^{monitored}$ = Data provided by the CEMS at time i.

BAF = Bias Adjustment Factor.

$$BAF = 1 + (|\bar{d}|/\overline{CEM}) \qquad \text{(Eq. B-2)}$$

where:

$\bar{d}$ = Arithmetic mean of the difference between the CEMS and the reference method measurements during the determination of bias..

$\overline{CEM}$ = Mean of the data values provided by the CEMS during the determination of bias.

If the bias test failed in a multi-level RA or RATA, calculate the BAF for each operating level. Apply the largest BAF obtained to correct for the CEM data output using equation B-1. Apply this adjustment to all monitoring data and emission rates from the time and date of the failed bias test until the date and time of a RATA that does not show bias. These adjusted values shall be used in all forms of missing data computation, and in calculating the mass emission rate.

The BAF is unique for each CEMS. If backup CEMS is used, any BAF applied to primary CEMS shall be applied to the backup CEMS unless there are RATA data for the backup CEMS within the previous year.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Response to Comments for June 3, 1994 Public Workshop
Proposed Amended Appendix A to RECLAIM Rules 2011 and 2012

July 27, 1994

Assistant Deputy Executive Officer
Technical Support Services
Nick Nikkila

Director
Applied Science and Technology
Chung Liu

Manager
Source Testing and Engineering
John Higuchi

Supervising Air Quality Engineer
Source Testing and Engineering
Arun Roy Chowdhury

Author: Dipankar Sarkar - Air Quality Engineer I

The response to the questions for the June 3, 1994 RECLAIM public hearing for proposed amendments to the SO_x and NO_x protocols are presented in the following two sections. The questions and comments in Section 1 are from the June 3, 1994 public workshop and those in Section 2 were submitted to the District in writing before the June 17, 1994 deadline.

Section 1

Comment: Southern California Gas Company
What EPA computer programs are available for missing data procedures?

Response: The EPA computer programs for missing data are DCAS and ETS-PC. DCAS is a dedicated missing data program, and ETS-PC covers missing data and general QA/QC procedures. Both these programs were developed by the EPA for the Acid Rain program.
Called company representative on June 24, 1994 and gave her EPA Region IX phone number to contact for programs because SCGC is not under Acid Rain.

Comment: Northrop Grumman Corporation
Expressed concern about RECLAIM record keeping and monitoring requirements for large sources, process units, and 219 exempt equipment.
Will the District also look into modifying such requirements for these sources?

Response: The District's Stationary Source Compliance (SSC) division is working on this issue and will answer any questions relating to these issues. However, because this workshop was only for missing data procedures and bias test for CEMS, only those questions relating to these two topics were addressed at the hearing. The company representative agreed to address the questions and concerns in writing to SSC.
Spoke to company representative on June 23, 1994. She will mail a letter to SSC and AST on July 1, 1994.

Comment: Southern California Edison Company

1. The proposed amendment to RECLAIM protocols has a bias adjustment requirement for concentration, flow, and mass emission rate (lb/hr), but 40 CFR Part 75 does not have this requirement for lb/hr. Why is there a deviation from Part 75?
2. Will there be any double biasing of lb/hr?

Response:

1. The main intent of this proposed amendment is to check for bias in the final result of mass emission rate (lb/hr) and use a bias adjustment factor (BAF) if necessary. This is important from a regulatory point of view because emission allocations, emission fees, CEMS testing, etc. in RECLAIM are all affected by this number. It is possible to have a BAF requirement for lb/hr but not for concentration or flow rate. 40 CFR Part

75 has this requirement for SO_2 concentration, flow rate, and NO_x lb/10^6 Btu.

2. It is not the intent of this proposed amendment to double bias the mass emission rate data. Three possibilities are presented in Attachment A of this document for BAF applicability for concentration, flow rate, and mass emission rate. Use the following procedure to calculate BAF and determine its applicability:
   Apply the procedure outlined in Chapter 2, Attachment B to determine if concentration, flow rate, and mass emission rate (lb/hr) pass the bias test. Calculate BAF for each case where the bias test requirement is not met according to the procedure in Attachment B of the Proposed Amended Protocol for Rules 2011 and 2012. If the CEMS results are biased low compared to the RM, the BAF shall be used to correct for underreporting. The CEMS mass emission rate shall be calculated from BAF uncorrected concentration and flow rate. For all record keeping and reporting purposes, correct all mass emission rate results using the BAF for lb/hr. BAF corrected concentration and flow rate shall be used for all missing data substitution.

Comment: Carnot

1. Why not use proposed BAF adjustments only for lb/hr because this is the final result that the District is interested in?
2. Where in the RECLAIM protocols is there a requirement for three load flow rate RATA?

Response:

1. It is correct that the lb/hr result is of prime importance to the District. But it is also necessary for audit purposes to know how the concentration and flow rates were biased (and BAF corrected if necessary) during relative accuracy (RA) testing. It is important to know the biases of the various CEMS components in order to adequately determine the proper functioning of the CEMS on a daily basis.
2. There is no specified rule language requirement in the current RECLAIM documents for three load flow rate RATA tests. Certain items are not present in the current RECLAIM documents but the District feels that they are necessary for certification testing and QA/QC purposes in order to improve the quality of emissions data and ensure long term reliable CEMS operation. The CEMS certification relative accuracy (RA) testing program is a one time series of tests that are conducted and interpreted statistically to establish the operating quality of the CEMS. Whereas, the QA/QC tests are a periodic testing program that is used to determine the integrity of the emissions data on a regular basis. The Executive Officer has the authority to require certain types of testing as a part of certification testing or QA/QC program in order to maintain a high level of emissions data quality. The two items that are in the process of a rule change in the protocols are missing data procedures and bias test, whereas this three load RA requirement is viewed as a rule interpretation item. As a part of this process of rule interpretation for CEMS

certification testing and QA/QC, the District has decided to require this three load flow rate RATA as a part of QA/QC. RECLAIM requires facilities to submit QA/QC plans as a part of the CEMS application, and this QA/QC plan can be implemented only if it is approved by the District.

Comment: GNB, Inc.

1. Comments about Procedure 1N for missing data. Please refer to Attachment B.
2. If a facility experiences any malfunctioning of CEMS and RTU equipment at the time of daily reporting of emissions data and status codes, how will the facility report data to the District?

Response:

1. Called company representative on June 20 and clarified this issue. Also consulted with District's TIC. Please refer to Attachment B.
2. Please refer to Rule 2011 and 2012 Subdivision c, Paragraph 3. This section explains how the daily emissions data and status codes can be reported to the District if there is a failure of the CEMS and RTU.

Comment: Powerine Oil Company

1. Comments about meeting RA and analyzer performance test requirements for units with very low gas concentrations.
2. What type of calibration certifications will the District allow for low concentrations?

Response:

1. For "regular" 40 CFR Part 75 concentrations, the RA and analyzer performance test requirements are in terms of percent of reference method values, gas concentrations, or full span ranges. Part 75 allows facilities to satisfy testing requirements for RA and analyzer performance testing for low concentrations by meeting ppmv and dscfm limits below certain low concentrations and flow rates. However, these low EPA limits are too high for some SCAQMD units because Part 75 limits were essentially developed for coal and oil fired units. The District is in the process of developing such limits for the low concentrations commonly encountered in the SCAQMD basin.
2. As stated in the RECLAIM protocols for Rules 2011 and 2012, the District allows the use of EPA Protocol 1 and Protocol 2 gases. If calibration gases satisfying these two EPA protocols cannot be obtained, the District will review and approve gas manufacturers' protocols for calibration standards preparation and analysis. Please refer to Appendix A, Chapter 2, Subdivision A.

Section 2

Two companies responded in writing within the June 17, 1994 deadline for submitting comments. Please refer to the attached letters from the companies.

1. Los Angeles Department of Water and Power (LADWP)

   The LADWP has expressed its support for the proposed amendment to RECLAIM protocol for Rule 2012. The proposed amendment in the protocols for Rules 2011 and 2012 are very similar, but the LADWP has not commented on the Rule 2011 protocol amendment because it is not under Rule 2011.

   The LADWP recognizes that the use of EPA's Acid Rain software packages will result in considerable savings and will ensure high CEMS availability. The proposed bias test amendment will reduce the number of potential RA tests without sacrificing the quality of emissions data. For companies like the LADWP that are affected both by RECLAIM and Acid Rain, the proposed amendment to missing data procedures and bias test will greatly increase the flexibility of meeting the regulatory requirements of the District and the EPA.

2. Southern California Gas Company (SCGC)

   SCGC has commented that the proposed missing data procedures amendment to Rule 2012 protocol will require reprogramming the existing RECLAIM programs that it has developed for its customers, which will result in additional costs for CEMS certification.

   The Acid Rain data recording and reporting for SO_2 and NO_x are in lb/hr and lb/10^6 Btu, respectively. The RECLAIM requirement for both of these pollutants is in lb/hr. The current Rule 2012 protocol requires facilities to use the procedure in Acid Rain (40 CFR Part 75 Subpart D) for NO_x concentration if all three RA results are less than 10%. Since both these regulations require monitoring these two pollutants in terms of lb/hr, the proposed amendment will allow facilities to generate NO_x missing data using the Acid Rain procedure for SO_2. It is the District's understanding that if both these procedures use the same lb/hr monitoring format then the missing data substitution procedure will be simplified. The process of substituting missing data in the form of lb/hr is much less involved than that of lb/10^6 Btu. For facilities affected by both RECLAIM and Acid Rain, this amendment should greatly reduce data processing costs. This proposed amendment does not include the District method for generating missing data. In the proposed amendment, facilities can use the District's method for concentration and flow rate even if all three RA results are less than 10%. The Acid Rain provision is strictly an alternative.

The proposed amendment for flow rate is very flexible. It allows facilities to use Acid Rain procedure as an alternative if all three RA results are less than 10%. The facility can use the District method for flow at all times, even if all three RA results are less than 10%.

The proposed amendments for concentration and flow rate missing data add flexibility to the process of generating and substituting missing data for the facility permit holders, and reduces the complexity of monitoring and regulating emissions for the District. The use of Acid Rain SO_2 missing data procedures for RECLAIM NO_x will allow greater flexibility and make the process of missing data substitution more consistent.

Attachment A

The numbers presented in the following tables are data from CEMS certifications in the SCAQMD basin. These numbers show the magnitude and the variation of Bias Adjustment Factors (BAF) for actual field data. All testing for each set of concentrations (ppmv), flow rates (dscfm), and mass emission rates (lb/hr) were conducted concurrently.

BAF is applied to correct for underreporting of CEMS emission data if the CEMS reading is less than that of the reference method. This situation is denoted by "L" in the following tables.

L = CEMS < RM
H = CEMS > RM

CASE 1:

$\lvert\bar{d}\rvert > \lvert cc\rvert$	ppmv	FAIL
$\lvert\bar{d}\rvert < \lvert cc\rvert$	dscfm	PASS
$\lvert\bar{d}\rvert > \lvert cc\rvert$	lb/hr	FAIL

UNIT	ppmv BAF	lb/hr BAF
-	1.04 L	1.15 L

CASE 2:

$\lvert\bar{d}\rvert < \lvert cc\rvert$	ppmv	PASS
$\lvert\bar{d}\rvert > \lvert cc\rvert$	dscfm	FAIL
$\lvert\bar{d}\rvert > \lvert cc\rvert$	lb/hr	FAIL

UNIT	dscfm BAF	lb/hr BAF
-	1.06 L	1.04 L
-	1.06 L	1.05 L
-	1.18 L	1.18 L
-	1.09 L	1.09 L

CASE 3:

$\lvert\bar{d}\rvert > \lvert cc\rvert$	ppmv	FAIL
$\lvert\bar{d}\rvert > \lvert cc\rvert$	dscfm	FAIL
$\lvert\bar{d}\rvert > \lvert cc\rvert$	lb/hr	FAIL

UNIT	ppmv BAF (1)	dscfm BAF (2)	1 x 2	lb/hr BAF

-	1.02 L	1.05 L	1.07	1.06 L
-	1.04 L	1.05 L	1.09	1.13 L
-	1.03 L	1.13 L	1.16	1.14 L
-	1.05 H	1.13 L	1.13	1.10 L
-	1.04 H	1.06 L	1.06	1.02 L
-	1.04 L	1.01 H	1.04	1.03 L
-	1.02 H	1.19 L	1.19	1.16 L
-	1.02 L	1.18 L	1.20	1.19 L
-	1.06 H	1.05 L	1.05	1.03 H
-	1.03 H	1.18 L	1.18	1.14 L
-	1.01 L	1.04 L	1.05	1.05 L
-	1.09 L	1.14 L	1.24	1.24 L
-	1.02 L	1.03 L	1.05	1.08 L
-	1.09 L	1.03 L	1.12	1.13 L
-	1.03 L	1.08 L	1.11	1.10 L
-	1.04 L	1.03 L	1.07	1.02 L

Attachment B

Question: In the following missing data example, how does the facility use Appendix A, Chapter 2, Procedure 1N to create the missing data?

Hour	Data	Hour	Data
0100	n1	1300	n13
0200	n2	1400	missing
0300	n3	1500	missing
0400	n4	1600	missing
0500	n5	1700	n17
0600	n6	1800	n18
0700	n7	1900	n19
0800	n8	2000	n20
0900	missing	2100	n21
1000	missing	2200	n22
1100	missing	2300	n23
1200	n12	2400	n24

Answer: The following is the District's interpretation of Procedure 1N for the above question:

Consider the entire period from 0900 to 1600 to be missing data and create data for this 8-hour period. Use this generated number only for actual periods of missing data, so, there shall be no missing data substitution for Hours 1200 and 1300.

The Gas Company™

Lee Wallace
External Affairs Manager
Environment & Safety

June 17, 1994

Mr. Ramiro Gonzalez, Jr.
Applied Science and Technology
South Coast Air Quality Management District
21865 E. Copley Drive
Diamond Bar, CA 91765-4182

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Dear Mr. Gonzalez:

The Southern California Gas Company (The Gas Co.) is pleased to provide comments on proposed Amended Rule 2012 (Requirements for Monitoring, Reporting, and Recordkeeping for Oxides of Nitrogen (NOx) Emissions). We support the objective of the proposed amendments to provide flexibility in operation of the continuous emission monitoring systems (CEMS).

The Gas Company has been trying to assist its customers to comply with RECLAIM, by developing a manual and computer programs for compliance. The new requirements for missing data will require reprogramming of these existing programs for monitoring, reporting, and recordkeeping of RECLAIM facilities. We urge the District to fully consider this additional cost when further evaluating this rule, or in consideration of other modifications to this or any other, similar rule.

If there are any further questions about these comments please contact me at 213/244-8851.

Sincerely,

Lee Wallace

June 16, 1994

Mr. Ramiro Gonzalez, Jr.
Applied Science and Technology
South Coast Air Quality
Management District
21865 East Copley Drive
Diamond Bar, California 91765-4182

Dear Mr. Gonzalez:

Los Angeles Department of Water and Power (LADWP)
Comments on Proposed Amended Rule 2012 (PAR 2012)

LADWP wishes to express support for PAR 2012, Requirements for Monitoring, Reporting, and Recordkeeping for Oxides of Nitrogen (NOx) Emissions, dated May 20, 1994. LADWP appreciates the efforts of the South Coast Air Quality Management District to make Rule 2012 consistent with the implementing regulations of Clean Air Act Title IV (Title IV). (LADWP is not commenting on Rule 2011 because it is exempt from the oxides of sulfur component of the Regional Clean Air Incentives Market.)

Allowing the use of Title IV missing data procedures will save LADWP the $130,000 cost of developing a separate software package, while improving data quality and providing incentives for high emissions monitoring system availability. For the bias test, LADWP's view is that we never would have satisfied the original Rule 2012 criteria and that the incorporation of a bias adjustment factor, as in Title IV, is the proper way to ensure that emissions are not under-reported.

Thank you for the opportunity to comment on PAR 2012. If you have any questions or require further information, please contact Mr. Scott A. Van Vuren at (213) 367-0466.

Sincerely,

J. Alan Walti

J. ALAN WALTI
Manager of Environmental
Services and Planning

c: Mr. Scott A. Van Vuren