


SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

OFFICE OF ENGINEERING & COMPLIANCE

MEMORANDUM

DATE: November 3, 2009
TO: E&C Senior Managers and AQAC Supervisors
FROM: Mohsen Nazemi 
SUBJECT: Interim Guidance for Rule 1110.2 Implementation

This memorandum provides an interim guidance for the implementation of Rule 1110.2 in several specific areas. The guidance shall remain effective until it is superseded, in part or in whole, by a new policy or guidance document.

Rule 1110.2 – Emissions from Gaseous and Liquid Fueled Engines, was amended on February 1, 2008, to further strengthen emission standards and enhance testing and monitoring requirements. Since then, several implementation issues have been raised as a result. This guidance will address issues in the following areas:

- Procedure for Submitting and Handling of Source Testing Protocols & Reports
- Source Tests Conducted without SCAQMD approved Protocols
- Application Requirements for Replacing Air to Fuel Ratio Controllers
- Implementation of Inspection & Monitoring Plans
- Authorized Signatures for Submitting Periodic Compliance Reports

Procedure for Submitting and Handling of Source Test Protocols & Reports

Effective August 1, 2008, Rule 1110.2(f)(1)(C)(i) has required source tests for NO_x, VOC and CO be conducted for each applicable stationary engines every two years or every 8,760 operating hours, whichever occurs first. Rule 1110.2 (f)(1)(C)(iv) requires engine operators to submit a source test protocol to the SCAQMD for written approval at least 60 days before the scheduled date of the test. Source test reports are required to be submitted within 60 days of completion of the test in accordance with Clause (f)(1)(C)(vi) of the rule.

Source test protocols and reports should be submitted to SCAQMD to P.O. Box 4944. An application is not required for a facility to submit a source test protocol or a source test report. However, companies submitting source test protocols and reports are subject to the Protocol/Report Evaluation Fees specified in Rule 306(m). These fees will be billed to the company after the source test protocol or report has been reviewed.

A facility may submit either the SCAQMD published standard protocols or a facility-specific protocol. An SCAQMD standard protocol that has been revised to meet the specific needs of a company will be considered a facility-specific protocol for review purposes. Standard protocols will be reviewed by engineers in Engineering & Compliance and facility-specific protocols will be reviewed by source testing engineers.

A facility with multiple engines may submit one protocol for the facility or a subset of the engines provided that none of the individual engines within the grouping requires special considerations. Facilities submitting protocols that cover multiple engines shall properly identify all engines covered by the protocol as required by the rule provisions.

A facility will be required to submit a source test protocol for subsequent periodical tests if the facility is affected by any of the following:

- The SCAQMD revises its standard protocol;
- The facility revises its facility-specific protocol; or
- The facility has an approved facility-specific protocol but changes its source test contractor (the facility/contractor may simply adopt the previously approved protocol or submit a new protocol).

The procedures for handling the source test protocol and reports are outlined in the attached flow charts entitled Rule 1110.2 Source Test Protocol Evaluation Procedure and Rule 1110.2 Source Test Report Evaluation Procedure, respectively. To facilitate the handling and review of the engine source test protocols and reports, the following attached documents are available:

- Rule 1110.2 Source Test Protocol Evaluation Checklist
- Sample Protocol Approval Letter
- Sample Rule 1110.2 – Source Test Protocol Evaluation
- Sample billing memo to Customer Service
- Detailed Instructions

Source Tests Conducted without SCAQMD-Approved Protocols

Rule 1110.2(f)(1)(C) requires initial source tests to be conducted in accordance with SCAQMD-approved protocols by August 1, 2008. Since the SCAQMD's source test guidance document was not available until August 1, 2008, certain facilities conducted the required tests without an approved test protocol. The facilities that conducted the required tests before August 1, 2008, without an approved protocol will not be considered as out of compliance with Rule 1110.2(f)(1)(C). The test reports submitted for these tests shall be reviewed and processed following the same procedure as shown in the attached Rule 1110.2 Source Test Report Evaluation Procedure flow chart. If the test report is considered to be unacceptable, the facility will be considered as out of compliance and may be subject to appropriate enforcement actions.

Application Requirements for Replacing Air to Fuel Ratio Controllers

Rule 1110.2 (d)(1)(E) requires spark-ignited engines without a Rule 218 or RECLAIM approved CEMS to be equipped with an air-to-fuel ratio controller by February 1, 2009. Rule 1110.2 (e)(5) specifies the compliance schedule for installing air-to-fuel ratio controllers including the date for submitting the required permit application. If a stationary engine has the required air-to-fuel ratio controller but it is not described on the permit to operate, Rule 1110.2(e)(5)(B) requires the operator of the stationary engine to file an application to modify the permit wording to include the air-to-fuel ratio controller description. The issue is what type of application is required under these various scenarios.

SCAQMD staff has learned that over time some facilities have replaced the air-to-fuel ratio controllers with ones from different manufacturers. Since the control logics, mechanisms, criteria, etc. of these controllers have not been standardized among the manufacturers, their ability to consistently maintain the engines in compliance with the emission standards varies. As a result, SCAQMD permitting staff must evaluate these air-to-fuel ratio controllers on a case-by-case basis. The type of application required for the various scenarios is shown in the following table.

Scenario	Type of Application
Existing air-to-fuel ratio controller needs to be added to the permit wording.	Reissue
Installing air-to-fuel ratio controller for the first time	Modification
Installing non-identical replacement air-to-fuel ratio controller or 3-way catalyst	Administrative

Implementation of Inspection & Monitoring Plans

Rule 1110.2(e)(4) requires that stationary engine operators subject to the I&M provisions of Rule 1110.2(f)(1)(D) shall submit an initial I&M plan by August 1, 2008, and implement the approved plan by December 1, 2008, with certain exceptions. Due to the volume of the applications received at the SCAQMD and the SCAQMD's resources constraints, many plans were not reviewed and approved prior to the implementation date. Therefore, a facility without an approved I&M plan as of December 1, 2008, shall implement its initial I&M plan as submitted until such time when the I&M plan is approved.

Authorized Signatures for Submitting Compliance Reports

The rule requires submittal of various scheduled or non-scheduled reports to the SCAQMD including, but not limited to, quarterly reports [(f)(1)(H)(iii)], periodic source test reports [(f)(1)(C)(vi)], and breakdown reports [(f)(1)(H)(ii)]. Similar to the SCAQMD's practices for submitting compliance reports for Regulation XI rules, these reports may be signed and/or submitted by the facility's personnel who is responsible for preparing the report or his/her direct supervisor or manager. If the facility is a Title V facility, these reports shall be signed

by the facility's "Responsible Official". In addition, the facility shall itemize these reporting requirements in its semi-annual or annual compliance certification report, which shall be signed and submitted by the facility's "Responsible Official" as defined in the Title V rules (SCAQMD Regulation XXX).

MN/JC/MM/MB (interim guidance_final11-3-09)

Attachments

Rule 1110.2
Source Test Protocol Evaluation Checklist

ID: <<Company Name>>

- | Item | Y | N | |
|-------------|--------------------------|--------------------------|--|
| 1. | <input type="checkbox"/> | <input type="checkbox"/> | The name, address, phone number, and primary contact of the organization which operates the engine were submitted. |
| 2. | <input type="checkbox"/> | <input type="checkbox"/> | The name, address, phone number, and primary contact of the District's approved testing laboratory were submitted. |
| 3. | <input type="checkbox"/> | <input type="checkbox"/> | District Permit information, such as the application number, permit number, and emission limits was submitted. |
| 4. | <input type="checkbox"/> | <input type="checkbox"/> | An equipment description, which includes the rated capacity or output of the engine, and classifies the engine as rich or lean burn, was submitted |
| 5. | <input type="checkbox"/> | <input type="checkbox"/> | The loads to be tested, the duration of each load test, and the pollutants that will be measured at each load have been specified. If the number of loads is less than three (normal duty, maximum, and minimum), a justification was submitted, as allowed by Rule 1110.2 (f)(1)(C)(ii). |
| 6. | <input type="checkbox"/> | <input type="checkbox"/> | The protocol shall indicate whether Method 25.1, Method 25.3, or both methods will be used for measuring VOC emissions. The VOC sampling time shall also be provided. Note the VOC sampling time may be extended beyond the minimum 30 minute interval listed in Rule 1110.2 based on an evaluation of expected VOC concentrations and the analytical detection limit. |
| 7. | <input type="checkbox"/> | <input type="checkbox"/> | The engine parameters approved in the I&M Plan [required by Rule 1110.2 (f)(1)(D)] will be measured during testing. |
| 8. | <input type="checkbox"/> | <input type="checkbox"/> | Will testing be conducted under non-ideal conditions (see Section 6.0 of the Rule 1110.2 Standard Test Protocol)? |
| 9. | <input type="checkbox"/> | <input type="checkbox"/> | Did the facility protocol propose deviations to the sampling or analytical procedures in the Rule 1110.2 Standard Test Protocol? |

In evaluating the Protocol, the Permit Engineer should notify the applicant if Items #1 through #7 have a "N" response, and request that the applicant provide the missing information for evaluation before the protocol can be approved.

The Protocol should be sent to Source Test Engineering (STE) for additional review if either the checkboxes in Items #8 or #9 are "Y". Submit ST-1 and ST-2 Forms to initiate review by STE.

(Current Date)

Company Information

(Contact Name, Address)

Subject: Rule 1110.2 Source Test Protocol Approval

Dear <<Contact Name>>:

The South Coast Air Quality Management District (SCAQMD) has reviewed and conditionally approved your Rule 1110.2 (f)(1)(C)(iv) Source Test Protocol (see attachment). Please review the Source Test Protocol Evaluation and the Protocol Conditions.

Any changes from this protocol will require the submittal of a new protocol for SCAQMD review and approval.

If you have any questions regarding this approval, please contact me at (909) 396-xxxx.

Very truly yours,

<<E&C Staff Name & Title >

Attachments

cc: Compliance

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Engineering & Compliance Division**

RULE 1110.2, - SOURCE TEST PROTOCOL EVALUATION

COMPANY: <<Company Name>>

EQUIPMENT:

Engine	Permit Application & Permit Nos.	Facility ID	Rule 1110.2 I & M Plan Application No.
Lean Burn I.C.E.			

TYPE OF TEST: Compliance Test

REASON FOR TEST: Rule 1110.2 (f)(1)(C)

DOCUMENT DATE April 30, 2009

STE EVALUATOR: << Engineer's Name >>

DATE:

OVERVIEW OF EVALUATION:

<i>OVERALL CONFIDENCE IN SOURCE TEST PROPOSAL:</i>	<input type="checkbox"/> ACCEPTABLE	<input checked="" type="checkbox"/> CONDITIONALLY ACCEPTABLE	<input type="checkbox"/> UNACCEPTABLE <input type="checkbox"/> NOT REVIEWED
<i>NOTES, DEFICIENCIES IDENTIFIED, MODIFICATIONS OR REMEDIAL MEASURES REQUIRED</i>	<ol style="list-style-type: none"> 1. No deficiencies noted. All applicable Rules and/or Permit Conditions have been addressed. Proposed sampling locations are considered representative of required testing, and proposed source testing and analytical methods meet District approved standards. 2. The source test shall follow the requirements of the "Source Test Protocol for the Measurement of Nitrogen Oxides, Volatile Organic Compounds, Carbon Monoxide, and Oxygen From Stationary Engines Subject to South Coast Air Quality Management District Rule 1110.2", dated 8/21/08 or later revision date. 3. The source test report shall be submitted to the District as specified by Rule 1110.2 (f)(1)(C)(vi). Include a copy of the Source Test Protocol submittal dated April 30, 2009. 4. Monitor the parameters identified in the source test protocol submittal. 5. Additional parameters identified in Attachment A to be monitored per Rule 1110.2 (f)(1)(C)(iv). 6. Relative accuracy tests required by Rule 218.1 or 40 CFR Part 75 Subpart E will satisfy the source test requirement for NOx, which is monitored by CEMS. 		

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Engineering & Compliance Division

RULE 1110.2 - SOURCE TEST PROTOCOL EVALUATION

ATTACHMENT A

Rule 1110.2 additional parameters to be monitored in addition to parameters that have been identified in the I & M compliance plan

- | Item | Y | |
|-------------|--------------------------|--|
| 1. | <input type="checkbox"/> | Engine load |
| 2. | <input type="checkbox"/> | Engine fuel rate. |
| 3. | <input type="checkbox"/> | The AFRC set points, maximums and acceptable ranges |
| 4. | <input type="checkbox"/> | The actual values of the AFRC set points and maximum. |
| 5. | <input type="checkbox"/> | The elapsed time meter that records engine operating hours. |
| 6. | <input type="checkbox"/> | The operating hours since the last source test. |
| 7. | <input type="checkbox"/> | For rich burn engines with NSCR, inlet and outlet temperature of the NSCR |
| 8. | <input type="checkbox"/> | Pressure drop, if is listed as a permit condition |
| 9. | <input type="checkbox"/> | For rich burn engines with NSCR, the pressure drop, if there is permit condition limiting the pressure drop. |
| 10. | <input type="checkbox"/> | For lean burn engines with SCR ,the catalyst inlet temperature |
| 11. | <input type="checkbox"/> | For lean burn engines with SCR , the reactant flow rate |
| 12. | <input type="checkbox"/> | Other parameters to be monitored <u>Ammonia Slip</u> |

Check the items to be monitored, if they were not identified in the compliance plan

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

MEMORANDUM

DATE:

TO: Customer Service

FROM:

SUBJECT: Rule 1110.2 Source Test Protocol Review Fee

Reference No.**:

Facility ID***	
Facility Name	
Contact Name	
Contact Phone #	
Protocol Date	

Source test protocol evaluation

Type of evaluation	Hourly fee	No. of hours	Subtotal
Minimum fee			\$299.56
Total hours worked		0	
Basic work hours		5	
Additional charge in excess of the basic hours	*(see below)	0	0
Total			\$299.56

AUTHORIZED FOR BILLING _____ DATE _____

*A minimum fee of \$299.56 will be charged for the evaluation of the source test protocol per Rule 306 (m). Additional fees for time spent in the evaluation in excess of 5 hours will be assessed at a hourly rate of \$112.30 per hour per Rule 306 (m). If the time spent on the evaluation is less than 5 hours only the minimum plan fee applies (\$299.56)

**Reference Number Nomenclature: "P" for Protocol, or, "ST" for Source Test Report + Facility ID + Approval Date in "mmddy" format. If one protocol is submitted for multiple facilities, pick any Facility ID number at your discretion.

***If one protocol is submitted for multiple facilities, pick any ID number at your discretion. The Facility ID chosen must be consistent with the Facility ID shown on the Reference Number.

INSTRUCTIONS

A. Cover letter

- Fill in company contact, facility name and address
- The reviewing Engineer will sign the letter and will be the contact person

B. Source test protocol evaluation form

- If the applicant agrees to use the District's standard protocol, then use this form.
- If the applicant operates more engines at other locations, then the protocol will apply to all the applicant's engine locations.
- The applicant will also have to file an I&M plan per Rule 1110.2 for each facility (NOTE: If an engine is monitored by both NO_x and CO CEMS, then an I & M plan is not required for this engine. However, the engine is still subject to the source testing requirement of Rule 1110.2 (f)(1)(C), and, therefore, the facility is still required to submit a source test protocol and report.)
- Fill out the top portion of the form: applicant name, application no., company id number and Rule 1110.2 compliance plan application no.
- List the date the protocol was submitted (document date) and approval date.
- All protocols will be listed as "conditionally acceptable".
- The first four conditions of the protocol are standard condition and it is recommended the conditions are not removed.
- Use condition 5, if there are additional parameters to monitor that were not listed in the source test protocol submittal.

C. Additional parameters to monitor, Attachment A

- The source test protocol should state the parameters to monitor during the source test.
- If the parameters to monitor during the source test is not identified in the protocol, you can review the I&M plan and the plan should list the items to monitor.
- Use the check list from Attachment A to identify the parameters to be monitored during the source test (if the parameters to be monitored are listed the protocol submittal, then attachment A is not required).
- Review permit conditions, some engines may require to monitor the pressure drop, if that is the case use Attachment A.

D. Fee form completion

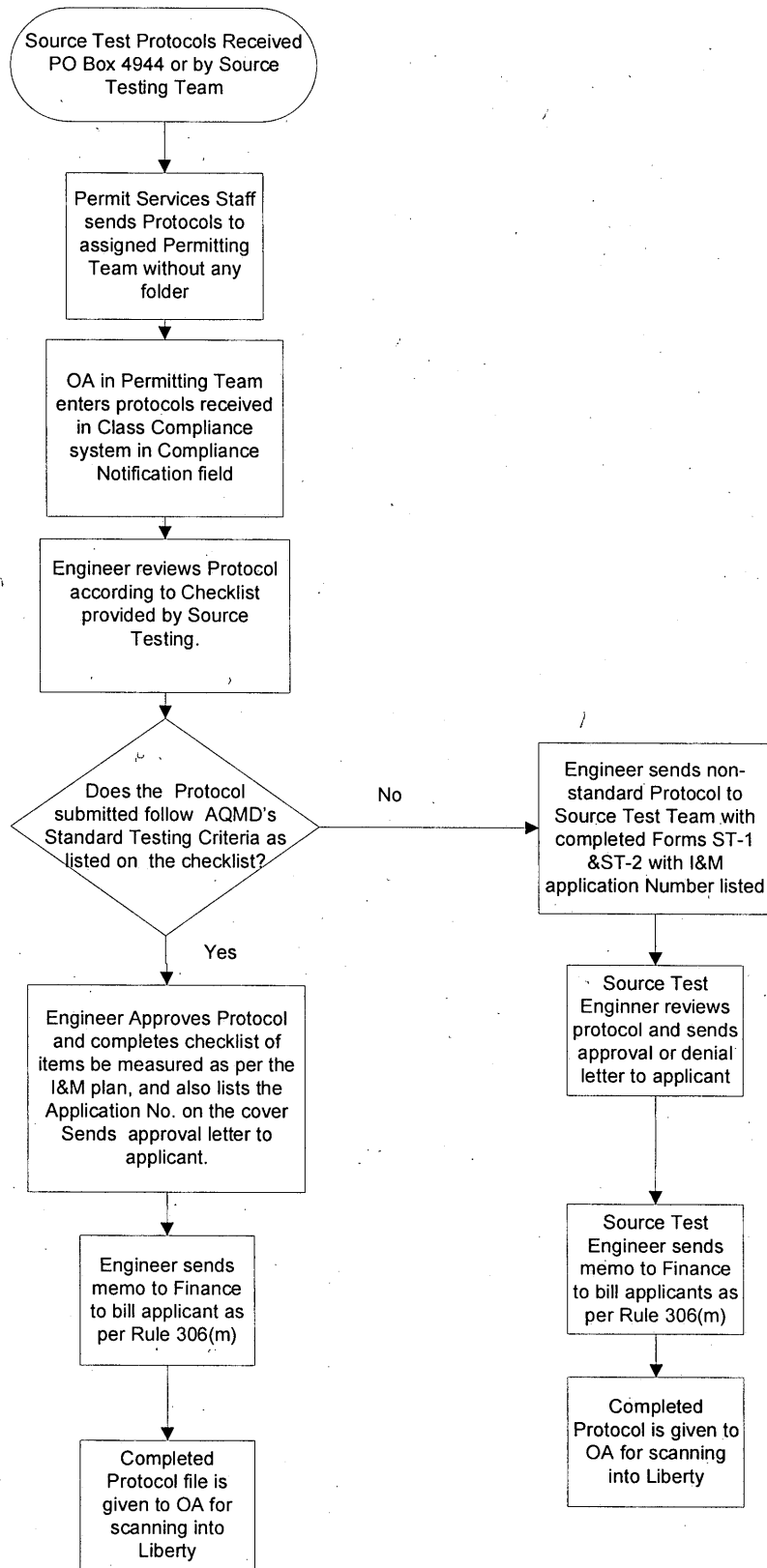
- The minimum fee is \$299.56 and includes 5 hours review time by the engineer.
- Additional review time above 5 hours, the applicant is charged T/M at a rate of \$112.30 per hour.
- Sum the additional T/M fee to the \$299.56 for the fee due to the District.
- Note if the total hours worked on the protocol is less than 5, the minimum charge is \$299.56

E. Protocol evaluation completion

- The Unit OA shall mail the following to the applicant (referred to as the "package"): the cover letter, protocol evaluation form, Attachment A (if required) and a copy of the source test protocol submittal. The Unit OA shall send a copy of the package to the Records Section for scanning into Liberty.
- The Unit OA shall send the Fee Memo to Customer Service to bill the applicant for the protocol review (make a copy of the memo for the file).

Rule 1110.2

Source Test Protocol Evaluation Procedure



Rule 1110.2

Source Test Report Evaluation Procedure

