



**COMPLIANCE ASSISTANCE BULLETIN**  
**March 2007**

***Equipment tuning for Boilers, Steam Generators, and Process Heaters***

To demonstrate compliance with certain requirements of Rule 4306 and 4307, periodic tuning must be performed. Two approved methods for tuning units are found in Rule 4304. The method to be used is dependent on the design of the unit. Method 4304-A is for mechanical draft units and Method 4304-B is for natural and induced draft units. Rule 4304 also allows for the use of an alternative tuning method if it produces equivalent results.

If an alternative method is used, a step-by-step description of the procedure must be kept with the unit. This alternative procedure must also include a statement that the tune-up method is intended to achieve the lowest possible nitrogen oxides (NO<sub>x</sub>) emissions while maintaining carbon monoxide (CO) emissions at less than 400 ppm @ 3% oxygen and acceptable flame conditions. It is highly recommended that prior District approval be obtained before using any alternate tune-up method to ensure that it meets all District requirements. In order to obtain approval of an alternative tune-up method, please contact the Small Business Assistance at the following telephone numbers:

Modesto Office 209-557-6446  
Fresno Office 559-230-5888  
Bakersfield Office 661-326-6969

Per Rule 4306, each unit that is limited to less than 9 billion Btu per calendar year heat input pursuant to a Permit to Operate shall be tuned at least twice per year with each tuning taking place between four and eight months apart. No tune up is required for any unit that is not operated during the calendar year, and only one tune up is required if the unit does not operate for a continuous six-month period.

For other units, a unit that has passed two consecutive 12-month source tests may defer the following 12-month source test for up to 36 months. During that 36-month interval, the unit must be tuned twice each year with each tuning occurring between four and eight months apart. Units that operate and maintain an APCO approved CEMS or Alternate Monitoring System need not be tuned during the 36-month source test deferral interval.

Per Rule 4307, each natural draft unit operated in an oilfield or refinery, each glycol reboiler, or each unit limited to no more than 5.0 billion Btu per calendar year heat input pursuant to a Permit to Operate or Permit-Exempt Equipment Registration shall be tuned at least twice per year with each tuning taking place between four and eight months apart. No tune up is required for any unit that is not operated during the calendar year, and only one tune up is required if the unit does not operate for a continuous six-month period. The unit may be test fired without triggering the tune-up requirement.

For all other units, tune the unit at least twice per calendar year, with each tuning taking place between four and eight months apart. In lieu of tuning, operators shall monitor the emissions with a portable NO<sub>x</sub> analyzer and adjust the unit's operating parameters accordingly to assure compliance with the emission limits of this rule.

**Record Keeping:** The attached form has been created for use in documenting that a tune-up has been performed. Per Rule 4306 and 4307, records must be kept for a period of five years and shall be available upon request.

For more information, visit the District's website at [www.valleyair.org](http://www.valleyair.org).



# San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT

## Rule 4304 – Equipment Tuning Certification

**Date of Procedure:** \_\_\_\_\_ **Permit #:** \_\_\_\_\_

**Owner/Operator:** \_\_\_\_\_

**Location:** \_\_\_\_\_

**City, State, Zip:** \_\_\_\_\_

**Vessel Manufacturer:** \_\_\_\_\_ **Model:** \_\_\_\_\_

**Serial Number:** \_\_\_\_\_

**Burner Manufacturer:** \_\_\_\_\_ **Model:** \_\_\_\_\_

**Serial Number:** \_\_\_\_\_

**Unit is a package with one data plate.**  Yes  No

### Type of Unit:

- |   |  |
|---|--|
| <input type="checkbox"/> Natural Draft Boiler | <input type="checkbox"/> Steam Generator |
| <input type="checkbox"/> Forced Draft Boiler  | <input type="checkbox"/> Process Heater  |
| <input type="checkbox"/> Induced Draft Boiler | <input type="checkbox"/> Other: _____    |

### Tuning Method/Procedure:

- Attachment 4304-A of District Rule 4304
- Attachment 4304-B of District Rule 4304
- Equivalent procedure approval letter from District (attached)
- A procedure that does not have prior District approval.  
(A step by step description of the tune-up procedure must be attached)

### Technician Performing Procedure:

Name: \_\_\_\_\_

Company: \_\_\_\_\_

Address: \_\_\_\_\_

City, State, Zip: \_\_\_\_\_

Phone Number: (     ) \_\_\_\_\_

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

*My signature certifies that I have tuned the subject equipment in accordance with the method or procedure noted*