

**San Joaquin Valley
Unified Air Pollution Control District**

Best Performance Standard (BPS) x.x.xx

Date: February 22, 2011

Class	Gaseous Fuel-Fired Boilers
Category	<i>New Hot Water Boilers, Fired Exclusively on Natural Gas or LPG</i>
Best Performance Standard	<i>Applicability Note: Hot water boilers fired with gaseous fuels other than natural gas or LPG (either exclusively or mixed with natural gas or LPG) and which meet the following standards shall be considered to meet BPS for their respective category.</i>
	<p>Hot water boilers meeting this Best Performance Standard must comply with all three elements of this BPS (items 1, 2 and 3 listed below) where applicable:</p> <ol style="list-style-type: none"> 1. The boiler shall meet the following design criteria or shall be equipped with an approved alternate heat recovery system which will collectively provide equivalent boiler efficiency. Equivalent heat recovery systems may utilize recovered heat for purposes other than steam generation provided such uses offset other fuel usage which would otherwise be required. <ul style="list-style-type: none"> <u>Design Criteria</u> A. Except for boilers subject to the requirements of item B below, the boiler shall be designed at full firing capacity to achieve a minimum thermal efficiency of 89 percent when operating with a return water temperature of 100°F and a temperature rise of 20°F. B. Boilers for which more than 75% of the annual hours of operation will be with a cold water or return water temperature which is equal to or greater than 140°F or boilers which operate as secondary boilers in hydronic heating systems in which the primary or lead boiler is a condensing boiler meeting the requirements of item A above, shall be designed at full firing capacity to achieve a minimum thermal efficiency of 84 percent when operating with a return water temperature of 140°F and a temperature rise of 20°F. 2. Electric motors driving combustion air fans or induced draft fans shall have an efficiency meeting the standards of the National Electrical Manufacturer's Association (NEMA) for "premium efficiency" motors and shall each be operated with a variable speed control or equivalent for control of flow through the fan. 3. Hydronic boiler systems shall incorporate the applicable requirements of the 2008 California Energy Efficiency Standards, Subchapter 5, Section 144j. (Hydronic System Measures).

Percentage Achieved GHG Emission Reduction Relative to Baseline Emissions	6.2%
--	-------------

District Project Number	C-1100388
Evaluating Engineer	Dennis Roberts, P.E.
Lead Engineer	Martin Keast
Initial Public Notice Date	April 8, 2010
Final Public Notice Date	January 19, 2011
Determination Effective Date	February 22, 2011