

# AHM SOUTH COAST AIR QUALITY DISTRICT NEWS

## AHM Helps Users Meet New Rules

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The purpose of this newsletter is to provide specialized information to our customers in the South Coast Air Quality District on new proposed changes to Rule 1146.

The provisions of this rule change applies to any boiler, steam generator, or process heater with a rated heat input capacity equal to or greater than 5 MMBtu/hr.

The rule limits NOx and CO emissions, and has requirements for monitoring, recordkeeping, and test methods.

AHM Associates, Inc. provides our customers with the engineering expertise and products to meet all the new regulations in the most efficient and cost effective way.

Not sure how to meet the new rules?? Backend SCR?? New boiler?? Combustion controls?? Low NOx burners?? Improved efficiency??

Let AHM review your system to make the correct and most economical choice for your plant.

AHM Associates, Inc. Products Help Users Meet New SCAQMD Rules

- **Ultra Low NOx Burners**
- **SCRs**
- **Condensing Exchangers**
- **Firetube Boilers**
- **Watertube Boilers**
- **Combustion Controls**

## South Coast AQMD Rule 1146

### Also Note:

- This rule applies to all boilers, steam generators and process heaters.
- Units >40 MMBtu/Hr need to have an in stack NOx monitor.
- This rule does not apply to units >40 MMBtu/Hr in a petroleum refinery.
- The CO (Carbon Monoxide) limit shall not exceed 400 ppm.

| Category                                   | Limit | Submit Compliance Plan | Application To Construct Permit | Full Compliance |
|--|-------|------------------------|---------------------------------|-----------------|
| >75 MMBtu/Hr                               | 5 ppm | -                      | 01/01/2012                      | 01/01/2013      |
| 20 to 75 MMBtu/Hr<br>75% or more of units  | 9 ppm | 01/01/2010             | 01/01/2011                      | 01/01/2012      |
| 20 to 75 MMBtu/Hr<br>100% or more of units |       | 01/01/2010             | 01/01/2013                      | 01/01/2014      |
| 5 to <20 MMBtu/Hr<br>75% or more of units  |       | 01/01/2011             | 01/01/2012                      | 01/01/2013      |
| 5 to <20 MMBtu/Hr<br>100% or more of units |       | 01/01/2011             | 01/01/2014                      | 01/01/2015      |

## Heinz Recoups Heat from Flue Gas



### Situation:

With rising fuel prices, Heinz decided to investigate new technologies to improve efficiency by recouping heat from the high temperature stack flue gas.

By adding state-of-the-art heat exchange and recovery technology, Heinz could capture valuable waste heat energy from the exhaust gases to reduce significantly their natural gas use while heating process water essential to their food processing operation.

### Solution:

Heinz decided to install a **Condex Condensing Heat Exchanger** on their new 350 HP boiler.

The patented "Reverse Flow" condensing economizer maximizes condensing heat recovery and keeps the condensing section completely separate from boiler stack while maintaining extremely low pressure drop.

Getting utility rebates made the project.

### Results:

- Recovers 1,264,000 Btu/hr.
- Yearly savings \$105,900
- Annual CO<sub>2</sub> Emissions reduction: 732 tons/year
- Annual Water Recovery: 544,530 Gallons per year
- Received PG&E rebate for improved efficiency

## Loyola Marymount LMU Retrofits to <9 ppm

As a Presidents Climate Commitment signatory, Loyola Marymount University (LMU) is committed to reducing energy use and their impact on the environment as evidence by their installation of the largest solar rooftop array of any university in the world.

In keeping with their energy mission, and to achieve compliance with the new Rule 1146 NOx regulation of 9 ppm on their Cleaver Brooks 300 HP boiler, LMU moved forward with their low NOx retrofit before the start of the school year in the fall of 2011.



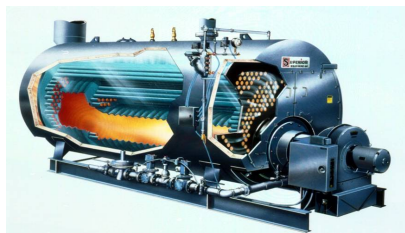
The preferred service contractor for LMU, Total Western, had a long term relationship and an excellent reputation with the University. It was paramount, that when TWI recommended AHM Associates, Inc. and the ST Johnson NOXmatic® burner, the results would exceed the client expectations.

This made the decision easy and the NOXmatic® was selected based on its inherent advantages: Out of the Box compliance, robust design, whisper quiet operation, and strong support to the customer.

The NOXmatic® simple design and stable combustion allows users to achieve less than 9 ppm NOx compliance practically "out of the box".

The contractor and ST Johnsons immense experience in converting Cleaver Brooks boilers led to another successful Ultra Low NOx burner retrofit.

- **Less Than Two Day Basic Start Up**
- **VFD Reduced BHP Cost**
- **Communication with BMS**
- **New System Easier to Operate**
- **No FGR Required**
- **New Controls Improved Efficiency**



## St. Joe Medical Center Reduces NOx

**Situation:**

St. Joe Medical Center in Burbank, Ca was mandated by Rule 1146 to retrofit their two old Cleaver Brooks 500 HP boilers by the required deadline of January 1, 2013. They also needed to upgrade their aging control system.

As a hospital, in addition to reliability, a fast turnaround was critical for the installation and startup while assuring backup steam production during the retrofit. Additionally, the boiler house's unique design with a large negative draft ventilation fan created some design challenges for the installation.

The hospital contacted the long time service organization Porter Boiler Service who brought in

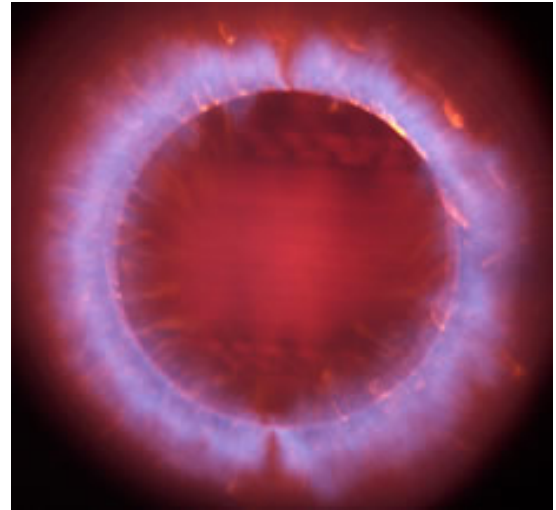
AHM & Assoc. for system evaluation and equipment suggestions for the retrofit.

**Solution:**

Based on the recommendation of the contractor, St. Joe Medical elected to retrofit one boiler first to observe the operation and results. Based on this would proceed with second unit. The retrofit went so well that the hospital pulled trigger and started the second retrofit immediately.

The new burner designed to meet the NOx requirement of 9 ppm was the ST Johnson NOxMatic 500.

The S.T. Johnson NOxMatic burners do not require FGR therefore the burner retrofit did not require OSHPD approval, which resulted in a very fast permitting situation.



The first retrofit went so well that the hospital pulled the trigger and started the second retrofit immediately.

**Results:**

- The startup was whisper quiet
- Startup only took 1-1/2 days
- Stack temperature was reduced
- Total retrofit was accomplished ahead of schedule
- NOx number of 9 ppm easily achieved



## About AHM Associates, Inc...

**AHM Associates, Inc.** is a manufacturer's representative that has served the territories of California, Nevada, Arizona and Hawaii since 1956. With offices conveniently located in Northern and Southern California, we are able to address combustion, power plant/boiler room, air pollution control and monitoring requirements.

### AHM Represents the Following:



Below NOT represented in Northern California:



**AHM ASSOCIATES, INC  
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RECIPIENT NAME  
COMPANY NAME  
STREET ADDRESS  
CITY, ST, ZIP CODE