



## CASE HISTORY (PCC Project 3739)

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**Application:**                                   **Combustion Chamber Retrofit (PCC OEM)**

Customer:    Chemical Plant  
Location:    Eastern United States  
Industry:    Chemical Manufacturing  
Year Installed:                                    2015

**Thermal Oxidizer Data:**

Quantity:    One (1)  
Orientation:                                        Horizontal Multi-component Refractory lined Combustion Chamber  
Type:   Single Stage Low NOx Combustion Process  
Size:   4'-5" diameter x 14 feet long  
Auxiliary Fuel:                                    Natural Gas  
Total System Capacity:                         5.5 MM Btu/hr  
Heat Recovery:                                    N/A  
Waste Stream Flow:                              234 SCFM MAX  
Waste Stream Composition:                     Hydrocarbons from Vent sweep header, Reactor Venting Dryer Pump Down, and Other Vent headers. Hydrocarbons, Nitrogen and Ethyl Chloride.  
APC Equipment:                                  Exhaust Stack (By Others)

**Background Information:**

This project was a retrofit of an existing PCC project under the # NPO-0997-4/E. The end user had been experiencing hot spots, and an eventual burn through on the existing combustion chamber. PCC worked with the end user to resupply a new combustion chamber, coordinate the removal of the existing chamber, install and commission the new chamber, all within a week turnaround.





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Process Combustion Corporation was selected to redesign and supply a low NO<sub>x</sub> thermal oxidizer combustion chamber and supply a refractory lined expansion joint, not originally in PCC's scope. In addition, the end user wanted PCC to manage the mechanical and electrical installation, as well as the start-up and commission the chamber. PCC was able to fabricate, refractory line, ship, deliver, install, and commission within the timeline the end user had specified

### **PCC Equipment Scope:**

- Refractory-Lined Combustion Chamber
- Refractory-Lined Expansion Joint (Not originally in PCC's scope)
- Installation of equipment
- Commissioning of new chamber





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