

TCEQ - Chapter 115 Monitoring of Flare & Cooling Towers

**WHAT? WHERE? WHEN? HOW?
Need Answers?
Our Experts Can Help!
Siemens Applied Automation**

To achieve federally mandated Ozone attainment compliance in the Houston-Galveston area, the Texas Commission on Environmental Quality (TCEQ) is requiring the reduction of HRVOC emissions from Flare and Cooling Water. These new regulations call for the on-line measurement of specific HRVOC and Total HRVOCs. Siemens Applied Automation has developed a Complete Solution for these applications, including front end engineering support, optimized, tested and validated analytical systems as well as complete turn-key solutions.



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Global network of innovation

Control of Highly Reactive Volatile Organic Compounds

Texas Commission on Environmental Quality (TCEQ)

What is proposed?

As part of the regional Ozone reduction efforts described in Chapter 115, Highly Reactive VOC (HR-VOC) emission from process Flares and Cooling Towers are to be reduced. A number of compounds such as Ethylene, Propylene, 1,3 Butadiene and Butenes are targeted and have to be measured. By measuring these components as well as flows, temperatures and pressures, emission can be quantified and eventually reduced.

Where? Houston Galveston Area

Cooling Towers:

Cooling Towers will need to determine HRVOC's by continuously monitoring Total VOC with frequent laboratory speciation of water entering the Cooling Towers. Due to the possible significant laboratory burden involved when measuring Total VOC, sites typically benefit from measuring specific HRVOCs automatically every 15 minutes instead of Total VOCs. Using the regulatory recommended extraction stripping device, or even better a

more simple and more efficient but equivalent sparging system, individual HRVOCs can be measured to the sub ppb-level.

Flares:

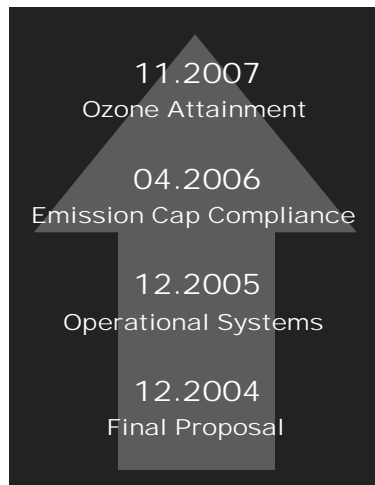
Flares emitting any of the HR-VOC listed by the TCEQ must be monitored and any of the targeted components must be measured individually every 15 minutes. Furthermore, the BTU content of the flare gas must be determined, either by utilizing the same Gas Chromatograph used to determine HRVOC or utilizing an

additional Calorimeter. Despite the possible presence of many other components, interference free determination of the targeted components is essential to accurately report emission data.

When does this take effect?

The ruling by the TCEQ specifies that the sites must start reporting HRVOC emission by the **end of 2005** and be in emission site-cap compliance by **April 2006**.

Timeline



How can Siemens help?

As a long time provider of analytical solutions, Siemens is uniquely qualified to assist plant sites in meeting these new requirements. Siemens has developed, tested and validated analytical solutions that exceed the requirements of the regulations today and have the flexibility for tomorrow. Siemens has a wide range of products and services



available ranging from providing detailed up-front engineering

assistance, providing tested and validated analytical solutions, stand alone or as part of a packaged system, as well as providing start-up assistance, field validation and maintenance services to ensure regulatory compliance. **All from one company, all from Siemens.**



To schedule a needs assessment, please contact your local sales representative at the address below:

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