

# REFINERY SECTOR RULE COMPLIANCE



On December 1, 2015, the Environmental Protection Agency (EPA) published the final Refinery Sector Rule (RSR). The EPA recently conducted a Risk and Technology Review of the National Emissions Standards for Hazardous Air Pollutants (NESHAP) and the New Source Performance Standards (NSPS) that apply to petroleum refineries. As a result, the EPA has finalized changes under an overall rulemaking called the RSR. The RSR has a strong emphasis on reducing upset event emissions, demonstrating improved flare destruction efficiency, and requiring refineries to monitor emissions both inside and at the fenceline of the facility. On February 9, 2016 the EPA subsequently proposed an amendment to defer compliance with startup and shutdown requirements and other features for up to 18 months.

The major changes with the new Refinery Sector Rule include:

## **Fenceline Monitoring**

A program to continuously monitor benzene concentrations at the fenceline, requiring sorbent tube monitors that encircle the facility to better identify sources of benzene in all wind directions. Detection of benzene at the parts per billion level (ppb) is required and detection above the established action level of 9 ppb will require corrective action. The RSR does allow for alternative monitoring methods so improvements to technology can be implemented without rule amendments.



## Flare Management

The RSR has established requirements to demonstrate flare destruction efficiency and reduce smoking flare emissions by implementing a wide program of monitoring and control. Significant new flare flow and assist gas measurements will be required, including potentially significant new instrumentation and control logic. Root cause analysis will be required for significant flaring events.

## Pressure Relief Devices

The RSR adds new work practice standards for pressure relief devices. These include monitoring, reporting, and preventive and corrective measures to reduce releases. Each device must be equipped with a monitoring device that indicates a pressure release, as well as implementing three layers of pollution prevention. Refineries will also need to implement root cause correction action programs.

## Other Equipment

The RSR requires additional emission reductions and monitoring from delayed cokers and storage tanks. The definition of Group 1 storage tanks has been revised to include vessels with smaller volumes and lower vapor pressures. Fluid Catalytic Cracking Units (FCCUs) will also require additional performance testing, plus changes in electronic reporting for performance and analyzer tests.

## How Can Trihydro Assist?

Trihydro's refinery compliance team is ready to support your refinery with any of the following:

- Conduct comprehensive facility RSR review and compliance plans
- Assist in flare operations review and compile flare management plans subject to NSPS Subpart Ja and NESHAP Subpart CC
- Provide reviews on root cause analysis reports
- Develop site-specific compliance plans
- Conduct fenceline pilot project plans and project implementation utilizing Fenceline Pro™, a proactive, transparent, and secure software solution (for any fenceline monitoring plan)
- Support permit reviews and application preparations

## Fenceline Pro™ Integrated Software

Trihydro's new stand-alone software solution can help you collect, securely store, analyze, and report fenceline monitoring data. Available on a per-site or corporate-wide basis. Fenceline Pro™ is available for your site even if Trihydro isn't your fenceline monitoring consultant.

A blue rectangular graphic containing two headshots of men, their names and titles, and the Trihydro logo. The background of the graphic features a faint white outline of a refinery structure.

**Calvin Niss**  
Business Unit Leader  
Air Quality and Process Management  
cniss@trihydro.com

**Jay Christopher**  
Business Unit Manager  
Air Quality and Process Management  
jchristopher@trihydro.com



800-359-0251 | trihydro.com