

# Focus on Fuels

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## TM&C Services in Fuel Regulations

TM&C provides a full range of services in its fuels regulatory practice. Some of these services are listed below.

- Preparing, reviewing and submitting fuels reports, including CDX submissions.
- Facility audits for compliance with fuels

Refineries have been reducing emissions for decades under voluntary programs, negotiating settlements and in compliance with existing regulations. A new rule, which was signed September 29, 2015, but is not yet published in the Federal Register, will be effective 60 days after being published. All the final requirements will not be fully implemented until 2018. The rule is often referred to as 'Fenceline Monitoring' since a large component will require refineries to install monitors to measure benzene at the edges of their refineries with the data being published on the EPA website. The implementation time for the monitoring is two years after promulgation. The obvious intent is to inform and better protect nearby communities. There are components to the rule other than fenceline monitoring such as reduced emissions surrounding flares and coker units.

## Refinery Fenceline Monitoring

*by Beth Hilbourn*

The EPA conducted residual risk and technology reviews of petroleum refinery source categories under national emission standards for hazardous air pollutants (NESHAP). Based on the results of the reviews, the EPA issued a proposed rule on June 30, 2014. This final rule is the result of decisions and revisions on the proposed rule. Changes in new source performance standards (NSPS) for petroleum refineries, another regulation which regulates air pollutant emissions from refineries, are also included. To determine the emission limits, the EPA gathered information on petroleum refineries through a comprehensive information collection request, review of previously collected information, current literature, and meetings with and information shared by industry and the industry trade

programs.

- Interaction with EPA to pose fuels-related questions.
- Industry specialist assistance for required gasoline attestations.
- Industry specialist assistance for in-line blending audits.
- Assistance in setting up a fuels compliance group/program.
- Personnel reviews of compliance-related groups.
- Compliance status reviews and recommendations.
- Negotiations/consultation during EPA enforcement actions.
- 3rd-Party Engineering reviews.
- Due diligence reviews of facilities and companies in RFS RINs Program.

association.

Besides fence line monitoring, the rule also strengthens emission controls for flares, pressure-relief devices, storage tanks, delayed coking units, marine vessel-loading and other refinery facilities. The rule would virtually eliminate visible flare emissions and releases by pressure-release devices by requiring a comprehensive program of process changes and pollution prevention measures for these sources. EPA indicated that all of this will reduce thousands of tons of hazardous air pollutants. Specifically, it estimated that the rule, when fully implemented, will cut 5,200 tons/year of toxic air pollutants and 50,000 tons/year of volatile organic compounds (VOC).

The American Petroleum Institute (API) and the American Fuel and Petrochemical Manufacturers (AFPM) posted joint comments shortly after the proposed rule was issued. The API and AFPM estimated that the proposed rule would cost the refining industry more than \$20 billion in compliance costs, plus tens of millions of dollars in annual operating costs. The EPA's economic impact analysis predicted that the overall economic effect of the proposal would be minimal for the refining industry and consumers. The groups claim that the flaring provisions would result in large quantities of gas being burned unnecessarily. The groups fought the proposal to build new flares to control all releases from pressure relief valves, and in the final rule, facilities are instead required to make changes in operations and practices to prevent pressure relief valve releases and emergency flaring.

One of EPA's more recent initiatives (to address air emissions from the Nation's petroleum refineries) began in 2000. EPA led investigations which focused on the four most significant Clean Air Act compliance challenges for this industry and the units that are the source of most of its emissions: (1) New Source Review/Prevention of Significant Deterioration, (2) New Source Performance Standards, (3) Leak Detection and Repair requirements, and (4) Benzene National Emissions Standards for Hazardous Air Pollutants. Since March 2000, the Agency has entered into 32 settlements with U.S. companies that refine over 90 percent of the Nation's petroleum refining capacity. These settlements cover 109 refineries in 32 states and territories, and EPA estimates full implementation will result in annual emission reductions of more than 93,000 tons of nitrogen oxides and more than 256,000 tons of sulfur dioxide. There will be additional emission reductions of benzene, volatile organic compounds and particulate matter.

In addition to EPA settlements such as the national Petroleum Refinery Initiatives, there have been settlements between refineries and communities. One such negotiated settlement occurred between the ConocoPhillips Rodeo refinery and its community. On April 16, 2012, the ConocoPhillips Rodeo refinery signed a Memorandum of Understanding (MOU). As a result of the MOU, they currently post fence line data on the web. Some of this data is shown in the snapshot. This monitoring goes

above and beyond what is required in the new rule. The Rodeo monitoring is active monitoring, while the final rule is for passive monitoring. Also, the Rodeo refinery's fence line data monitors much more data than just benzene.

PHILLIPS 66 RODEO REFINERY FENCE LINE DATA					
Ambient air quality data provided on the Phillips 66 Rodeo Refinery website is raw data at the time of collection -- unchecked data that may contain errors					
Message Board					
11/12/2015 10:07 - Maintenance work on the Organic Gas Detectors has been completed.					
<a href="#">Document Download Center</a>			<a href="#">Message Archive</a>		
FTIR Systems			UV Systems		
Chemical (values in PPB)	South Fence Line	North Fence Line	Chemical (values in PPB)	South Fence Line	North Fence Line
System Status	Online	Online	System Status	Online	Online
Date	2015-11-24	2015-11-24	Signal Strength	2861	2262
Time	07:15:00	07:10:55	Date	2015-11-24	2015-11-24
1,3 Butadiene	ND	ND	Time	07:12:04	07:10:11
Carbonyl Sulfide	ND	ND	Benzene	ND	ND
Total Hydrocarbons	32	67	Carbon Disulfide	ND	ND
Carbon Monoxide	181	415	Ozone	18	22
Ethanol	ND	ND	Sulfur Dioxide	ND	ND
Ethylene	ND	ND	Toluene	ND	ND
Nitrous Oxide	394	404	Xylene	ND	ND
Ammonia	ND	ND	TDL Systems		
Mercaptan	ND	ND	System Status	Online	Online
Methane	2112	5681	Data Date	2015-11-24	2015-11-24
MTBE	ND	ND	Data Time	07:13:02	07:12:52
			Signal Strength	7202	3985
			Hydrogen Sulfide	ND	ND
			Weather Conditions		
Organic Gas Detectors (OGDs)			System Status	Online	
Instrument (values in %LEL)	% Level		Date	2015-11-24	
System Status	Online		Time	07:14:19	
Last Date	2015-11-24		Temperature (°F)	53	
Data Time	07:14:47		Humidity (%)	84	

TM&C reviews fuel and environmental regulations in our semi-annual **CRUDE AND REFINED PRODUCTS OUTLOOK**. Give us a call if you have any questions in these areas.

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