

Technical Bulletin

Summary of Refinery NSPS/NESHAPs

The U.S. Environmental Protection Agency (EPA) issued a final rule on September 29, 2015 seeking to further control emissions of hazardous air pollutants (HAPs) and volatile organic compounds (VOCs) from petroleum refineries. The rule imposes new requirements on storage vessels, delayed coker units and flares, and requires fence-line monitoring.

This action finalizes the residual risk and technology review conducted for the petroleum refinery source category regulated under the National Emission Standards for Hazardous Air Pollutants (NESHAP; 40 CFR Part 63, Subpart UUU), including the refinery Maximum Achievable Control Technology Standard (MACT) 1 and Refinery MACT 2. It includes revisions to the Refinery MACT 1 and MACT 2 rules in accordance with provisions regarding establishment of MACT standards. This action also finalizes technical corrections and clarifications for the New Source Performance Standards (NSPS; 40 CFR Part 60, Subpart J/Ja) for petroleum refineries to improve consistency and clarity and address issues related to a 2008 industry petition for reconsideration.

The fence-line monitoring requirement means that the refinery will have to establish sample points along its site boundary to monitor for benzene with consideration given to meteorological data. If a reading is found below the action level of 9 ug/m^3 or 2.8 parts per billion (ppb), monitoring frequency can be reduced, but if levels are above the action level, a root cause analysis must be done and corrective action must be taken (e.g., leak inspection using optical gas imaging or more frequent monitoring).

Under the new rule, flares are to operate with no visible emissions except in periods not to exceed five minutes in any two consecutive hours. An initial visible emission demonstration must be done for the first two hours of operation and, depending on observations during flare venting, at least once a day thereafter.

EPA believes the rule will significantly reduce smoking flare emissions and releases by pressure release devices by requiring a comprehensive program of process changes and pollution prevention measures for these emission sources. This first of its kind national program will require:

- A minimum of three pollution prevention measures be installed;
- Continuous monitoring of flares and pressure release devices (PRD);
- Release events must be analyzed to determine the cause and remedied; and
- A hard limit of no more than three events in three years per device or flare.

In addition to the fence-line monitoring and flare emission requirements, the rule requires additional emission reductions from storage tanks and delayed coking units at petroleum refineries, some of which had no previously required controls.

In the rule's preamble, EPA claims the final rule will result in a reduction of 1,323 tons/year of HAPs and 16,600 tons/year of VOCs from the 142 major source refineries affected by the rule. On a per refinery average, this amounts to 9.3 tons/year of HAPs and 117 tons/year of VOCs. EPA estimates on average that it will cost about \$2

million per refinery in capital investment and about \$450,000/year to comply.

The rule contains extensive new recordkeeping and reporting requirements. In addition to mandating all fence-line monitoring results be uploaded to an EPA website via electronic reporting criteria, the rule also requires results of each performance test and information on flaring events be routinely reported and uploaded to EPA. This type of increased reporting will place an enormous amount of information in the public realm, which will be easily accessible and likely used to support regulatory and citizen suits for potential violations and by class action plaintiff lawyers for alleged damages for health issues.

The increased reporting and accessibility of information in the rule is similar to that required under the Coal Combustion Residuals (CCR) Rule, which requires online compliance reporting. In that rulemaking, EPA invited citizen suits to help enforce the rule. Together, the CCR Rule and this rule continue a trend of "transparency" established by EPA as part of its Next Generation Compliance initiative. In short, this trend means a regulated facility will not only be subject to traditional EPA (and state agency) enforcement and compliance actions but also an ever-increasing number of citizen suits and damage claims.

The rules will become effective 60 days after publication in the Federal Register. Additional information can be found at the website listed below.

For copy of the rule and related documents:
<http://www3.epa.gov/airtoxics/petref.html>

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