

CHANGES TO MACT AND HOW IT AFFECTS SHUTDOWN, STARTUP, AND MALFUNCTION (SSM) EVENTS

What is a MACT standard? It is the Maximum Achievable Control Technology standard developed to reduce hazardous air pollutant (HAP) emissions.

On October 9, 2019, the EPA proposed revisions to the Generic MACT (GMACT) Standards that affect, among others, OLD MACT (Organic Liquid Distribution other than gasoline), and EMACT (Ethylene facilities). The EPA published its final changes to GMACT in July 2020. The goal of the generic MACT standards is to reduce the regulatory burden associated with the development of separate rulemakings. Changes to the MACT standard will reduce the amount of volatile organic compound (VOC) emissions and assure that facilities are meeting a 98% destruction of efficiency with the control technologies required by NESHAP (National Emissions Standard for Hazardous Air Pollutants).

What you need to know: The amendments to MACT eliminate most exemptions during SSM events and assure that CAA (Clean Air Act) 112 Standards apply continuously. For

those facilities not governed under an NSR permit, California SCAQMD, or not located in Texas, this will be a big change. The new standards closely align with Texas NSR requirements and California's SCAQMD for HAP emissions control, which require controlled degassing of tanks to certain levels. Under the new MACT requirements, for those that are considered a major source of HAPS (10 tons per year of a single HAP or 25 tons per year of all HAPs combined), tanks meeting certain criteria will require controlled degassing to <10 percent of LEL.

What does this mean for facilities under these new requirements? Many facilities not currently required by an NSR permit or SCAQMD will now have to meet controlled degassing requirements for tanks that were once considered exempt from emission control during SSM events.

Some examples of regulated entities that will be affected are Organic Liquid Distributors (sites that store and distribute organic liquids other than gasoline) which, according to the EPA, includes 177 facilities, and producers of ethylene from refined petroleum or liquid hydrocarbons.

Additionally, there are new monitoring requirements for flares

that are used as control devices which will require costly investments into equipment to meet the standards. These flares will be subject to Refinery MACT provisions, with some modifications, which the EPA has determined is needed to assure 98% destruction efficiency of VOCs. In many instances where vapors from emissions sources during SSM events will be required to be controlled, it will be more practical to utilize mobile combustion technologies such as Thermal Oxidizers and Internal Combustion Engine Systems to handle these emissions and perform controlled tank degassing to the required levels before emitting to atmosphere.

According to the EPA's review of storage tanks that are required to be inspected every 10 years, and that are not in Texas or under SCAQMD, the new MACT standards will reduce the amount of HAP emissions by 74 tpy (tons per year). This is just one review that was noted in the EPA's consideration of the MACT standards. As is commonly known, these tanks often need to be taken out of services for reasons other than the required 10-year inspection.

When will facilities be required to comply with the new standards? Existing facilities will be required to meet the new MACT standards 3 years from the final publish of changes (by July 2023). Facilities that started construction or reconstruction on or before October 21, 2019, will be required to meet the new standards upon initial startup or the 3-year deadline from publish date, whichever is later.

The information contained within this article is provided as high-level overview of the new standards and primarily focused on new requirements for tank degassing. What do you need to do now? Review the new standards and explore options for controls to meet the new standards. Shelton Services can help you meet these requirements in relation to tank degassing and vapor control during SSM events and can be contacted at (866) J2S-6780.

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