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SCS TECHNICAL BULLETIN

CHANGE IN NONATTAINMENT DESIGNATION FOR THE GREATER MILWAUKEE METROPOLITAN AREA

January 12, 2024

INTRODUCTION

The Clean Air Act (the "Act") requires that the U.S. Environmental Protection Agency (U.S. EPA) set National Ambient Air Quality Standards (NAAQS) for six principal pollutants (criteria air pollutants). These pollutants can be harmful to public health and the environment. The standards provide public health protection, including protecting the health of sensitive populations such as asthmatics, children, and older people. Criteria air pollutants include ozone, nitrogen oxides, carbon monoxide, sulfur dioxide, particulate matter, and lead. Metropolitan areas where the standards have been achieved are considered in attainment with the standards. Those areas exceeding standards for one or more of the criteria air pollutants have a designation of "nonattainment."

Ozone is the toxic component of smog and is present in several urban areas around the country. Los Angeles is the most notable city that is designated nonattainment for ozone. Ozone is formed when heat and sunlight cause chemical reactions between nitrogen oxides (NOx) and volatile organic compounds (VOC).

Currently, the greater Milwaukee area is designated as moderate nonattainment for ozone.https://dnr.wisconsin.gov/topic/AirPermits/Nonattainment.html

The U.S. EPA is reviewing the Milwaukee nonattainment designation and may change the status from "moderate" to "serious." This change is expected to occur in the spring of 2025 but may occur as early as the fall of 2024. The re-classification has a direct impact on construction and operating air permitting programs.

OPERATION PERMITS

Title V of the Clean Air Act requires major sources of air pollutants and certain other sources to obtain and operate in compliance with an operating permit. With the impending change applicable to the greater Milwaukee metropolitan area from moderate to serious nonattainment for ozone, the Title V threshold for NOx and VOC emissions will decrease, meaning more companies will be subject to Title V permitting. A source can still accept a voluntary limit on its potential to emit and apply for a Federally Enforceable State Operating Permit (FESOP).

Title V Thresholds for Ozone (VOC and NOx)

Permitting Type	Moderate	Serious
Title V Threshold:	100 tpy of NOx and VOC	50 tpy of NOx and VOC

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CONSTRUCTION PERMITS

Title I of the Act addresses the criteria for construction permits, which are administered through the Nonattainment New Source Review (NSR) program in the case of major sources located in nonattainment areas, and Prevention of Significant Deterioration (PSD) for major sources located in attainment areas. Redesignation of the greater Milwaukee metropolitan area from moderate to serious nonattainment for ozone the NOx and VOC emissions threshold will decrease from the current threshold, which will mean more companies will be subject to NSR review for construction of new major sources and major modifications at major sources.

NSR Review

Construction of a new major source or major modification at an existing major source is subject to NSR review, which includes three primary components:

1. Implementation of the Lowest Achievable Emission Rate (LAER), which is the most stringent emission limitation derived from either of the following:

    a. The most stringent emission limitation contained in the implementation plan of any State for such class or category of source, or

    b. The most stringent emission limitation achieved in practice by such class or category of source.

The emissions rate may result from a combination of emissions-limiting measures such as a change in the raw material processed, a process modification, and/or installation of add-on pollution control equipment. Implementation of LAER is required regardless of the cost.

2. The NSR permitting process also requires the project emission increases to be "offset." Offsets are emission reductions obtained (purchased) from other emission sources that have banked emission decreases with the applicable permitting agency (Wisconsin Department of Natural Resources [WDNR]). To qualify as a bankable emission decrease, the decrease must be real, permanent, verifiable, and enforceable. The emission offsets must typically be acquired from a source within the same nonattainment area. The amount of emission decreases needed is not a one-to-one ratio; it depends on the level of nonattainment. In the case of serious nonattainment areas, the ratio is 1.2 units (tons per year [tpy]) of emission decreases for every one unit (tpy) of proposed emission increases.

Emission Offset Ratio for Ozone (VOC and NOx)

Permitting Type	Moderate	Serious
Emissions Offset Ratio:	1.15:1 for NOx and VOC	1.2:1 for NOx and VOC

Currently, one source of credible offset credits can be purchased in the greater Milwaukee area.

3. The third component of an NSR review is public notice. The permitting agency will not approve the project without a public comment period, usually 30 days plus an additional 15 days for the regional U.S. EPA office to review.

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Permit Number	ERC Holder	County of Origin	Nonattainment Area	Pollutant	Quantity (tpy)	Facility Contact	Comment
599001000-E01	Wisconsin Electric Power Company D/B/A/ WE Energies	Kenosha	Chicago, IL-IN-WI 2015 ozone NAAQS NAA	VOC	135.3	Robert Greco 414-221-5441 bob.greco@we-energies.com	Shutdown of Pleasant Prairie Power Plant. Generated 9/7/2018
599001000-E01	Wisconsin Electric Power Company D/B/A/ WE Energies	Kenosha	Chicago, IL-IN-WI 2015 ozone NAAQS NAA	NOx	2,634.3	Robert Greco 414-221-5441 bob.greco@we-energies.com	Shutdown of Pleasant Prairie Power Plant. Generated 9/7/2018

NSR AVOIDANCE

A major source proposing to construct a major modification can avoid an NSR permitting action by netting out of NSR. The netting process is an internal emissions reduction that can be applied against the proposed increase in emissions. Essentially, the emissions decrease must realize a net reduction in emissions such that the new project does not trigger the major modification threshold (25 tpy of NOx and VOC emissions, as applicable). Unlike offsets purchased from a third party, the netting process occurs internally, and netting has to achieve a one-to-one ratio of emission decreases to emission increases only. Ways to internally reduce emissions include shutting down a piece of equipment, rendering it inoperable, substituting a raw material with a new raw material containing less VOC, and other types of emission reductions that are real, permanent, verifiable, and enforceable. A netting action is enforceable by including it in the facility's air permit.

Note that the netting process allows a source to avoid NSR, so the emissions reduction should be accomplished before applying for an air permit and approved as a real permanent, verifiable, and enforceable reduction by the WDNR. An applicant can also include a description of the netting process in the permit application, but the permittee is taking a chance that the WDNR may not approve the reduction as real, permanent, verifiable, and enforceable.

NSR Thresholds for Ozone
(VOC and NOx)

Permitting Type	Moderate	Serious
NSR Threshold	40 tpy of NOx and VOCs	25 tpy of NOx and VOCs

REGISTRATION OPERATION PERMITS

Emission sources that are eligible for a Registration Operation Permit (ROP) have the potential to emit 25 percent or less of the applicable major source threshold. With the impending change applicable to the greater Milwaukee metropolitan area from moderate to serious nonattainment for ozone, the NOx and VOC emissions ROP threshold will decrease, meaning more companies will be ineligible for coverage under the ROP.

ROP Thresholds
(VOC and NOx)

Permitting Type	Moderate	Serious
ROPA Threshold.	25 tpy of NOx and VOCs	12.5 tpy of NOx and VOCs
ROPB Threshold	50 tpy of NOx and VOCs	25 tpy of NOx and VOCs

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CONCLUSIONS

- Any facility with a ROPA or ROPB will need to review actual emissions of VOC and NOx against the more stringent ROP thresholds to determine if they are still eligible under the ROP.

- Any facility with the potential to emit greater than 50 tpy of VOC or NOx will be required to obtain a Title V operating permit or voluntarily limit VOC and NOx emissions below 50 tpy.

- Review any upcoming projects, expansions, or modifications. It may be beneficial to assess if there are internal opportunities for netting out of NSR.

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