

DAR-17 / Federal Enforceability of Air Pollution Control Permits

New York State Department of Environmental Conservation

DEC Program Policy

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I. Summary: This document describes the procedure and requirements for developing federally enforceable permit conditions that must be used by permit writers when implementing the New York State Department of Environmental Conservation's (Department) operating permit program. This document updates the Department's procedures to reflect more recent practices and requirements, as the Department previously issued guidance regarding federal enforceability in air permits in 1994.

II. Policy: It is the policy of the Department that all air pollution control permits will be issued with federally enforceable terms and conditions where appropriate. Accordingly, permit writers should utilize the procedures described in this document when reviewing permit applications to ensure that each permit condition that is to be federally enforceable meets the necessary criteria. This policy supersedes Air Guide 10, Federal Enforceability of Information on Air Operating Permits, issued on October 5, 1994.

III. Purpose and Background: Federally enforceable is defined in 6 NYCRR Part 200.1(ab) as '*all limitations and conditions that are enforceable by the department and the administrator and citizens under the Clean Air Act (Act)*'. Examples of limitations and conditions that should be federally enforceable include, but are not limited to:

1. Emission standards, alternative emission standards, alternative emission limitations, and equivalent emission limitations established pursuant to Section 112 of the Act as amended in 1990. Section 112 of the Act addresses emissions of hazardous air pollutants. National Emission Standards for Hazardous Air Pollutants (NESHAPs) established after Section 112 was amended in 1990 are included in 40 CFR Part 63;
2. New source performance standards established pursuant to Section 111 of the Act, and emission standards established pursuant to Section 112 of the Act before it was amended in 1990. Section 112 of the Act addresses emissions of hazardous air pollutants. NESHAPs established before Section 112 was amended in 1990 are included

in 40 CFR Part 61;

3. All terms and conditions in a Title V facility permit, unless expressly designated as not federally enforceable;
4. All limitations and requirements included as part of the State Implementation Plan (SIP);
5. Limitations and conditions that are part of a New Source Review permit under 6 NYCRR Part 231 or federal construction permit issued under 40 CFR 52.21; and
6. Limitations and conditions in a permit issued pursuant to Subpart 201-7 that are designed to limit a facility's or emission source's potential to emit (PTE) for the purpose of avoiding an applicable requirement (defined at 6 NYCRR Part 201-2.1(b)(5)) to which the facility would otherwise be subject (i.e. an emissions cap).

The PTE of a stationary source is a critical factor in establishing regulatory applicability. PTE is defined at 6 NYCRR Part 200.1(b) as the maximum capacity of a stationary source to emit any air contaminant under its physical and operational design. A stationary source's PTE is determined as follows:

First, the stationary source's potential emissions are calculated at its maximum operational capacity. Any physical or operational limitation on the capacity of a stationary source to emit any air contaminant will be treated as part of the stationary source's design only if the limitation is federally enforceable. Limitations may include the installation of air pollution control equipment and/or restrictions on hours of operation, or on type or amount of material combusted, stored, or processed.

The stationary sources' PTE may be "capped" by any recognized practically and federally enforceable limits on the stationary source's emissions, such as limits on emissions of a contaminant during any 12-month period (defined at 6 NYCRR Part 201-2.1(b)(1)). In cases where the emission limit does not reflect the worst case scenario (maximum emissions with the facility operating at its full design capacity without any pollution control equipment), additional limitations must be established on the facility's production or operation. Production or operation limitations include restrictions on the rates of production, hours of operation, type and amount of fuel burned, or materials processed.

Another key component of federal enforceability is the requirement that an opportunity for public notice and participation be provided prior to the issuance of any air permit imposing limitations on a facility's or emission source's operation. This will allow interested parties the chance to review the record to determine whether a proposed limitation or reduction will produce the benefits claimed and whether practical means exist to monitor compliance with the limitation.

In order to be considered "federally enforceable", the terms and conditions in air pollution control permits must meet the following criteria:

1. The state's operating permit program has been approved by EPA;
2. The operating permits are legally binding on the facility under state law;

3. All emissions limitations, emission controls, and other requirements imposed by the operating permits are no less stringent than any of the corresponding federal regulations or SIP requirements;
4. The limitations, controls and requirements in the operating permits are permanent, quantifiable, and otherwise enforceable as a practical matter; and
5. The permits are issued subject to public participation, timely notice, and opportunity for public comment in accordance with 6 NYCRR 621.7.

The first two criteria are met by the Department's federally approved operating permit program and existing portions of the state's environmental conservation law. Accordingly, each permit writer is responsible for developing permit terms and conditions that satisfy the remaining criteria.

IV. Responsibility: The Division of Air Resources shall have primary responsibility for ensuring that this policy remains up-to-date and for providing any additional interpretation that may be needed. The Regional Air Pollution Control Engineers/Regional Office Staff, in consultation with the Bureau of Stationary Sources, will be responsible for implementing this policy when reviewing air pollution control permit applications received by the Department.

V. Procedure: Permit limitations fall into the following general categories:

- A. **Emission limits** restrict the amount of a pollutant emitted from a stationary source over a set time period. For example, a facility may be required to demonstrate that the concentration of NO_x in the stack gases is less than an acceptable level, or a facility may be required to demonstrate VOC emissions during any 12 month period are less than the major facility threshold. Emission limits are also accompanied by either a continuous monitoring system, intermittent stack testing requirement, or a method for calculating and tracking emission levels.
- B. **Production or raw material usage limits** restrict the amount of final product which can be manufactured or otherwise produced at a stationary source or limit the quantity of raw material used during a specified time period. For example, a facility may choose to limit (1) the amount of stone crushed per hour to limit emissions of particulate matter; (2) the sulfur content of the fuel burned to limit emissions of SO₂; (3) the megawatt hours produced each month by its turbine to limit emissions of NO_x; or (4) the amount of surface coating applied each month to limit emissions of VOC and/or HAP.
- C. **Operational limits** encompass all other restrictions on the manner in which an emission source functions. For example, a facility be required to monitor the temperature of a thermal oxidizer in order to demonstrate compliance with VOC RACT requirements, or a facility may be required to maintain the pressure drop across a baghouse within a certain range to demonstrate compliance with an NSPS particulate matter limit. Also a facility may be required to limit the monthly hours of operation of its boiler to limit emissions of SO₂ and NO_x.

Each limitation included in the permit must be stated as a separate condition that can be enforced independently from the other conditions in the permit. For example, a facility operating a baghouse may monitor both the pressure drop across the baghouse and the inlet temperature in order to demonstrate compliance with an applicable requirement. By including these limitations as separate conditions, the facility operator can easily determine which parameters need to be monitored, and what the applicable limitations are. Should enforcement action become necessary, the resulting notice of violation will clearly state which operating parameter was found to be out of compliance. If a permit requires the emissions from an emission source to be controlled by a control device (i.e. thermal oxidizer, baghouse, etc.), the control device must be operated at any time the emission source is in operation as required by a mandatory permit condition at 6 NYCRR Part 200.7.

Another important component of a federally enforceable permit condition is the inclusion of an appropriate averaging time and monitoring frequency. In general, the time period over which production or operational restriction is verified should be as short as possible. The reason for this policy is that enforcement actions can be initiated for continuing violations without having to wait an excessive amount of time for data to be collected and a violation to be verified.

A short term limit (e.g. pounds per hour) is appropriate for monitoring conditions that are associated with the operation of a continuous emission monitoring system. Such a system allows compliance data to be easily and reliably collected and reviewed by both the facility and the Department, resulting in a condition that is practically enforceable.

A long term limit (e.g. tons per year) is more appropriate when developing an emissions cap at the facility level. Such a limit must be written on a rolling basis (i.e. 12-month total rolled monthly) so that the facility can easily demonstrate compliance with its emission cap during each 12-month period as required by Part 201. Long term emission limits that are not based on a rolling average (e.g. 12-month calendar basis) are not practically enforceable, and therefore must not be used to establish an emissions cap.

Each limitation must also contain a record keeping requirement that will allow verification of a facility's compliance with its limits. For example, a facility monitoring the temperature of its thermal oxidizer on a continuous basis must be required to maintain a log of the recorded temperature data, and to make the log available to the Department upon request. Record keeping requirements must also state the time period that the facility is required to maintain such records (e.g. five years from the date of the record) on site.

The final component of a federally enforceable permit condition is an appropriate reporting frequency. The facility owner or operator should be required to submit a monitoring report to the Department at a regular interval so that continuous compliance can be verified in between site visits. The Title V permitting program requires that monitoring reports be submitted at least semiannually, unless more frequent reporting is required by an applicable requirement or for some other reason (e.g. as a resolution to a previous violation). For state facility permits, the reporting frequency for periodic monitoring and recordkeeping conditions is at the discretion of the permit writer, and should be based on best engineering judgment. The owner or operator of a facility that contains one or more emission caps must submit an annual compliance certification at a minimum.

In order to be practically enforceable, permits requiring installation of air pollution controls

must also have monitoring conditions for the operating parameters under which the control efficiency was achieved. For example, an asphalt plant may opt to install a baghouse by a manufacturer claiming 95% control efficiency for particulate matter. The applicant must provide sufficient documentation as part of the permit application that supports this claim. The resulting permit must include monitoring conditions that assure the specified control efficiency is being met continuously (e.g. pressure drop, inlet temperature, etc.). By noting continuous operation within the specified parameters, the field inspector can then assume that the control device is functioning properly and achieving the manufacturer's rated efficiency.

In addition, air pollution control devices controlling the main sources of emissions at a facility must be stack tested at a minimum of once per permit term in order to verify that they are still operating at the specified control efficiency. If the required control efficiency was achieved during the test using operating parameters other than those listed in the permit, the permit conditions must be modified accordingly.

The final component of developing a federally enforceable permit limitation is an appropriate period of public notice and comment as specified by Part 621.

Illustrative Examples of Federal Enforceability:

Listed below are hypothetical situations to illustrate the proper development of federally enforceable permit restrictions.

1. A proposed asphalt plant has the potential to emit 150 tons per year of PM-10. The applicant is proposing to install a baghouse with a manufacturer's guaranteed control efficiency of 95% in order to limit emissions below the major facility threshold (100 tpy).

There are several additional items that are needed before this proposed emissions cap can be considered to be an effective federally and practically enforceable limit. First, the facility must propose some form of parametric monitoring that indicates the design efficiency of the baghouse is being met (e.g. pressure drop). A separate monitoring condition must be developed for each parameter that is being monitored, and must also include an associated record keeping component. Second, the permit must contain a condition that requires the facility owner or operator to conduct a stack test in order to verify the control efficiency of the baghouse once during the term of the permit. Lastly, the permit must contain an emissions cap that restricts emissions of particulate matter to less than 100 tons per year. The cap should specify that PM-10 emissions must remain less than 100 tons during each 12-month period, calculated as a 12-month total rolled monthly. The permit must also specify the methodology for calculating monthly and 12-month total rolling emission totals. Additionally, the facility must be required to maintain all data and calculations used to determine compliance with the cap at the facility for a period of at least five years. The facility owner or operator must be required to submit an annual capping certification demonstrating that the facility has complied with its cap during each 12-month period of the preceding year. Finally, the resulting permit must be subject to public notice prior to issuance.

2. A proposed wood finishing operation has the ability to apply up to 10,000 gallons of topcoat per month. The proposed coatings have a VOC content of 1.8 pounds per gallon. Accordingly, the PTE of the facility is 108 tons per year of VOC. In order to avoid Title V

applicability, the facility is proposing to maintain records of coating usage to demonstrate that VOC emissions remain below the major facility threshold (50 or 25 tpy).

This limitation cannot be considered federally and practically enforceable as proposed because no restriction has been placed on the facility's potential to emit VOCs. Accordingly, the permit must contain an emissions cap that restricts emissions of VOC to less than the applicable major facility threshold during each 12-month period. The facility must also be required to demonstrate compliance with this cap by tracking coating usage on a monthly basis. The monthly coating usage will be multiplied by the VOC content of the coatings used, to calculate the monthly VOC emissions from the facility. The VOC emissions for each month must be added to the previous 11 months to generate the VOC emissions for each 12-month period.

Alternatively, the facility may choose to limit its PTE by purchasing and installing add-on controls (e.g. a thermal oxidizer). Such a device would need to have a destruction efficiency high enough to restrict emissions below the applicable major threshold. In addition, the permit would need to contain a parametric monitoring condition for at least one parameter that is representative of proper operation (e.g. operating temperature) and a once per permit term stack testing requirement.

In either case, the permit must be subjected to public notice prior to issuance for the restriction to be federally enforceable.

3. A landfill gas to energy facility proposes to construct five new identical engines with a potential to emit of 300 tpy of CO. The 300 tpy limit was estimated based on the CO emission factor (as lb/MW-hr) provided by the manufacturer and the engines' design capacity (in megawatt hours). The proposed engines are the only source of CO emissions at the facility. In order to remain below the major source threshold for PSD (250 tpy), the facility proposes a limit of 220 tpy of CO as a 12-month rolling total emissions.

There are several additional items that are needed before this proposed CO emissions cap can be considered to be a federally and practically enforceable limit. First, the permit should specify an emissions capping condition of 220 tpy of CO during each 12-month period. Second, the methodology for calculating the monthly and 12-month rolling emissions of CO must be clearly explained in the capping condition. Part of that methodology must be a requirement to track production (e.g., megawatt hours per month) so that it can be multiplied by the manufacturer's emission factor to determine the monthly CO emissions from the facility. Third, the permit must contain a condition that requires the facility to conduct CO stack tests following commencement of operation and once during the permit term thereafter to verify that the actual CO emission rate does not exceed the manufacturer's CO emission factor used in calculating the CO emission limit. Lastly, the facility must be required to maintain all data and calculations used in determining compliance with the cap at the facility for a period of at least five years. Additionally, the permit must be subjected to public notice prior to issuance for the limitations to be federally enforceable.

VI. Related References:

1. 6 NYCRR Part 201, Permits and Registrations
2. 40 CFR Part 70, State Operating Permit Programs