



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

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MEMORANDUM

To: Air Quality Permitting Staff

From: John Preczewski, P.E., Assistant Director
Air Quality Permitting Program

Date: 1/7/2008

Subject: Subchapter 18 Procedures for Modifications to Operating Permits

Attached is the December 14th, 2007 procedure for evaluating Operating Permit Modifications subject to N.J.A.C. 7:27-18. All Air Quality Permitting Staff is directed to use this guidance for all modifications currently under review. Permits issued with a netting analysis reviewed and approved before this procedure will not be re-evaluated under this procedure. Questions regarding this procedure should be directed to your immediate supervisor.

CC: William O'Sullivan, P.E., Director
Division of Air Quality

Subchapter 18 Procedures for Modifications to Operating Permits

December 14, 2007

Purpose

The intent of this clarifying document is to ensure consistent application of Subchapter 18 requirements for Operating Permit Modifications. This document also clarifies procedures that should be followed when applying Subchapter 18 requirements to specific situations. These procedures do not change existing regulatory requirements. They do address situations where errors may have been made in the past.

Background

An Operating Permit may have established emission units (or group) or batch processes through the permitting process. The compliance plan for these emission units (or groups) or batch processes must include enforceable ton-per-year (TPY) caps for all equipment (Significant Source Operations) covered by the unit or process. These caps, or potential-to-emit (PTE) limits, were not established to provide a method to avoid compliance with Major NSR and Subchapter 18. Specifically, the Air Permitting Program has become aware that the caps have been used, when constructing, re-constructing, or modifying equipment or control apparatus, to avoid a "Significant Net Emission Increase", pursuant to N.J.A.C. 7:27-18.2. These caps should not be used to "hide" new "actual" emissions to the atmosphere from the rule requirements of Subchapter 18.

Batch process equipment and control apparatus requires special consideration for Subchapter 18 applicability. Specifically, the Batch Plant Production Permitting Procedure (Technical Manual 1301) did not address TPY PTE for equipment or control apparatus. It shifted the TPY PTE analysis to the batch level (in the form of pounds of emissions per batch produced) and ultimately, TPY PTE was established based on an estimate of the number of batches. Furthermore a batch usually involved several pieces of equipment and "sets" of equipment.

Some operating permits have pilot plant operations included in the compliance plan under a batch process (BP). Such operations were sometimes included in an operating permit because they were "major" by themselves. The Pilot Plant Production Permitting Procedure (Technical Manual 1302) did not address TPY PTE for equipment or control apparatus. It established the TPY PTE for the entire pilot plant, regardless of the number of pieces of equipment.

Procedure

Subchapter 18 applicability is addressed by reviewing the determination required at N.J.A.C. 7:27-18.7, Determination of a Net Emission Increase or a Significant Net Emission Increase. The following examples provide guidance when using this determination method.

1. New equipment in an existing emission unit (or group). (This is the most common situation where Subchapter 18 requirements have been bypassed.) The Operating Permit's compliance plan will show the same TPY PTE before and after the modification for an emission unit (or group). Here, the "IA" term, at N.J.A.C. 7:27-18.7, should reflect the TPY PTE from the new piece of equipment, as limited by the compliance plan. In most cases, the TPY PTE from the new piece of equipment is equal to the TPY PTE established in the compliance plan for the emission unit (or group). The IA term is never "zero" in this situation.
2. Reconstructed or modified equipment or control apparatus in an existing emission unit (or group). The Operating Permit's compliance plan shows the same TPY PTE before and after the modification for an emission unit (or group) of equipment. If a piece of equipment in that emission unit (or group) will be changed to process higher throughput or higher-emitting materials, the "IA" term at N.J.A.C. 7:27-18.7 should reflect the increase in TPY PTE experienced by the changed piece of equipment. Even though the TPY PTE for the emission unit (or group) is unchanged, there is an increase in TPY from the "changed" piece of equipment. This increase should be shown in the IA term for Subchapter 18.
3. Construction (new equipment), re-construction, or modifications of equipment or control apparatus in a Batch Process (BP). For modification applications where the equipment or control apparatus was approved using Technical Manual 1301, Subchapter 18 should be evaluated for TPY PTE changes at the "BP" level in the compliance plan. Specifically, the "IA" term at N.J.A.C. 7:27-18.7 would be equal to the TPY increase offered in the modification application for the "BP."
4. Construction (new equipment), re-construction, or modifications of equipment or control apparatus in a Pilot Plant. For modification applications where the equipment or control apparatus is approved using Technical Manual 1302, Subchapter 18 should be evaluated for TPY PTE changes at the "BP" level in the compliance plan. Specifically, the "IA" term at N.J.A.C. 7:27-18.7 should be equal to the increase offered in the modification application for the "BP."
5. "Replacement" equipment or control apparatus in an existing emission unit (or group). Applications for "replacement equipment or control apparatus" are treated as an application for new equipment or control apparatus. The procedures described above for new equipment should be followed (see example #1 above). However, because there may be equipment shutdown as part of the modification request, the "DC" term at N.J.A.C. 7:27-18.7 may not be zero. The IA term is never "zero" in this situation.

6. Requests to permit higher allowable emissions with a claim that higher actual emissions were “always there.” This request is a change in the method of operation and the equipment’s “increase” in allowable emissions must be evaluated under Subchapter 18. An increase in allowable emissions is the clearest possible change in the method of operation under Subchapter 18. Such increases include changes to emission factors where the Facility decides a different method of calculating emissions is more reflective of their operation. The Operating Permit’s compliance plan may show the same TPY PTE before and after the modification for an emission unit (or group). However, the “IA” term, at N.J.A.C. 7:27-18.7, should reflect the TPY PTE increase from each affected piece of equipment. This situation is similar to the first example for new equipment in an existing emission unit (or group). The IA term is never “zero” in this situation.
7. Requests to “reset the permit.” Facilities that permitted and never constructed or modified equipment or control apparatus subject to offsets, must continue to carry forward the PTE increase in the contemporaneous period, unless the Operating Permit is revised to “cancel” the PTE, Operating Scenarios, Equipment and Control Apparatus. In recent examples, Facilities did not purchase required offsets because the projects were “canceled.” The Facilities asked to “reset” to the previous PTE that did not include the increases associated with the new equipment or control apparatus. This request is a “paper” reduction with neither an increase nor decrease in emissions for the contemporaneous period. In this example, the IP and DC term at N.J.A.C. 7:27-18.7 are “zero” for the contemporaneous period for the equipment or control apparatus removed by the revision. (Note: Had the Facility secured and transferred emission offsets in the above example before filing for an Operating Permit revision, those offsets would be considered “used” and not available for credit under any provision of Subchapter 18.)
8. Requests to add new emergency generators to an existing emission unit (or group). The Operating Permit’s compliance plan may show the same TPY PTE before and after a proposed modification for an emission unit (or group). Here, the “IA” term, at N.J.A.C. 7:27-18.7, would reflect the TPY PTE from the new generator(s). Specifically, the IA term should be limited to the emission increase associated with the testing and maintenance of the new generator(s) (as provided by the applicant). The IA term is never “zero” in this example.
9. “Contemporaneous” Period. With respect to newly constructed, reconstructed, or modified equipment, or a change in method of operation, Subchapter 18 defines “contemporaneous” as occurring within a time period which includes: 1. the five years prior to the commencement of construction; and, 2. the period between the commencement of construction and the initiation of operation of the newly constructed, reconstructed, or modified equipment. For the purposes of this definition, the five-year period prior to the commencement of construction is a “calendar year, consistent with the definition of “actual emissions” as used in the definition of “creditable emission reduction.” (The terms in the calculation at N.J.A.C. 7:27-18.7 must have the same basis as the contemporaneous period for any

creditable emission reduction, which is a calendar year. A calendar year is January 1 to December 31.) Using these definitions, the contemporaneous period is usually longer than five years as shown in the following example.

An application for modification states that the commencement of construction is expected to start on 11/16/07 and the initiation of operation is expected by 3/11/08. Here, the five-year period includes the calendar years 2002 through 2006. The contemporaneous period would start with calendar year 2002 and end on 3/11/08. (Applicants should be reminded that an application for modification must include these critical construction and operation dates to establish the correct contemporaneous period.) An application that requests several new pieces of equipment may have several contemporaneous periods based on different construction and operation dates. Each contemporaneous period must be evaluated under Subchapter 18 individually.

10. Non-source fugitive emissions. Subchapter 22 defines and regulates these types of emissions for certain facilities listed at N.J.A.C. 7:27-22.2, Applicability. These types of emissions were not included in the requirements of Subchapter 18 and therefore are not subject to the calculation procedures at N.J.A.C. 7:27-18.7. For example, truck traffic causing road dust is not regulated. As such, road dust, a non-source fugitive emission, is not included in the calculation procedures at N.J.A.C. 7:27-18.7. Conversely, a conveyor and its pile are regulated. As such, the emissions from the conveyor and pile would be included in the calculation. Note that the emissions from the pile are considered source fugitive and are always included in the calculation.
11. Insignificant Source Operations. When calculating IA (proposed increases in allowable emissions), emissions from insignificant sources should be taken into account. Specifically, the calculation procedures at N.J.A.C. 7:27-18.7 should include a best estimate of actual emissions expected from new insignificant source operations during the contemporaneous period.
12. Past Subchapter 18 applicability determinations. Permits issued with a netting analysis reviewed and approved before this procedure will not be re-evaluated under this procedure.
13. Today's LAER or yesterday's LAER for installed equipment. LAER is a case-by-case decision that can consider all facts and circumstances, including the fact that the equipment is "already installed." All of today's available control technology and alternative equipment for the type of source operation should be considered in the evaluation of LAER, including the technical feasibility of applying new technology to an existing source operation. This is a case-by-case decision. However, a LAER decision should be no less stringent than LAER at the time of installation or modification of the equipment or source operation, even if it means the equipment or

source operation must be replaced. It can also be more stringent, reflecting today's LAER, if the case-by-case evaluation indicates that is reasonable.

14. Procedures for offsets. Pursuant to N.J.A.C. 7:27-18.3(e), part of an application for modification, where offsets must be secured, includes an emission-offset demonstration. An operating permit modification should not be issued until the applicant has demonstrated that offsets have been secured and comply with N.J.A.C. 7:27-18.5. (Note that preconstruction approval, in advance of an operating permit modification approval, is not allowed for such a modification.) In addition, the public notice for such a modification should explain the amount of offsets required, identify where they have been "secured", and confirm that the DEP has verified that the offsets will comply with the rule. An applicant need not obtain the offsets before operating permit modification approval. The applicant must however, have an agreement(s) in place to obtain the offsets. Furthermore, the operating permit must include a requirement to transfer the offsets and notify the DEP (pursuant to N.J.A.C. 7:27-18.3(f)) prior to the initiation of operation of the equipment or control apparatus.
15. "Actual Emissions." The definition of "actual emissions" at N.J.A.C. 7:27-18.1 provides that the DEP may allow the use of a time period different than the rule-provided two-year period, if that "different time period is more representative of normal operation." The "representative" time period must always be in the five-year contemporaneous period.