

US EPA ARCHIVE DOCUMENT



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ADMINISTRATOR

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MEMORANDUM

SUBJECT: Project Emissions Accounting Under the New Source Review Preconstruction Permitting Program

FROM: E. Scott Pruitt

TO: Regional Administrators

In accordance with presidential priorities for streamlining regulatory permitting requirements for manufacturing, and in line with my prior recognition that “opportunities exist to simplify” the New Source Review process and thereby “achieve meaningful NSR reform,”¹ the U.S. Environmental Protection Agency has been undertaking an assessment of the agency’s implementation of the preconstruction permitting requirements under the NSR provisions of the Clean Air Act. As part of this assessment, the EPA has identified certain elements of the NSR regulations and associated EPA policies that have been sources of confusion and uncertainty.²

One such element that has given rise to uncertainty among both permitting authorities and stakeholders alike is whether emissions decreases from a proposed project at an existing major stationary source may be taken into account under Step 1 of the major modification applicability process in the EPA NSR regulations. The purpose of this memorandum is to communicate the EPA’s interpretation that its current NSR regulations provide that emissions decreases as well as increases are to be considered at Step 1 of the NSR applicability process, provided they are part of a single project. The EPA has at times indicated that the relevant provisions of the NSR regulations preclude the consideration of emissions decreases at Step 1, but for the reasons discussed below, the agency will no longer apply any such interpretation reflected in prior statements on this issue.³

¹ See Final Report on Review of Agency Actions that Potentially Burden the Safe, Efficient Development of Domestic Energy Resources Under Executive Order 13783 (Oct. 25, 2017) at 3.

² See, e.g. “New Source Review Preconstruction Permitting Requirements: Enforceability and Use of the Actual-to-Projected-Actual Applicability Test in Determining Major Modification Applicability” (Dec. 7, 2017).

³ Thus, for example, the EPA no longer subscribes to the reading of the NSR regulations that is reflected in the Letter from Barbara A. Finazzo, U.S. EPA Region 2 to Kathleen Antoine, HOVENSA, LLC, “Re: HOVENSA Gas Turbine

Background

Under EPA regulations, the process for determining whether a project at an existing major stationary source triggers the requirement to obtain an NSR permit is a two-step process. Step 1 requires a determination of whether the proposed project, by itself, is projected to result in a significant emissions increase. If such an increase is projected to occur, the process moves to Step 2. Under Step 2, an evaluation is made as to whether the project will result in a significant *net* emissions increase, considering any other increases and decreases in actual emissions at the source that are contemporaneous with the particular project and are otherwise creditable. The EPA has generally referred to Step 2 as “netting” or “contemporaneous netting.”

In the past, the EPA has sometimes described the consideration of both increases and decreases in emissions under Step 1 of the NSR applicability process as “project netting.” The EPA now recognizes that using the term “project netting” at Step 1 has resulted in confusion among stakeholders, permitting authorities and within the EPA itself. A more appropriate term to characterize the consideration of a proposed project’s emissions increases and decreases at Step 1 is “project emissions accounting.” In the context of Step 1, the term “netting” is misplaced, insofar as “netting” more properly describes looking at those *other* projects that may have been or will be undertaken at a given facility over the contemporaneous period – i.e. an evaluation that takes place under Step 2. In contrast, “project emissions accounting” more accurately captures what Step 1 of the NSR applicability process is really all about – i.e. taking account of the true emissions impacts of the project itself.

The EPA believes that those prior agency statements that interpreted the NSR regulations as precluding project emissions accounting have had the practical effect of preventing certain projects from going forward and significantly delaying others, even though those projects would not have resulted in a significant emissions increase.⁴ The EPA recognizes that because of the inherent complexities associated with doing multi-year contemporaneous netting under Step 2 at a large facility,⁵ some companies may have been dissuaded from undertaking some projects. As a consequence, the EPA’s lack of clarity in this matter likely foreclosed projects with the potential to make production more efficient across a wide variety of industrial sectors. Such efficiencies can result in reduced emissions, even while production is maintained or expanded. The interpretation provided here is consistent with the language of the NSR regulations and should result in sounder regulatory outcomes.

Nitrogen Oxides (GT NO_x) Prevention of Significant Deterioration (PSD) Permit Application- Emission Calculation Clarification” (March 30, 2010) (March 30 HOVENSA Letter).

⁴ See, e.g. National Mining Association Response to Request for Comments on Regulations Appropriate for Repeal, Replacement, or Modification Pursuant to Executive Order 13777, 82 FR 17,793 (Apr. 13, 2017), at 3-4, EPA-HQ-2017-0190-37770; Testimony of Paul Noe for Am. Forest & Paper Ass’n and Am. Wood Council, House Comm. on Energy & Commerce, Subcomm. on Env’t. Oversight Hearing on “New Source Review Permitting Challenges for Manufacturing and Infrastructure.” at 2, 5, 7-8 (Feb. 14, 2018) (“Noe Testimony”).

⁵ See, e.g. Noe Testimony at 7-8.

Relevant CAA and Regulatory Provisions

The NSR provisions of the CAA and the EPA's implementing regulations require that a preconstruction permit be obtained prior to beginning (1) the construction of a new major stationary source or (2) a "major modification" to an existing major stationary source. In general, preconstruction permits for sources emitting pollutants for which the area is designated attainment or unclassifiable and for other pollutants regulated under the major source program are called prevention of significant deterioration (PSD) permits. Permits for major sources emitting nonattainment pollutants and located in nonattainment areas are referred to as nonattainment NSR (NNSR) permits. The preconstruction permitting program, including the PSD and the NNSR permitting programs, is known as the NSR program.

The CAA contains no statutory definition of the term "major modification." The CAA does, however, define the term "modification" – i.e. "any physical change in, or change in the method of operation of, a stationary source which increases the amount of any air pollutant emitted by such source or which results in the emission of any air pollutant not previously emitted." 42 U.S.C. § 7411(a)(4); CAA § 111(a)(4).⁶ Reflecting the fact that the preconstruction review provisions of the CAA's PSD and nonattainment area permitting programs are phrased in terms of the construction or modification of a "major emitting facility" (under the PSD program) and of a "major stationary source" (under the nonattainment program),⁷ The EPA's implementing regulations have from their earliest days been framed in terms of how one goes about determining whether a particular activity at an existing "major stationary source" will be deemed to be a "major modification."⁸ The EPA regulations specify that one determines whether a modification is "major" based on whether the modification results in an increase of emissions above specified rates defining whether the increase is "significant" (or greater than a *de minimis* amount).⁹

A project¹⁰ constitutes a major modification for a regulated NSR pollutant if (and only if) it would result in two types of emissions increases – i.e. a significant emissions increase

⁶ This definition of "modification," originally enacted by Congress in 1970 as part of the New Source Performance Standards (NSPS) program, was incorporated by reference for purposes of the newly enacted PSD and nonattainment programs by the Clean Air Act Amendments of 1977. *See* 42 U.S.C. § 7479; CAA § 169(C) ("The term 'construction' when used in connection with any source or facility, includes the modification (as defined in section 7411(a) of this title) of any source or facility."); 42 U.S.C. 7501 (4); CAA § 171 (4) ("The terms 'modifications' and 'modified' mean the same as the term 'modification' as used in section 7411(a)(4) of this title.")

⁷ 42 FR 57479, 57480 (Nov. 3, 1977).

⁸ *See, e.g.* 40 CFR § 52.21(a)(2) (1978).

⁹ *See, e.g.* 40 CFR § 52.21(a)(2) (2017). The EPA adopted this current approach after a court rejected the EPA's initial attempt to determine whether a modification was "major" based on the thresholds of 100 and 250 tons per year from the statutory definition of "major emitting facility." *Alabama Power v. Costle*, 636 F.2d 323, 399-400 (D.C. Cir. 2012); 44 FR 51924, 51937 (Sept. 9, 1979); 45 FR 52676, 57705 (Aug. 7, 1980).

¹⁰ A "project" is defined as "a physical change in, or change in the method of operation of, an existing major stationary source." 40 CFR § 52.21(b)(52).

(determined at Step 1), and a significant net emissions increase (determined at Step 2).¹¹ *See, e.g.* 40 CFR § 52.21(a)(2)(iv)(a).¹² These NSR applicability procedures, adopted as part of the 2002 NSR Reform rule,¹³ codified a prior EPA practice of looking first at whether any emissions increase that may result from the project itself would be significant before evaluating whether there would be a significant “net emissions increase” from the major stationary source as a whole.

The regulations further specify that the particular procedure for calculating whether a proposed project would by itself result in a significant emissions increase depends upon the type of emissions units that would be included in the proposed project.¹⁴ *See* 40 CFR § 52.21(a)(2)(iv)(b). These different procedures are required because, under the NSR regulations, the specific requirements for determining both the “baseline actual emissions” and the post-change “projected actual emissions” for existing emissions units are different than the requirements for determining the “baseline actual emissions” and the post-change “potential to emit” for new emissions units.

As relevant here, the NSR regulations currently provide as follows:

§ 52.21 Prevention of significant deterioration of air quality.

(a)(1) * * * *

(2) *Applicability procedures.* (i) The requirements of this section apply to the construction of any new major stationary source (as defined in paragraph (b)(1) of this section) or any project at an existing major stationary source in an area

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The net emissions increase is calculated as the sum of the emissions increase attributable to the particular project, calculated pursuant to 40 CFR § 52.21(a)(2)(iv), and any other increases and decreases in actual emissions at the major stationary source that are contemporaneous and otherwise creditable. *See* 40 CFR § 52.21(b)(3). Notwithstanding the interpretation of Step 1 communicated in this memorandum, source-wide netting (i.e. Step 2) will continue to have an important role in the NSR applicability process. For example, source-wide netting always will be needed, as appropriate, to allow for consideration of emissions associated with past projects within the contemporaneous period.

¹² This memorandum cites certain provisions in the federal PSD regulations at 40 CFR § 52.21(a)(2). The other NSR regulations, including 40 CFR § 51.166(a)(7), 40 CFR § 51.165(a)(2), and Appendix S of Part 51 (Part IV, Subpart I), contain analogous definitions and requirements, and the interpretation set forth in this memorandum also applies to those analogous provisions. However, there are certain modification provisions under the Title I, Subpart D of the CAA and the EPA nonattainment NSR regulations that apply to certain nonattainment area classifications (*see, e.g.* CAA § 182(e)(2); 40 CFR Part 51, Appendix S 11.A.5.(v)). This memorandum does not address those specific modification provisions in the Act or the EPA regulations for nonattainment areas, and, thus, does not communicate any EPA view regarding interpretation of those provisions.

¹³ In 2002, the EPA issued a final rule that revised the regulations governing the major NSR program. 67 FR 80186 (Dec. 31, 2002). The agency refers generally to these rule provisions as the “NSR Reform rule.”

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“Emissions unit” is defined, in relevant part, as “any part of a stationary source that emits or would have the potential to emit any regulated NSR pollutant and includes an electric utility steam generating unit as defined in paragraph (b)(31) of this section.” 40 CFR § 52.21(b)(7). An “emissions unit” can be either a “new” unit or an “existing” unit, with a “new” unit being further defined as “any emissions unit that is (or will be) newly constructed and that has existed for less than 2 years from the date such emissions unit first operated.” *Id.* at § 52.21(b)(7)(i). An “existing emissions unit” is any unit that is not a “new emissions unit.” *Id.* at § 52.21(b)(7)(ii).

designated as attainment or unclassifiable under sections 107(d)(1)(A)(ii) or (iii) of the Act.

* * * *

(iv) The requirements of the program will be applied in accordance with the principles set out in paragraphs (a)(2)(iv)(a) through (f) of this section.

* * * *

(b) The procedure for calculating (before beginning actual construction) whether a significant emissions increase (i.e. the first step of the process) will occur depends upon the type of emissions units being modified, according to paragraphs (a)(2)(iv)(c) through (f) of this section. The procedure for calculating (before beginning actual construction) whether a significant net emissions increase will occur at the major stationary source (i.e. the second step of the process) is contained in the definition in paragraph (b)(3) of this section. Regardless of any such preconstruction projections, a major modification results if the project causes a significant emissions increase and a significant net emissions increase.

(c) *Actual-to-projected-actual applicability test for projects that only involve existing emissions units.* A significant emissions increase of a regulated NSR pollutant is projected to occur if the sum of the difference between the projected actual emissions (as defined in paragraph (b)(41) of this section) and the baseline actual emissions (as defined in paragraphs (b)(48)(i) and (ii) of this section), for each existing emissions unit, equals or exceeds the significant amount for that pollutant (as defined in paragraph (b)(23) of this section).

(d) *Actual-to-potential test for projects that only involve construction of a new emissions unit(s).* A significant emissions increase of a regulated NSR pollutant is projected to occur if the sum of the difference between the potential to emit (as defined in paragraph (b)(4) of this section) from each new emissions unit following completion of the project and the baseline actual emissions (as defined in paragraph (b)(48)(iii) of this section) of these units before the project equals or exceeds the significant amount for that pollutant (as defined in paragraph (b)(23) of this section).

(e) [Reserved]¹⁵

¹⁵ While now designated as “reserved,” what had been clause (e) of 40 CFR § 52.21(a)(2)(iv) was promulgated as part of the 2002 NSR Reform rule. As originally promulgated, clause (e) read as follows:

(e) *Emissions test for projects that involve Clean Units.* For a project that will be constructed and operated at a Clean Unit without causing the emissions unit to lose its Clean Unit designation, no emissions increase is deemed to occur.

See 67 FR 80275. The Clean Unit provision of the 2002 NSR Reform rule was subsequently held to be unlawful and vacated by the U.S. Court of Appeals for the D.C. Circuit in *State of New York v. EPA*, 413 F.3d 3, 38-40 (D.C. Cir.

(f) *Hybrid test for projects that involve multiple types of emissions units.* A significant emissions increase of a regulated NSR pollutant is projected to occur if the sum of the emissions increases for each emissions unit, using the method specified in paragraphs (a)(2)(iv)(c) through (d) of this section as applicable with respect to each emissions unit, for each type of emissions unit equals or exceeds the significant amount for that pollutant (as defined in paragraph (b)(23) of this section).

40 CFR § 52.21(a)(2)(iv)(b)-(f).

The EPA's Interpretation of the NSR Applicability Provisions

Based on the reconsideration of some previous conclusions and an examination of the regulations as a whole, the EPA now interprets the provisions set forth in 40 CFR § 52.21(a)(2)(iv)(c) through (iv)(f) as providing that any emissions *decreases* that may result from a given proposed project are to be considered when calculating at Step 1 whether the proposed project will result in a significant emissions increase. This interpretation is grounded in the principle that the “plain language of the CAA indicates that Congress intended to apply NSR to *changes that increase actual emissions.*” *State of New York v. EPA*, 413 F.3d at 40 (emphasis added). Central to the CAA’s definition of “modification” is that there must be a causal link between the physical or operational change at issue – i.e. the “project” – and any change in emissions that may ensue. In other words, it is necessary to account for the full and direct effect of the proposed change itself. Accordingly, at the very outset of the process for determining whether NSR may be triggered, the EPA should give attention to not only whether emissions may increase from those units that are part of the project but also whether emissions may at the same time decrease at other units that are also part of the project.

The use of the phrase “sum of the difference” in clauses (c) and (d) of 40 CFR § 52.21(a)(2)(iv) makes this clear. The “difference” between a unit’s projected actual emissions or potential to emit (following the completion of the project) and its baseline actual emissions (prior to the project) may be either a positive number (representing a projected increase) or a negative number (representing a projected decrease). In either case, the values that result from “summing” the “difference” are to be taken into consideration at Step I in determining the emissions impact of the project.

Some have argued that, in the case of projects involving only new units, the “sum of the difference” could never include a decrease in emissions, because the applicable test compares the potential to emit following the project to pre-project baseline actual emissions, which are equal to

2005). Thereafter, all of the regulatory language related to the Clean Unit provision, including clause (e) of 40 CFR § 52.21(a)(2)(iv), was stricken from the NSR Reform rule. *See* 72 FR 32526, 32528 (June 13, 2007). Also affected by the D.C. Circuit’s vacatur was certain language of clause (f) of 40 CFR § 52.21(a)(2)(iv) as it had originally been promulgated in 2002. Struck from clause (f) was a final sentence that provided: “For example, if a project involves both an existing unit and a Clean Unit, the projected increase is determined by summing the values determined using the method specified in paragraph (a)(2)(iv)(c) of this section for the existing unit and using the method specified in paragraph (a)(2)(iv)(e) of this section for the Clean Unit.” *See* 67 FR 80275; 72 FR 32529.

zero.¹⁶ What this argument overlooks is that the NSR regulations define a “new unit” as “any emissions unit that is (or will be) newly constructed and that has existed *for less than 2 years* from the date such emission unit first operated” 40 CFR § 52.21(b)(7)(i) (emphasis added), and for a new unit “the baseline actual emissions for purposes of determining the emissions increase that will result from the initial construction and operation of such unit shall equal zero,” and “thereafter, for all other purposes, shall equal the unit’s potential to emit.” 40 CFR § 52.21(b)(48)(iii). Therefore, following initial construction or permitting, a “new unit” (i.e. one that has existed for less than two years since it first operated) could, as the result of a particular project, experience a decrease in potential emissions – that is, the “sum of the difference” could be a negative number – if that project involved, for instance, the installation of controls on the unit, resulting in a decrease in the unit’s potential to emit.^{17e}

The phrase “sum of the difference” does not appear in clause (f) of 40 CFR § 52.21(a)(2)(iv). This omission, and the fact that clause (f) speaks of the “sum of the emissions increases,” led the EPA to say in a September 2006 notice of proposed rulemaking that this “challenges whether an emissions increase at an individual emissions unit can be a negative number.” See 71 FR 54249 (Sept. 14, 2006). While the EPA went on to say that it was “reasonable to conclude that a source can perform project netting for hybrid [projects] as well,” the agency also indicated that the “current rule . . . would not allow a source to include reductions from units that are part of the project until Step 2 of the calculation.” *Id.* It was on that basis that the EPA proposed new regulatory language that was directed at making it explicit that emissions decreases as well as increases would be accounted for at Step I for projects involving both existing and new units. *Id.* at 54252.

Based on a more thorough consideration of the surrounding context in the regulations, the EPA finds that the negative inference which the agency drew in 2006 from the fact that the phrase “sum of the difference” is absent from clause (f) was unwarranted.¹⁸ Other language in clause (f)

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It was on this basis that the EPA previously said that, because the “sum of the difference” for a project that only involves new emissions units must entail summing only emissions increases, this result should also inform the reading of the “sum of the difference” as the phrase is applied to projects involving only existing units, leading to the conclusion that taking account of emissions decreases at Step I is not permitted at all. See March 30 HOVENSA Letter at 5. As was previously noted, the EPA no longer subscribes to the reading of the NSR regulations reflected in the March 30 HOVENSA Letter.

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In its March 30 HOVENSA Letter, the EPA also stated that “EPA would not have needed to provide a special provision and unique rationale for the replacement unit rule if EPA had intended to allow project netting under the 2002 NSR Reform Rule.” March 30 HOVENSA Letter at 4. But this does not follow. Absent the provision, a replacement unit would be deemed a new emissions unit to which the actual-to-potential test would apply instead of the actual-to-projected-actual test applicable to existing units (including replacement units). This difference between the two applicability tests remains regardless of whether emissions decreases are accounted for at Step I.

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This negative inference previously led the EPA to adopt the view that this provision did not allow “project netting,” 71 FR at 54249, and thus that it was necessary to propose an amendment to 40 CFR § 52.21(a)(2)(iv)(f) to allow project emission accounting for hybrid projects. 71 FR at 54251. Since the EPA no longer considers the negative inference to be warranted, the agency also does not believe it is necessary to finalize the proposed 2006 revision before project emissions accounting can be conducted in Step I of the NSR applicability analysis for hybrid projects. However, the EPA is not taking action at this time to withdraw the project netting elements of the 2006 notice of proposed rulemaking. The EPA is still evaluating whether a revision of the text of 40 CFR § 52.21(a)(2)(iv)(f) is desirable to provide additional clarity on this issue.

indicates that emissions decreases are also to be accounted for. Clause (f) specifically provides that the “sum of the emissions increases for each emissions unit” is to be calculated *after* the specific impact of the proposed project has been ascertained with respect to each type of unit involved, “using the method specified in paragraphs (a)(2)(iv)(c) through (d) of this section *as applicable with respect to each emission unit.*” (emphasis added). That is, for a project involving both existing and new units, this accounting is to be done on a unit type-by-unit type basis, in which both emissions decreases (if any) and emissions increases (if any) are to be taken into consideration.

Moreover, the history of this provision in the regulations indicates that the EPA originally intended that project emissions accounting be allowed at Step 1 for projects involving different types of units. The concluding “For example . . .” sentence that had originally been part of clause (f) but which had been stricken (for unrelated reasons) when the Clean Unit provision was vacated, *see* note 15 above, illustrates the agency’s intention. That sentence provided that, where a proposed project involves different types of units, the determination whether there is a projected increase is to be made by “summing the *values determined using* the method specified in paragraph (a)(2)(iv)(c) of this section for the existing unit and using the method specified in paragraph (a)(2)(iv)(e) of this section for the Clean Unit.” (emphasis added). If one were to substitute “new unit” for “Clean Unit” and “paragraph (a)(2)(iv)(d)” for “paragraph (a)(2)(iv)(e),” by way of providing a different “example,” the point remains. Since the “values” derived from calculating the “sum of the difference” with respect to both existing units and new units could be a negative number, the language used in clause (f) – “sum of the emissions increases” – presents no “challenge” to the use of project emissions accounting, i.e. taking account of emissions decreases as well as emissions increases, under the current regulatory language pertaining to projects that involve both existing and new units.

The EPA does not interpret the existing regulations as requiring that a decrease be creditable or enforceable as a practical matter in order to be considered at Step 1. The issue of whether an emissions decrease is creditable and enforceable is relevant to Step 2, but not to Step 1. Regarding this, in the 2002 NSR Reform rule, the EPA expressly declined to adopt a requirement under which a source’s post-project projected actual emissions would have become an enforceable emission limitation. Such an approach had previously been suggested by the EPA, but the agency ultimately rejected it. *See* 67 FR 80193, 80197. The same reasoning that underpinned the 2002 NSR Reform rule’s treatment of projected actual increases applies equally to projected emissions decreases at Step 1. One exception to this is where an emissions decrease is calculated using the potential to emit of a unit after the project. In such a case, the requirements of 40 CFR § 52.21(b)(4) would continue to apply.

The EPA also promulgated, as part of its adoption of provisions addressing the use of the “projected actual emissions” methodology, provisions pertaining to the tracking, documenting, and, under certain circumstances, the reporting of post-project emissions increases. *See, e.g.* 40 CFR §§ 52.21(b)(4), 52.21(r)(6). Those provisions would impose on sources the same obligations with respect to emissions decreases taken account of at Step 1. Given this, the EPA should not treat projected increases and projected decreases differently at Step 1, by requiring that decreases

be “credible” and “enforceable,” as would be the case with contemporaneous decreases accounted for at Step 2.¹⁹

Finally, it is important to point out that project emissions accounting, as described above, is a calculation that is done in conjunction with ascertaining, prior to beginning actual construction, the applicability of NSR to a particular project at a source that the owner/operator is itself *proposing* to undertake. In this regard, the EPA recognizes that as a general matter, the source itself is responsible for defining the scope of its own “project,” subject to the understanding that the source cannot seek to circumvent NSR by characterizing the proposed project in a way that would separate into multiple projects those activities that, by any reasonable standard, constitute a single project. Subject to the equivalent understanding that it might be possible to circumvent NSR through some wholly artificial grouping of activities, the EPA does not interpret its NSR regulations as directing the agency to preclude a source from reasonably defining its proposed project broadly, to reflect multiple activities. The EPA will speak more to this issue in planned upcoming action on “project aggregation.”

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The EPA Regional Offices should send this memorandum to states within their jurisdiction. For any questions concerning this memorandum, please contact Anna Marie Wood in the Office of Air Quality Planning and Standards at (919) 541-3604 or wood.anna@epa.gov.

¹⁹ In the September 2006 notice of proposed rulemaking, the EPA had proposed to adopt regulatory language that specified, for the purposes of what was then termed “project netting,” that emissions decreases must be credible or otherwise enforceable as a practicable matter. *See* 71 FR 54252. At that time, the EPA provided no explanation why it considered such a requirement to be either necessary or warranted, and the agency now recognizes that other provisions in existing regulations serve to alleviate concerns that projected emissions decreases would escape the same tracking, documentation and reporting requirement applicable to projected emissions increases. As discussed in footnote 18, the EPA is not withdrawing the September 2006 proposal at this time, pending further consideration of whether a revision of the regulatory text is desirable to provide further clarity.