1-2008 ELR NEWS & ANALYSIS 38 ELR 10003

ARTICLES

Preventing Significant Deterioration Under the Clean Air Act: New Facility Permit Triggers

by John-Mark Stensvaag

Editors' Summary: The CAA's PSD program is extraordinarily complex. This Article is the third in a series on preventing significant deterioration under the CAA. The first two Articles, which appeared in the December 2005 and January 2006 issues of News & Analysis*, focused on baselines, increments, and ceilings. In this Article, Prof. John-Mark Stensvaag turns his focus to the circumstances under which a new stationary source must obtain a PSD permit. After explaining the benefits of avoiding a PSD permit requirement, he explores the statutory and regulatory language relevant to construction of a new major emitting facility.*

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I. Introduction

The Clean Air Act's (CAA's) prevention of significant deterioration (PSD) program is now more than 30 years old.[1] Born of a simple notion—that air quality in pristine areas of the nation should not be degraded to the levels otherwise permitted by national ambient air quality standards

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1. For a description of the PSD program's origin and development, see John-Mark Stensvaag, *Preventing Significant Deterioration Under the Clean Air Act: Baselines, Increments, and Ceilings—Part I*, 35 ELR 10807, 10808 & nn.1-6 (Dec. 2005); Craig N. Oren, *Prevention of Significant Deterioration: Control-Compelling Versus Site-Shifting*, 74 Iowa L. Rev. 1, 10 (1988).

(NAAQS)[2]—the program has grown into a regime of extraordinary complexity.[3]

How has this program been implemented? How does today's real-world PSD program correspond to the structure initially invented by the U.S. Environmental Protection Agency (EPA) and codified by the U.S. Congress? Definitive answers to these questions are probably unattainable, because the true contours of PSD implementation could be discerned only by reading tens of thousands of documents associated with many hundreds of PSD permits—documents and permits scattered throughout the nation.[4] Nevertheless, some things may be learned by reviewing the statutory language, EPA regulations,[5] the thousands of *Federal Register* documents, and the hundreds of judicial and administrative opinions that make up the more readily available public face of the program.

Two earlier Articles in this series sought to address what this more limited database tells us about one aspect of PSD implementation: baselines; increments; and ceilings.[6] Those Articles demonstrated what seems to be a truism: initial understandings of core environmental law programs are frequently misleading and superficial, because such programs will be seen to be vastly different once their fine print has been explored.[7]

This Article examines a question uppermost in the minds of developers: under what circumstances must a new stationary source obtain a PSD permit?[8]

At the outset, it is important to specify what this Article does not address. PSD permits may be required not only for the construction of new stationary sources but also for certain modifications of existing facilities. The circumstances in which modification activities trigger the need for a PSD permit are complex and highly controversial.[9] This Article does not seek to address those circumstances. Instead, the Article is addressed to the situation in which a new stationary source is being constructed from scratch. To use somewhat extreme imagery, picture a site currently populated only by tumbleweeds. Will a proposed new facility constructed on this site need a PSD permit?

II. Why Seek to Avoid a PSD Permit?

The importance of the foregoing question to a proposed developer can best be understood by summarizing briefly the hurdles that the developer must surmount if a PSD permit is, indeed, required.

A. The Consequences of Pulling the PSD Permit Trigger

A PSD permit may not be issued until:

> (1) the proposed project has undergone preconstruction review, including a public hearing[10];
>
> (2) the permit applicant has demonstrated that emissions from the construction or operation of the proposed facility will not cause, or contribute to, air pollution in excess of—
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> (A) any maximum allowable PSD increment or ceiling[11];
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> (B) any NAAQS in any air quality control region[12]; or
>
> (C) any other applicable emission standard or standard of performance under the CAA[13];
>
> (3) the proposed facility is subject to the best available control technology "for each pollutant subject to regulation under this chapter emitted from, or which results from, such facility"[14];
>
> (4) statutory provisions designed to protect Class I areas have been complied with[15];

2. This Article assumes a basic understanding of NAAQS, the concepts of attainment and nonattainment, and the role of the PSD program in precluding the significant degradation of air quality in attainment and unclassifiable areas. For an explanation of these CAA features, see Stensvaag, *supra* note 1, at 10808-12.

3. "[T]he requirements . . . virtually swim before one's eyes." U.S. Steel Corp. v. EPA, 444 U.S. 1035, 1038, 10 ELR 20081 (1980) (Rehnquist, J., dissenting from denial of certiorari).

4. *See* Stensvaag, *supra* note 1, at 10808:

> Only by poring through permit applications, monitoring reports, letters, briefs, memoranda, draft permits, consultant reports, agency minutes, and administrative opinions, could one begin to understand the numerous interpretative choices that have led to the issuance of and conditions in a given PSD permit (or to a determination that no permit is necessary).

5. EPA's PSD regulations are echoed in two places: 40 C.F.R. Part 51 (setting forth the items that must be included in any state implementation plan (SIP) or tribal implementation plan (TIP) for a state or Native American tribe wishing to take over and administer the PSD program); and 40 C.F.R. Part 52 (setting forth the PSD requirements applicable in those states or Native American nations whose PSD programs have not been approved by EPA).

6. Stensvaag, *supra* note 1; John-Mark Stensvaag, *Preventing Significant Deterioration Under the Clean Air Act: Baselines, Increments, and Ceilings—Part II*, 36 ELR 10017 (Jan. 2006).

7. *See* Stensvaag, *supra* note 1, at 10808; John-Mark Stensvaag, *The Not So Fine Print of Environmental Law*, 27 Loy. L.A. L. Rev. 1093, 1103 (1994).

8. A thorough canvassing of PSD implementation would address at least the following topics lying beyond the scope of this Article and the two prior Articles: (1) the geographic reach of the program, including designations, redesignations, and classifications; (2) modification activities triggering the PSD permit requirement; (3) fugitive and secondary emissions; (4) PSD permit avoidance techniques, including synthetic minor permits; (5) best available control technology (BACT) standards; (6) increment consumption and air-quality related values in Class I areas; (7) permit procedures; and (8) enforcement.

9. A PSD permit is required for the "construction" of certain stationary sources under certain conditions. *See* CAA §165(a), 42 U.S.C. §7475(a). The term "construction" is defined by statute to include the "modification"—as defined in CAA §111(a)—of any source or facility, CAA §169(2)(C), 42 U.S.C. §7479(2)(C), and the regulations provide that a PSD permit is required for a "major modification." *See* 40 C.F.R. §§51.166(a)(7)(iii), 52.21(a)(2)(iii). The PSD regulations further specify, however, that "modification" does not include "routine maintenance, repair and replacement." 40 C.F.R. §§51.166(b)(2)(iii)(a), 52.21(b)(2)(iii)(a). Whether modification activities have pulled the PSD permit trigger is an extraordinarily complicated issue. *See, e.g.*, Environmental Defense v. Duke Energy, 127 S. Ct. 1423, 37 ELR 20076 (2007); United States v. Cinergy Corp., 458 F.3d 705, 36 ELR 20167 (7th Cir. 2006); United States v. East Kentucky Power Co-Op., 2007 WL 959162 (E.D. Ky. 2007); Shi-Ling Hsu, *The Real Problem With New Source Review*, 36 ELR 10095, 10101-02 (Feb. 2006); *id*. at 10101 (lamenting "the fruitlessness of drawing a workable dividing line for the argument over the meaning of 'major modification'").

10. CAA §165(a)(2), 42 U.S.C. §7475(a)(2).

11. *Id.* §165(a)(3)(A), 42 U.S.C. §7475(a)(3)(A). For a thorough exploration of PSD increments and ceilings, see Stensvaag, *supra* note 1; Stensvaag, *supra* note 6.

12. *Id.* §165(a)(3)(B), 42 U.S.C. §7475(a)(3)(B).

13. *Id.* §165(a)(3)(C), 42 U.S.C. §7475(a)(3)(C).

14. *Id.* §165(a)(4), 42 U.S.C. §7475(a)(4).

15. *Id.* §165(a)(5), 42 U.S.C. §7475(a)(5). Protection of air quality in Class I areas—the most highly valued locations (such as national parks) under the PSD program—is governed primarily by the intri-

(5) "there has been an analysis of any air quality impacts projected for the area as a result of growth associated with such facility"[16]; and

(6) the permit applicant agrees to conduct necessary monitoring.[17]

The foregoing requirements confront developers with the unhappy prospect of considerable expense and delay. The process of assembling the necessary data and submitting a satisfactory PSD permit application may itself prove time-consuming. For example, the statute requires continuous air quality monitoring "gathered over a period of one calendar year preceding the date of application for a permit" unless "a complete and adequate analysis . . . may be accomplished in a shorter period."[18] Moreover, the statute gives the permit-issuing authority one year from the date on which a "completed application" has been filed to grant or deny the permit.[19] Thus, the preconstruction review and public hearing process may delay construction by up to two years or more.

The PSD permit trigger may also increase the cost of a proposed project because the best available control technology (BACT) obligation kicks in only if the trigger is pulled. Parties to PSD permit proceedings often bicker about whether a proposed permit's definition of BACT is excessively demanding or too lenient,[20] leading to further delays.

Finally, the PSD trigger can be disadvantageous to developers by setting in motion a powerful mechanism through which opponents of a project may interfere with the developer's plans: the mandatory public hearing on the PSD permit and the appeals and court challenges that may emerge from that hearing.

B. The Benefits of Avoiding the PSD Permit Requirement: A Story

To illustrate the competitive advantages of avoiding the costs and delays associated with PSD permit acquisition, consider the following news report:

> [T]he Clinton Administration last month levied an $11.1 million penalty against a company that falsely reported how much pollution it produced. It was the largest civil fine ever obtained under the Clean Air Act. . . .
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> [C]ritics said the penalty against the Louisiana-Pacific Corporation, the nation's largest manufacturer of wood-fiber construction panels, was minor compared with the enormous market advantage the company had gained by breaking environmental laws . . . . Louisiana-Pacific . . . said . . . that the penalty would not affect the company's earnings. . . . Investment analysts say the company now controls 43 percent of the $1.2 billion waferboard market . . . .
>
> The case . . . focused mainly on . . . 11 new plants the company built in eight states in the 1980s to manufacture waferboard, a substitute for plywood made from wafers of wood glued and pressed together. . . .
>
> Officials in the eight states said the company had avoided . . . stringent [PSD] review by deliberately underestimating, often by thousands of tons a year, how much pollution the new waferboard plants would produce. . . .
>
> By filing inaccurate information, the authorities said, Louisiana-Pacific consistently beat its competitors in getting new waferboard plants into operation. It was also able to avoid the multimillion-dollar expense of installing and operating pollution control equipment that was required of its competitors.
>
> In Georgia, for example, State air pollution technicians found in 1990 that a year-old Louisiana-Pacific waferboard plant . . . was pouring 1,500 tons of volatile organic chemicals into the air each year, more than six times the amount the company said it would emit.
>
> The violation was discovered after the Georgia authorities noticed that the International Paper Company, a competitor that had applied to build a similar waferboard plant in Georgia at the same time, accurately described the amount of air pollution it would produce. . . . Louisiana-Pacific . . . had its plant operating a year before International Paper.[21]

The foregoing story illustrates the advantages of avoiding PSD permit status, as well as the disadvantages of submitting to the PSD permit acquisition process. If the *New York Times* article is accurate, the company which chose to bypass the PSD permitting procedure was able to go online approximately one year prior to commencement of operations by its competitor, which applied for a PSD permit. The delay for the PSD permit applicant might have been even greater if it had run into significant opposition from environmental or community activists.

We see, therefore, that developers and their legal advisers will ordinarily feel strongly compelled to avoid pulling the PSD permit trigger if possible. They can do so, however, only if they fully understand that trigger.

III. The Statutory PSD Permit Trigger: Construction of a Major Emitting Facility

The statutory PSD permit trigger presents a classic illustration of seemingly straightforward language posing multiple legitimate and difficult interpretive challenges. Who must obtain a PSD permit? The statute provides: "No major emitting facility on which construction is commenced after Au-

cate language of CAA §165(d), 42 U.S.C. §7475(d). *See* Stensvaag, *supra* note 1, at 10811 & n.29.

16. *Id.* §165(a)(6), 42 U.S.C. §7475(a)(6).

17. *Id.* §165(a)(7), 42 U.S.C. §7475(a)(7).

18. *Id.* §165(e)(2), 42 U.S.C. §7475(e)(2).

19. The regulations define "complete" to mean "contain[ing] all the information necessary for processing the application," 40 C.F.R. §§51.166(b)(22), 52.21(b)(22), but the date on which a given permit application can be said to be "complete"—starting the one-year decisionmaking clock—has sometimes been disputed. *See, e.g.*, Citizens Against the Refinery's Effects v. U.S. EPA, 643 F.2d 178, 181, 11 ELR 20174 (4th Cir. 1981); In the Matter of Transgulf Pipeline Permit No. PSD-FL-013, PSD Appeal 82-6, 1982 WL 43353, 1 E.A.D. 735 (EPA Admr. Oct. 4, 1982); *see also* 61 Fed. Reg. 38250, 38276-77 (July 23, 1996).

20. *See, e.g.*, Environmental Defense v. Duke Energy, 127 S. Ct. 1423 (2007); Sur Contra la Contaminacion v. EPA, 202 F.3d 443, 30 ELR 20358 (1st Cir. 2000); Citizens for Clean Air v. U.S. EPA, 959 F.2d 839, 22 ELR 20669 (9th Cir. 1992); Northern Plains Resource Council v. U.S. EPA, 645 F.2d 1349, 11 ELR 20635 (9th Cir. 1981); Detroit Resource Recovery Auth. v. Adamkus, 677 F. Supp. 521 (E.D. Mich. 1987).

21. Keith Schneider, *Hollow Note Heard in Trumpeted Pollution Fine*, N.Y. Times, June 3, 1993, at A12. EPA launched a sector-based PSD compliance investigation of the wood products industry in 1993, leading to settlements with Boise-Cascade, Georgia-Pacific, Louisiana-Pacific, Weyerhaeuser, and Willamette Industries. *See* 31 Env't Rep. (BNA) 1557 (July 28, 2000). Many of the alleged violations involved modification activities, rather than construction of new facilities. *See id.*; 61 Fed. Reg. 42266 (Aug. 14, 1996); EPA Press Release, 2002 EPA 02-R-42, 2002 WL 389404 (Mar. 13, 2002).

gust 7, 1977, may be constructed in any area to which this part applies unless—(1) a permit has been issued for such proposed facility in accordance with this part. . . ."[22] This language indicates that the PSD permit trigger involves three aspects: (1) construction[23] is commenced after August 7, 1977; (2) construction takes place in "[an] area to which this part applies"; and (3) the source is a "major emitting facility."

The first of the three aspects need not detain us. Because the focus of this Article will be on truly new facilities, we will ignore construction commenced prior to August 7, 1977, and will also ignore modifications of existing facilities taking place after that date. We will assume, therefore, that the first aspect of the PSD permit trigger is met: construction is being commenced after August 7, 1977.

Must construction of our hypothetical proposed facility be preceded by issuance of a PSD permit? The answer will depend on whether the proposed construction meets the second and third aspects of the PSD permit trigger: the geographic component and the major emitting facility component.

IV. The Geographic Component

The statute requires a PSD permit when construction will occur "in any area to which this part applies."[24] The phrase "this part" refers to CAA "Part C—Prevention of Significant Deterioration of Air Quality."[25] Accordingly, the geographic component of the PSD permit trigger hinges on the resolution of the following question: in which geographic locations does Part C apply?

The statute is a bit opaque on this matter, but seems to answer this question in two places. First, §161 provides that implementation plans must include measures "to prevent significant deterioration of air quality in each region (or portion thereof) designated . . . as attainment or unclassifiable."[26] Second, §167 establishes enforcement mechanisms to prevent the construction of "a major emitting facility which does not conform to the requirements of [Part C], or which is proposed to be constructed in any area designated . . . as attainment or unclassifiable and which is not subject to an implementation plan which meets the requirements of [Part C]."[27]

A. PSD Areas

Taken together, these statutory provisions suggest a mechanical approach to the geographic component of the PSD permit trigger: a permit is necessary for the construction of any major emitting facility in an attainment or unclassifiable area. EPA regulations confirm this geographic coverage, specifying that the PSD permit requirement is triggered by "the construction of any new major [emitting facility] . . . in an area designated as attainment or unclassifiable."[28] EPA has referred to such locations as "PSD areas."[29]

We will struggle later in this Article with the major emitting facility "pollutant trigger" issue: which pollutants count, when determining whether a facility's emissions make it a major emitting facility?[30] For now, however, it is important to note that—with one exception—the geographic component of the PSD permit trigger does not involve any correlation between the pollutants in the proposed facility's emissions and the existing ambient air quality at its proposed location: as long as the location is designated attainment or unclassifiable for *any* criteria pollutant,[31] the geographic component of the permit trigger is met. Stated another way: "[T]he PSD requirements apply everywhere as long as an area is designated as attainment or unclassifiable for at least one . . . criteria pollutant . . . ."[32] As EPA explains: "This geographic applicability test does not take into account what new pollutant emissions caused the construction to be [a] major [emitting facility]. It looks simply at whether the source is major for any pollutant and will be located in a PSD area."[33]

Upon reflection, this approach to geography is quite startling. The nation has struggled for almost 40 years—without success—to achieve compliance with NAAQS, with the result that there are many, many locations in the United States which are in nonattainment status for one or more criteria pollutants.[34] But in no location in the country is a community in nonattainment status for each and every criteria pollutant. EPA's June 2007 condensed nonattainment area list fails to display a single nitrogen dioxide (NO_2) nonattainment area, and displays only six areas in nonattainment for lead.[35] Consider, for example, two locations widely thought to have the nation's worst air quality. The Houston-Galveston-Brazoria area is in nonattainment status only for ozone and particulate matter, and the Los Angeles-South Coast Air Basin is in attainment or unclassifiable status for lead and NO_2.[36]

22. CAA §165(a), 42 U.S.C. §7475(a).
23. The term "construction" poses a difficult interpretive challenge because of its extension by statute and regulation to include "major modification." *See supra* note 9.
24. CAA §165(a), 42 U.S.C. §7475(a).
25. *Id.* §§160-169B, 42 U.S.C. §§7470-7492.
26. *Id.* §161, 42 U.S.C. §7471. "Attainment areas" are areas that meet NAAQS, and "unclassifiable areas" are areas that cannot be determined on the basis of available information as meeting or not meeting NAAQS. *See id.* §107(d)(1)(A), 42 U.S.C. §7407(d)(1)(A); Stensvaag, *supra* note 1, at 10809 n.17.
27. CAA §167, 42 U.S.C. §7477.
28. 40 C.F.R. §51.166(a)(7)(i); *see also id.* §52.21(a)(2)(i). After parsing the relevant statutory language, the U.S. Court of Appeals for the District of Columbia (D.C.) Circuit concluded that the geographic component of the PSD permit trigger must be read literally. *See Alabama Power Co. v. Costle*, 636 F.2d 323, 365, 10 ELR 20001 (D.C. Cir. 1979); *see also* 45 Fed. Reg. 31307, 31308 (May 13, 1980) ("Congress intended the applicability of PSD permit review to turn on whether the proposed source would locate in an area designated attainment. [sic] or unclassifiable, not on whether the source would impact such an area").
29. *See, e.g.*, 61 Fed. Reg. 56450, 56451 (Nov. 1, 1996); 45 Fed. Reg. 52676, 52677 (Aug. 7, 1980) ("A PSD area is one formally designated by the State as 'attainment' or 'unclassifiable' for any pollutant for which a [NAAQS] exists").
30. *See infra* notes 54-128 and accompanying text.
31. For a description of the criteria pollutants and their role under the CAA, see Stensvaag, *supra* note 1, at 10809.
32. 58 Fed. Reg. 31622, 31623 (June 3, 1993). *See* 53 Fed. Reg. 48554, 48556 (Dec. 1, 1988) (requiring revision of North Dakota implementation plan incorrectly declaring that the PSD program was not applicable in areas exceeding NAAQS for SO_2 and particulate matter).
33. 45 Fed. Reg. at 52677.
34. *See* U.S. EPA, Currently Designated Nonattainment Areas for All Criteria Pollutants as of June 20, 2007, http://www.epa.gov/oar/oaqps/greenbk/ancl3.html (last visited July 23, 2007); John-Mark Stensvaag, Materials on Environmental Law 514-17 (1999).
35. *See* U.S. EPA, *supra* note 34.
36. *See id.*

Accordingly, every location in the United States is a "PSD area" meeting the geographic component of the PSD permit trigger. Thus, with one important exception, every major emitting facility constructed in every location in the country will need a PSD permit.

B. The Nonattaining Pollutant Exception

As we have seen, the geographic component of the PSD permit trigger seems to say that a PSD permit will be needed for every major emitting facility constructed in an area which is designated attainment or unclassifiable for any criteria pollutant—in other words, anywhere in the country—regardless of which pollutants the proposed construction will emit. The one exception to this principle is what we might call the nonattaining pollutant exception: "no PSD permit is required for major construction which emits only the pollutant for which the area of location is nonattainment."[37]

Upon reflection, this exception makes sense. The nonattainment permit[38] program of CAA Part D[39] applies to "the construction and operation of new or modified major stationary sources anywhere in [a] nonattainment area . . . ."[40] Pulling the nonattainment permit trigger results in a host of consequences, including application of "lowest achievable emission rate" emission standards[41] and the obligation to retire sufficient nonattaining pollutant "offsets" to result in "reasonable further progress" toward attainment.[42]

If a major source is being constructed in a "PSD area" (in other words, anywhere in the country) that simultaneously happens to be a nonattainment area, and if that source will emit only nonattaining pollutants, all of its air emissions should, quite sensibly, be regulated under the nonattainment permit program. By definition, such a facility will not emit any pollutant for which the area has been classified attainment or unclassifiable, and the PSD program is designed to protect against increasing ambient air concentrations of such "attaining" pollutants—concentrations which will remain unaffected by the emissions of the proposed facility. It follows, therefore, that such a facility should not need a PSD permit, even though it may technically be a major emitting facility constructed in a PSD area.[43]

A proposed major source that will emit only nonattaining pollutants—pulling no PSD permit trigger—is less common than a proposed facility that will emit both attaining and nonattaining pollutants. The governing principle in this situation is that "the PSD permit regulations apply to pollutants for which the area is designated as attainment or unclassifiable, and the . . . nonattainment permit regulations apply to pollutants for which the area is designated nonattainment."[44] Stated another way, the facility will need both a nonattainment permit and a PSD permit, and the permit applicant must run the gauntlet of two preconstruction review programs.[45] These complications need not detain us now, but it is worth noting that this situation is actually quite common.

The important thing for purposes of our PSD permit trigger analysis is simply this: the geographic component of that trigger is pulled whenever a major emitting facility is constructed anywhere in the country, except in the situation in which the only pollutants emitted by the facility are nonattaining ones. "PSD areas"—the areas in which PSD permits must be obtained by major emitting facilities—cover every square inch of the United States.

V. The Major Emitting Facility Component

A. The Statutory Major Emitting Facility Definition

The second component of the PSD permit trigger is the major emitting facility component. Even if a proposed source will be constructed in a PSD area (effectively, as we have seen, anywhere in the country), it will need a PSD permit only if it is a major emitting facility. The major emitting facility definition is so central to the PSD permit program that the U.S. Court of Appeals for the District of Columbia (D.C.) Circuit has called it "jurisdictional in nature."[46]

Here again, the statutory language is deceptively straightforward:

> The term "major emitting facility" means any of the following stationary sources of air pollutants which emit, or have the potential to emit, one hundred tons per year or more of any air pollutant from the following types of stationary sources: [enumerating approximately 26 types of sources][47] . . . Such term also includes any other source

37. 45 Fed. Reg. at 52680.

38. Environmental attorneys frequently use the terms "new source review (NSR)" and "NSR permit" to refer jointly to the PSD and nonattainment permit programs. This Article distinguishes between the two by using more precise terminology: "PSD permit" and "nonattainment permit."

39. CAA §§171-193, 42 U.S.C. §§7501-7515.

40. *Id.* §172(c)(5), 42 U.S.C. §7502(c)(5). As we explain later, *see infra* notes 51-53 and accompanying text, "major stationary source" for purposes of the nonattainment permit program is defined quite differently than "major emitting facility" for purposes of the PSD permit program. This is one reason why the employment of precise terminology to distinguish between the two programs is helpful.

41. CAA §173(a)(2), 42 U.S.C. §7503(a)(2).

42. *Id.* §173(a)(1), 42 U.S.C. §7503(a)(1). *See* Stensvaag, *supra* note 7, at 1097-1102; Stensvaag, *supra* note 34, at 495-518.

43. The designations of areas as attainment and nonattainment are constantly undergoing revision. Accordingly, it is possible that a proposed facility may quite correctly apply for and receive a PSD permit at a time when its proposed emissions would consist solely of a single attaining pollutant, only to discover that the area has been redesignated to nonattainment status for that pollutant by the time it commences operation. EPA has anticipated this situation, and has provided that such a PSD permit would remain "in effect as long as the source commences construction within 18 months after the date of nonattainment designation of the area, does not discontinue construction for more than 18 months, and completes construction within a reasonable time." 57 Fed. Reg. 18070, 18076 (Apr. 28, 1992). *See* 40 C.F.R. §52.21(r)(2).

44. 57 Fed. Reg. at 18076. This principle is codified in 40 C.F.R. §§51.166(i)(2) and 52.21(i)(2): "The [PSD permit] requirements . . . shall not apply to a major [emitting facility] with respect to a particular pollutant if the owner or operator demonstrates that, as to that pollutant, the source . . . is located in an area designated as nonattainment . . . ." *Id.*

45. For an excellent series of illustrations explaining whether hypothetical facilities would need PSD or nonattainment permits—or both—and how the requirements of each program would apply to various pollutants, see 45 Fed. Reg. at 52711-12.

46. Alabama Power Co. v. Costle, 636 F.2d 323, 352, 10 ELR 20001 (D.C. Cir. 1979).

47. The enumerated types of sources are:

> fossil-fuel fired steam electric plants of more than two hundred and fifty million British thermal units per hour heat input, coal cleaning plants (thermal dryers), kraft pulp mills, Portland Cement plants, primary zinc smelters, iron and steel mill plants, primary aluminum ore reduction plants, primary

> with the potential to emit two hundred and fifty tons per year or more of any air pollutant. . . .[48]

By this language, Congress chose to create two classes of facilities, based on their potential emissions. For the approximately 26 categories of sources enumerated in the first sentence of §169(1), the PSD permit trigger value is 100 tons per year (tpy); for all other sources, the trigger value is 250 tpy.[49] We will refer to these triggering emission levels as the "100/250 tpy cutoffs," and will refer to the two categories as "100 tpy" (or "enumerated") facilities[50] and "250 tpy" (or "nonenumerated") facilities.

B. Major Emitting Facilities Distinguished From Major Stationary Sources

It is vital to our understanding of the PSD permit trigger that we do not confuse two overlapping categories of stationary sources with hauntingly similar names. The PSD permit program applies to major emitting facilities; because we are examining the PSD permit trigger, we must spend considerable effort unraveling the meaning of this term. The nonattainment permit program, by contrast, applies to major stationary sources[51]—a term that is defined quite differently and which, in fact, may have a sliding scale definition, depending on the extent of nonattainment in a given area.[52]

Unfortunately, EPA regulations codifying the PSD program's major emitting facility definition (and essentially echoing the statute's language, complete with 100/250 tpy cutoffs) begins with the phrase "[m]ajor stationary source means . . . ."[53] Such sloppy use of terminology presents the potential for endless confusion, and we accordingly avoid it. When it comes to the CAA's new source review programs, we limit use of the term major stationary source to the nonattainment permit program context, and employ the term major emitting facility in the PSD program context. At points in the analysis where we intend to refer jointly to the combined universe of: (1) major emitting facilities (the PSD program trigger); and (2) major stationary sources (the nonattainment permit trigger), we use the more generic term "major source."

VI. Which Pollutants Count?

A. The Statute's Breathtaking Pollutant Scope

The statutory definition of major emitting facility embraces proposed new sources having the potential to emit "one hundred [or 250] tons per year or more of any air pollutant."[54] This language poses what we call the major emitting facility "pollutant trigger" issue: in calculating whether the relevant emission cutoff value will be exceeded by the operation of a given proposed facility, which *pollutants* must be counted?

The statutory pollutant trigger is not by its terms limited to the three PSD "increment pollutants"—particulate matter, sulfur dioxide (SO_2), and NO_2.[55] Nor is that trigger lim-

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> copper smelters, municipal incinerators capable of charging more than fifty tons of refuse per day, hydrofluoric, sulfuric, and nitric acid plants, petroleum refineries, lime plants, phosphate rock processing plants, coke oven batteries, sulfur recovery plants, carbon black plants (furnace process), primary lead smelters, fuel conversion plants, sintering plants, secondary metal production facilities, chemical process plants, fossil-fuel boilers of more than two hundred and fifty million British thermal units per hour heat input, petroleum storage and transfer facilities with a capacity exceeding three hundred thousand barrels, taconite ore processing facilities, glass fiber processing plants, [and] charcoal production facilities . . . .
>
> CAA §169(1), 42 U.S.C. §7479(1).

48. CAA §169(1), 42 U.S.C. §7479(1).

49. "The origin of this bifurcated threshold seems to lie in legislative compromise." Oren, *supra* note 1, at 14 n.62.

50. At times, it may be unclear whether a given facility falls within the list of enumerated sources. *See, e.g.*, 72 Fed. Reg. 24060, 24078 (May 1, 2007), amending several PSD regulations to clarify that the term "chemical processing plant"—one of the enumerated types of sources subject to the 100 tpy cutoff—does not include corn milling facilities that produce ethanol for fuel. This was done to make the definition "consistent with the 250-ton threshold for plants that produce ethanol for human consumption." 37 Env't Rep. (BNA) 1049 (2007).

    This Article will not explore the subtleties of the enumerated source list, but the following explanation from a U.S. Court of Appeals for the Second Circuit opinion suggests the complexity of the topic:

    > A facility that produces air pollution may often be engaged in multiple activities that, if considered separately, would fall under different categories for purposes of the PSD program. In order to categorize such complex sources of air pollution, EPA looks to the "primary activity" of the facility in question. *See* 45 Fed. Reg. 52676, 52695 (Aug. 7, 1980). If the primary activity is one that falls under one of the twenty-eight kinds of "major source" specifically identified by the CAA, the lower 100 tpy threshold will apply; otherwise the "default" 250 tpy threshold obtains . . . In determining the primary activity of a facility, EPA's stated policy is to follow the guidelines set forth in the Office of Management and Budget's *Standard Industrial Classification Manual (SIC Manual)*. *See* 45 Fed. Reg. 52676, 52695 (Aug. 7, 1980).
    >
    > LaFleur v. Whitman, 300 F.3d 256, 261, 33 ELR 20006 (2d Cir. 2002).

51. *See* CAA §172(c)(5), 42 U.S.C. §7502(c)(5), mandating nonattainment permits for major stationary sources in nonattainment areas.

52. The CAA's default definition of "major stationary source" is "any stationary facility or source of air pollutants which directly emits, or has the potential to emit, one hundred tons per year or more of any air pollutant . . . ." CAA §302(j), 42 U.S.C. §7602(j). (Technically, this is also the default definition of "major emitting facility," but section §169(1) plainly overrides this default definition for all PSD program purposes.) In ozone nonattainment areas, however, the term "major stationary source" has different pollutant cutoff values, based on the severity of nonattainment. *See* CAA §182(c), 42 U.S.C. §7511a(c) (cutoff of 50 tpy in serious ozone nonattainment areas); CAA §182(d), 42 U.S.C. §7511a(d) (25-tpy cutoff in severe ozone nonattainment areas); CAA §182(e), 42 U.S.C. §7511a(e) (10-tpy cutoff in extreme ozone nonattainment areas).

53. 40 C.F.R. §51.166(b)(1)(i); *see also id.* §52.21(b)(1)(i). When EPA amended its PSD regulations to conform to the 1977 CAA Amendments, the Agency explained its unfortunate decision to blur the two stationary source categories in an unconvincing manner: "The regulations would replace the term 'major emitting facility' as used in the Act with the term 'major stationary source' to reflect current EPA terminology." 42 Fed. Reg. 57479, 57480 (Nov. 3, 1977).

54. CAA §169(1), 42 U.S.C. §7479(1). The Agency has declared, in language that seems faithful to the statute: "Different pollutants are not summed to determine applicability." 70 Fed. Reg. 65984, 66036 (Nov. 1, 2005). Thus, for example, SO_2 emissions are not added to carbon monoxide emissions when making the 100 (or 250) tpy calculation. Note, however, that EPA has defined certain pollutants by lumping together contaminants that might ordinarily be thought of as separate pollutants. Particulate matter, for example, is typically a mix of many different contaminants; volatile organic compounds (VOCs) are similarly defined to include many different chemicals. Obviously, emissions of contaminants falling within these aggregated labels must be summed.

55. *See* Alabama Power Co. v. Costle, 636 F.2d 323, 406 n.81, 10 ELR 20001 (D.C. Cir. 1979) ("the House specifically rejected an amend-

ited to the six criteria pollutants.[56] Instead, the statute refers unambiguously to "*any* air pollutant."[57]

The term "air pollutant," in turn, is defined expansively by the CAA to mean:

> any air pollution agent or combination of such agents, including any physical, chemical, biological, radioactive . . . substance or matter which is emitted into or otherwise enters the ambient air. . . .[58]

Because water is the familiar chemical substance H_2O, this definition of air pollutant—coupled with the statute's definition of major emitting facility—would seem to compel the conclusion that a source with the potential to emit into the air 100 (or 250) tpy or more of ordinary water must obtain a PSD permit.

B. Which Pollutants Are Subject to BACT?

The statute's broad reference to "any air pollutant" when defining major emitting facilities stands in marked contrast to §165(a)(4), which mandates that the BACT standard in PSD permits be applied to a different universe of contaminants: "each pollutant subject to regulation under" the Act.[59] Although it may seem an odd detour in our analysis, an examination of the pollutants subject to the BACT requirement will help inform our understanding of the pollutant trigger for major emitting facilities.

When Congress declared that the BACT standard must apply to "each pollutant subject to regulation" under the Act, the legislature unfortunately perpetrated an ambiguity; the phrase could mean two quite different things.

First, the phrase "subject to regulation" could refer to those pollutants that EPA has chosen to regulate under the CAA—in other words, pollutants *currently being subjected to regulation* under the Act. If this is the correct interpretation of the phrase, BACT standards must be applied to criteria pollutants and to any additional pollutants regulated in the new source performance standards (NSPS) under §111(d)—the so-called designated pollutants from designated facilities.[60]

Second, and alternatively, the phrase "subject to regulation" could refer to any pollutant that *could be subjected to regulation* under the Act. Read in this manner, the phrase in §165(a)(4)—"each pollutant subject to regulation"—would be synonymous with the language of §169(1): "any air pollutant."

Prof. David Currie has concluded that the first interpretation is the more compelling one; "subject to regulation under" the Act must mean pollutants actually regulated "since it otherwise would be as comprehensive as if there were no qualifying clause."[61] The D.C. Circuit agreed with this interpretation, concluding that the phrase "each pollutant subject to regulation . . . encompasses each pollutant for which EPA has promulgated . . . a . . . standard."[62] Accordingly, it has long been settled that the BACT requirement of the PSD program applies only to those pollutants currently being regulated by EPA. These pollutants are not limited to the criteria pollutants—the pollutants for which ambient standards have been established.[63] They also include designated pollutants at designated facilities: noncriteria pollutants uniquely chosen for control at specific stationary source categories through the NSPS promulgated pursuant to §111.[64]

One important twist to this principle, however, is that BACT applies to pollutants currently being regulated under the Act, even though the relevant standards for such pollutants might not apply to the source for which the permit is sought.[65] Thus, if an NSPS emission limit has been established under §111 for a noncriteria pollutant at a particular source category—for a so-called designated pollutant at a "designated facility"—the pollutant is considered to be "regulated" for purposes of the PSD program, "regardless of the category of the source emitting such pollutants."[66]

ment offered to restrict PSD coverage to sulfur oxides and particulates"—the only two increment pollutants at that time). For a description of the increment pollutants and the function of the increments, see Stensvaag, *supra* note 1, at 10810-13 & n.23.

56. The criteria pollutants are carbon monoxide, lead, NO_2, ozone, particulate matter, and SO_2. For a description of the criteria pollutants and their accompanying NAAQS, see Stensvaag, *supra* note 1, at 10809, tbl. 1 & n.13.

57. CAA §169(1), 42 U.S.C. §7479(1) (emphasis added).

58. *Id.* §302(g), 42 U.S.C. §7602(g).

59. *Id.* §165(a)(4), 42 U.S.C. §7475(a)(4).

60. *See id.* §111(d), 42 U.S.C. §7411(d); 40 C.F.R. Part 62; *see also* 55 Fed. Reg. 38545 (Sept. 19, 1990) ("Designated pollutants are defined as pollutants which are not . . . 'criteria' pollutants, but to which a standard of performance for new sources applies under section 111"). For a description of designated pollutants from designated facilities and their unique role in expanding the universe of regulated pollutants beyond criteria and hazardous air pollutants (HAPs), see Stensvaag, *supra* note 34, at 371-72. Prior to 1990, the phrase "subject to regulation" would also have applied to HAPs under this first interpretation. *See infra* notes 108-16 and accompanying text.

61. David P. Currie, *Nondegradation and Visibility Under the Clean Air Act*, 68 Cal. L. Rev. 48, 57 (1980); *see also id.* at 66 ("EPA seems correct" in interpreting the phrase "subject to regulation" to mean "pollutants subject to existing regulations").

62. Alabama Power Co. v. Costle, 606 F.2d 1068, 1085, 9 ELR 20400 (D.C. Cir. 1979). In making this ruling, the court rejected industry arguments that BACT should apply only to SO_2 and particulates—the only PSD increment pollutants at that time. *See* Alabama Power Co. v. Costle, 636 F.2d 323, 405-06, 10 ELR 20001 (D.C. Cir. 1979) (concluding that the language of §165(a)(4) could not be read so narrowly).

Prior to the *Alabama Power* decision, the Agency had proposed to limit BACT to those pollutants emitted in "major" amounts—in other words, those pollutants exceeding the relevant 100 or 250 tpy cutoff. *See* 40 C.F.R. §§51.24(i)(1) and 52.21(i)(1) (1978). As the court put it, EPA effectively "adopted a BACT 'de minimis' criterion to coincide with the 100 and 250-ton emission thresholds for major emitting facilities." *Alabama Power Co. v. Costle*, 636 F.2d at 404-05. The court struck down this limitation as unlawful under the plain language of §165(a)(4), but invited the Agency to formulate rationally based de minimis amounts. *See id*. at 405; Currie, *supra* note 61, at 67. On remand, EPA amended its regulations to provide: "A new major [emitting facility] shall apply best available control technology for each pollutant subject to regulation under the Act that it would have the potential to emit in significant amounts." 40 C.F.R. §52.21(j)(2) (1981). The Agency also promulgated unique significance values for specifically named pollutants. *See* 40 C.F.R. §52.24(b)(23)(i) (1981).

As we discuss *infra* at note 85 and accompanying text, the phrase "each pollutant subject to regulation under the Act" has now been replaced in EPA's regulations by the phrase "each regulated NSR pollutant." 40 C.F.R. §52.21(j)(2), *promulgated in* 67 Fed. Reg. 80186, 80260 (Dec. 31, 2002). *See also* 40 C.F.R. §51.166(j)(2).

63. *See* Currie, *supra* note 61, at 57 & n.65.

64. If EPA chooses to regulate a noncriteria pollutant for a category of *new* stationary sources through NSPS, the states are required to develop standards governing the emissions of the same pollutants at *existing* sources in the same category. *See* CAA §111(d), 42 U.S.C. §7411(d). Although this label does not seem to have caught on, it may be helpful to think of such state standards as ESPS—Existing Source Performance Standards—paralleling their NSPS counterparts. *See* Stensvaag, *supra* note 34, at 372.

65. *See* Currie, *supra* note 61, at 66.

66. 56 Fed. Reg. 5488, 5503 (Feb. 11, 1991).

Consider, for example, a widget plant with sufficient air emissions to qualify as a major emitting facility, triggering the need for a PSD permit. Assume that the widget plant falls within a stationary source category not yet governed by any NSPS, and that it emits fluorides—a noncriteria pollutant—in more than an insignificant amount. Fluorides are subject to NSPS at aluminum manufacturing plants and at certain phosphate fertilizer plants[67]; accordingly, fluorides are a designated pollutant at those designated facilities. Because fluorides are "subject to regulation" within the meaning of §165(a)(4), the widget plant's PSD permit must include a fluoride BACT standard even though the widget plant is not one of the designated facilities for which the fluoride NSPS have been promulgated.

C. EPA's Dovetailing of the PSD Pollutant Trigger With BACT Coverage

So much for our detour into the meaning, for purposes of the BACT requirement, of "pollutant subject to regulation under" the Act—a detour that will soon bear fruit. The PSD permit pollutant trigger is worded quite differently than the BACT provision. Section 169(1) does not declare that major emitting facilities are those with the potential to emit 100 (or 250) tpy of pollutants "subject to regulation" under the Act. Instead, it declares that emissions at the 100 (or 250) tpy level of "any air pollutant" result in major emitting facility status and pull the PSD permit trigger. As we have seen, the statute's language literally encompasses facilities emitting more than 100 (or 250) tpy of ordinary water.

The court in *Alabama Power Co. v. Costle*[68] concluded that the startlingly expansive sweep of the statutory pollutant trigger was intentional:

> The definition is not pollutant-specific, but rather identifies sources that emit more than a threshold quantity of *any* air pollutant. Once a source has been so identified, it may become subject to section 165's substantial administrative burdens and stringent technological control requirements for each pollutant regulated under the Act, even though the air pollutant, emissions of which caused the source to be classified as a "major emitting facility," may not be a pollutant for which NAAQS have been promulgated or even one that is otherwise regulated under the Act. . . . Congress's intention was to identify facilities which, due to their size, are financially able to bear the substantial regulatory costs imposed by the PSD provisions and which, as a group, are primarily responsible for emission of the deleterious pollutants that befoul our nation's air.[69]

Although the statute seems unambiguous, EPA concluded even prior to the *Alabama Power* decision that such a literal approach to the PSD pollutant trigger would be untenable. Thus, in its 1978 regulations implementing the 1977 CAA Amendments, the Agency narrowed the major emitting facility definition to sources with the potential to emit 100 (or 250) tpy of "any air pollutant *regulated under the Clean Air Act*."[70]

Even though the italicized language seems plainly inconsistent with the statute, Professor Currie endorsed EPA's interpretive gloss: "requiring a permit to construct a facility emitting only contaminants not subject to substantive limitations would be a waste of effort."[71] The *Alabama Power* court did not rule on the italicized language,[72] and EPA's decision to narrow the PSD permit pollutant trigger has now been on the books for three decades.[73]

The result of EPA's regulatory narrowing of the §169(1) language is that the universe of pollutants with the power to trigger major emitting facility status and the universe of pollutants subject to BACT standards are now precisely the same. Only pollutants currently being regulated by EPA are subject to BACT standards, and only such pollutants may trigger major emitting facility status.

D. Carbon Dioxide: The Quintessential Unregulated Pollutant

The classic example of a pollutant that is not yet being regulated under the CAA—at least by the federal government—is carbon dioxide (CO_2).[74] Thus, CO_2 emissions do not count when ascertaining major emitting facility status for PSD permits, and this pollutant is also not subject to BACT standards.

It is true, however, that state and local governments are free to regulate CO_2 by virtue of §116.[75] California has attempted to do so, in motor vehicle standards designed to curb emissions of greenhouse gases,[76] but this effort cannot succeed unless and until EPA grants a federal preemption waiver.[77] There can be no doubt, however, that California and other states have the authority under the CAA to establish CO_2 emission limitations for stationary sources, just as states have the freedom to regulate pig farm odors and the like.

In a state that has regulated CO_2, would emissions of that pollutant count in ascertaining major emitting facility status for PSD purposes? Although the answer may depend on the wording of the state's PSD regulations—particularly its chosen language for defining major emitting facilities—each state is free to expand the list of pollutants triggering the need for a PSD permit,[78] as long as its resulting standards are not "less stringent" than federal law.[79]

The U.S. Court of Appeals for the Eighth Circuit has held that federal courts have subject matter jurisdiction in a citizen suit alleging violation of state odor standards submitted as part of a state implementation plan (SIP) and approved by

67. *See* 40 C.F.R. §60.192 (fluoride standards for primary aluminum reduction plants); *id*. §60.202 (fluoride standards for wet-process phosphoric acid plants).

68. 636 F.2d 323, 10 ELR 20001 (D.C. Cir. 1979).

69. *Id.* at 352-53.

70. 40 C.F.R. §§51.24(b)(1), 52.21(b)(1) (emphasis added), *added by* 43 Fed. Reg. 26403 (1978). *See* Currie, *supra* note 61, at 57.

71. Currie, *supra* note 61, at 57.

72. *See id.* at 57 & n.65.

73. *See* Oren, *supra* note 1, at 14 n.62 ("The literal terms of the Act extend coverage to a source that exceeds the 100/250 threshold for any air pollutant, not just an air pollutant regulated by the Act . . . . Without explanation, the agency chose in its regulations to cover only emissions of regulated pollutants [and] [t]his decision has not been challenged").

74. *See* Massachusetts v. EPA, 127 S. Ct. 1438 (2007) (finding EPA's refusal to regulate CO_2 emissions from motor vehicles "arbitrary, capricious . . . or otherwise not in accordance with law").

75. CAA §116, 42 U.S.C. §7416. *See infra* note 111.

76. *See* 37 Env't Rep. (BNA) 730 (2006).

77. *See* CAA §209(b), 42 U.S.C. §7543(b).

78. *See infra* note 111.

79. *See* CAA §116, 42 U.S.C. §7416.

EPA, because such a suit is against a person alleged to be in violation of a "standard . . . under" the CAA.[80] By the same logic, if a state promulgates CO_2 standards in a SIP approved by EPA, CO_2 would thereafter seem to be a pollutant "subject to regulation under the Act"—the very type of pollutant that must be counted when ascertaining major emitting facility status under EPA's PSD regulations.[81]

E. Hydrogen Sulfide: A First Look

In addition to CO_2, there are thousands of other air contaminants literally falling within the statute's PSD major emitting facility pollutant trigger ("any air pollutant") but which may be ignored under EPA's regulatory narrowing of that trigger ("any air pollutant regulated under the Clean Air Act"). Take, for example, hydrogen sulfide, "a flammable, colorless gas with a characteristic odor of rotten eggs" which, when released into the air, changes into SO_2 and sulfuric acid.[82] There can be no doubt that hydrogen sulfide is an air pollutant within the meaning of §302(g), and that §169(1) literally provides that this pollutant must be counted when determining whether a stationary source is a major emitting facility.

Nevertheless, because hydrogen sulfide is seemingly not yet regulated by EPA[83]—it is not a criteria pollutant (or listed as a precursor thereto) and does not at first seem to be a designated pollutant in any §111 NSPS—the regulatory definition of major emitting facility seems to declare that emissions of hydrogen sulfide do not count in the major emitting facility analysis. This deceptively straightforward conclusion will be reassessed a bit later in this Article.[84]

F. EPA's Current Nomenclature: "Regulated NSR Pollutants"

In 2002, EPA decided to tinker somewhat with the language of its regulations governing both BACT applicability and the major emitting facility pollutant trigger. As a result, both aspects of its regulations now refer to "regulated NSR [new source review] pollutants." BACT must be met for "regulated NSR pollutants,"[85] and major emitting facilities are defined as those having the potential to emit 100 (or 250) tpy or more of "a regulated NSR pollutant."[86]

"Regulated NSR pollutant" is defined, in turn, to mean:

> (i) Any pollutant for which a national ambient air quality standard has been promulgated and any constituents or precursors for such pollutants identified by the Administrator (e.g., volatile organic compounds are precursors for ozone);
>
> (ii) Any pollutant that is subject to any standard promulgated under section 111 of the Act;
>
> (iii) Any Class I or II substance subject to a standard promulgated under or established by title VI[87] of the Act; or
>
> (iv) Any pollutant that otherwise is subject to regulation under the Act; except that any or all hazardous air pollutants[88] either listed in section 112 of the Act or added to the list pursuant to section 112(b)(2) of the Act, which have not been delisted pursuant to section 112(b)(3) of the Act, are not regulated NSR pollutants unless the listed hazardous air pollutant is also regulated as a constituent or precursor of a general pollutant listed under section 108 of the Act.[89]

These amendments seem faithful to the position taken by the Agency since 1978: major emitting facility status may be triggered by the emission of—and BACT applies to—only those pollutants that EPA is currently regulating under the CAA.

G. The "Designated Pollutant" Trap

As we saw in exploring the issue of BACT coverage, designated pollutants at designated facilities under the §111 NSPS program are undeniably pollutants currently being regulated under the CAA.[90] Moreover, they are considered to be regulated pollutants even at sources at which such pollutants are not yet subject to any standard. Accordingly, the emission of designated pollutants (for example fluorides) at a nondesignated facility (for example, a widget plant) may trigger the need for a PSD permit. This peculiar twist to the PSD permit pollutant trigger is sufficiently esoteric that it would be easy for an environmental attorney to miss it. The emission of any designated pollutant at any stationary source in sufficient amounts may trigger the need for a PSD permit.

It is imperative, therefore, that attorneys have access to a complete and up-to-date[91] list of the designated pollutants

80. *See* Save Our Health Org. v. Recomp of Minn., Inc., 37 F.3d 1334, 1336, 25 ELR 20589 (8th Cir. 1994).

81. *See* 40 C.F.R. §§51.166(b)(49)(iv), 52.21(b)(49)(iv).

82. *See* Agency for Toxic Substances and Disease Registry, ToxFAQs for Hydrogen Sulfide 1 (2006), *available at* http://www.atsdr.cdc.gov/tfacts114.html. North Carolina considers hydrogen sulfide a toxic air pollutant; moreover, it has considered a significant lowering of that state's emission limits for the pollutant. *See* 34 Env't Rep. (BNA) 432 (2003).

83. Environmental groups and state officials have unsuccessfully urged EPA to list hydrogen sulfide as a HAP. *See* 29 Env't Rep. (BNA) 1869 (1999); 30 *id*. at 1360 (1999); 31 *id*. at 2360 (2000). Section 112(n)(5) directs EPA to study the dangers of hydrogen sulfide emissions associated with the extraction of oil and gas resources and to develop and implement a control strategy, as appropriate. *See* CAA §112(n)(5), 42 U.S.C. §7412(n)(5).

84. *See infra* notes 99-103 and accompanying text.

85. 40 C.F.R. §§52.21(j)(2), 51.166(j)(2), *as amended by* 67 Fed. Reg. 80186 (Dec. 31, 2002).

86. *Id.* §§51.166(b)(1)(i), 52.21(b)(1)(i), *as amended by* 67 Fed. Reg. at 80186.

87. Title (or Subchapter) VI of the CAA deals with stratospheric ozone protection. *See* CAA §§601-618, 42 U.S.C. §§7671-7671q. Because the production and phaseout of Class I and Class II substances is mandated by the statute, *see* CAA §§604-605, 42 U.S.C. §§7671c-7671d, a new stationary source with the potential to emit 100 (or 250) tpy or more of a Class I or Class II substance would seem unlikely. *But see* 61 Fed. Reg. at 38307 (emissions of CAA §602 "ozone-depleting substances," when counted for PSD purposes, should be aggregated and treated as a single pollutant, in a manner similar to the way in which VOC emissions are summed for purposes of PSD applicability).

88. This language appears to be a drafting error, representing a misleading paraphrase of §112(b)(6). That section provides that the PSD requirements "shall not apply to pollutants listed under" §112; it does not exempt merely "hazardous air pollutants." CAA §112(b)(6), 42 U.S.C. §7412(b)(6). The regulated NSR pollutant definition should exclude all pollutants listed under §112, including those listed under §112(r)(3). *See infra* notes 121-28 and accompanying text.

89. 40 C.F.R. §§51.166(b)(49), 52.21(b)(49), *as amended by* 67 Fed. Reg. at 80186.

90. *See supra* note 65 and accompanying text.

91. "The PSD program will also automatically apply to *newly regulated* pollutants, for example, upon final promulgation of an NSPS applicable to a previously unregulated pollutant." 61 Fed. Reg. at 38310.

under the §111 NSPS program. That list must be gleaned by eyeballing the NSPS in their entirety, combing them for emission standards governing noncriteria pollutants.[92] At a minimum, the designated pollutants include at least the following:

(1) fluorides[93];
(2) sulfuric acid mist[94];
(3) volatile organic compounds (VOCs)[95];
(4) municipal solid waste (MSW) landfill emissions, measured as non-methane organic compounds (NMOC)[96];
(5) municipal waste combustor (MWC) metals, MWC acid gases, and MWC organics[97];
(6) reduced sulfur compounds[98]; and
(7) total reduced sulfur.[99]

The last two of these designated pollutants pose excellent examples of the potential complexity of the major emitting facility pollutant trigger. We have seen in an earlier portion of this Article[100] that hydrogen sulfide appears to be a pollutant that is not yet regulated by EPA under the CAA and, accordingly, that emissions of hydrogen sulfide cannot trigger the need for a PSD permit. Might this initial conclusion be mistaken?

H. Hydrogen Sulfide: A Second Look

A careful examination of the NSPS for petroleum refineries and for Kraft pulp mills suggests that assigning hydrogen sulfide to the unregulated pollutant status may be incorrect. The NSPS for Kraft pulp mills contains emission standards for total reduced sulfur.[101] Accordingly, total reduced sulfur is a designated pollutant at a specific designated facility: Kraft pulp mills. "Total reduced sulfur" is defined, in turn, as "the sum of the sulfur compounds hydrogen sulfide, methyl mercaptan, dimethyl sulfide, and dimethyl disulfide . . . ."[102] This means that hydrogen sulfide is counted when measuring total reduced sulfur, and it also means that hydrogen sulfide is technically a regulated NSR pollutant: a "pollutant that is subject to [a] standard promulgated under section 111 . . . ."[103]

Similarly, the NSPS for petroleum refineries includes an emission standard for reduced sulfur compounds.[104] "Reduced sulfur compounds," in turn, is defined to mean "hydrogen sulfide . . . carbonyl sulfide . . . and carbon disulfide."[105] Accordingly, hydrogen sulfide is technically a regulated NSR pollutant.

If the foregoing analysis is correct, hydrogen sulfide is a pollutant that must be counted when a new facility is ascertaining whether it has exceeded the 100 (or 250) tpy trigger of the PSD program's major emitting facility definition. EPA itself seems to have reached this conclusion:

> The compound hydrogen sulfide . . . was inadvertently on the section 112(b)(1) list of HAPs in the 1990 Amendments. To correct this clerical error, [hydrogen sulfide] was removed from the section 112(b)(1) list by a joint resolution of Congress. . . . This means that the PSD provisions of the Act continue to apply to [hydrogen sulfide], which is still regulated under section 111 of the Act.[106]

It bears repeating that—with one exception—emissions of sufficient quantities of any pollutant regulated in a NSPS may trigger the PSD permit requirement even at sources which are not themselves subject to the relevant NSPS. Thus, hydrogen sulfide emissions must be counted, not only when ascertaining the major emitting facility status of new Kraft pulp mills or petroleum refineries, but also when determining whether the PSD permit pollutant trigger will be pulled at any category of stationary sources.

The sole exception to this principle has to do with one unique set of designated pollutants from designated facilities: MWC emissions. In promulgating the NSPS for the MWC stationary source category, EPA explained:

> In response to the comment that "MWC emissions" as such can only be emitted by MWCs, EPA agrees that the establishment of this pollutant as a "regulated" pollutant for PSD purposes is unique to MWCs and does not subject source categories other than MWCs to PSD even though such other sources may emit the same pollutant, subclasses that constitute MWC emissions. This conclusion does not call into question the accuracy of EPA's general policy that pollutants (such as reduced sulfur compounds) for which EPA has established NSPS emission limits for particular source categories become "regulated" for PSD purpose as to any category of source that emits the named pollutant.[107]

I. Hazardous Air Pollutants: An Exception With a Twist

Prior to the 1990 CAA Amendments, the PSD permit pollutant trigger included HAPs—pollutants that EPA had listed under §112. This is so, because HAPs were pollutants "regulated under the Clean Air Act"—the language used in the

92. The NSPS for the various stationary source categories are set forth in 40 C.F.R. §§60.30b through 60.4420.

93. *See* 40 C.F.R. §60.192 (fluoride standards for primary aluminum reduction plants); *id*. §60.202 (fluoride standards for wet-process phosphoric acid plants).

94. *See id.* §60.31d (sulfuric acid mist guidelines for sulfuric acid production plants).

95. The term "volatile organic compound" is defined in 40 C.F.R. §51.100(s). NSPS for VOCs have been promulgated for approximately 20 stationary source categories. *See, e.g.*, 40 C.F.R. §60.112 (petroleum liquid storage vessels); *id*. §60.312 (surface coating of metal furniture); *id*. §60.502 (bulk gasoline terminals). For an unusual case in which plaintiffs alleged that a new dairy facility had been built in violation of California's NSR requirements, because the VOC emissions from dairy cow digestive systems and manure piles exceeded the relevant PSD or nonattainment permit cutoff values under state law, see *Association of Irritated Residents v. C & R Vanderham Dairy*, 2006 WL 2644896 (E.D. Cal. 2006).

96. *See* 40 C.F.R. §60.752; *see also* 61 Fed. Reg. 9905, 9912 (Mar. 12, 1996) ("Today's rulemaking . . . establishes a new classification of pollutants subject to regulation under the CAA: 'MSW landfill emissions.'").

97. *See id.* §60.33b.

98. *See id.* §60.104(a)(2)(ii) (standard for reduced sulfur compounds at petroleum refineries).

99. *See id.* §60.283 (standard for total reduced sulfur at Kraft pulp mills).

100. *See supra* notes 82-84 and accompanying text.

101. 40 C.F.R. §60.283.

102. *Id.* §60.281(c).

103. *Id.* §§51.166(b)(49)(ii), 52.21(b)(49)(ii).

104. *Id.* §60.104(a)(2)(ii).

105. *Id.* §60.101(*l*).

106. 61 Fed. Reg. at 38310 n.95. EPA has reiterated this analysis in connection with hydrogen sulfide's status as a mandatory §112(r)(3) substance. *See infra* notes 125-28 and accompanying text.

107. 56 Fed. Reg. at 5503.

Agency's regulatory narrowing of the major emitting facility pollutant trigger.[108]

In the 1990 Amendments, when Congress massively expanded the list of HAPs,[109] it added §112(b)(6), declaring that the provisions of Part C—the PSD portion of the CAA—"shall not apply to pollutants listed under this section."[110] Accordingly, unless state law provides to the contrary,[111] HAPs may be ignored when computing the 100 (or 250) tpy cutoffs in the major emitting facility definition.

In an exception to the exception, EPA has provided that a HAP is a regulated NSR pollutant if it "is also regulated as a constituent or precursor of" a criteria pollutant.[112] In that event, "that listed pollutant may be regulated under [the PSD program] but only as part of regulation of the general pollutant."[113]

It is hard to know what to do with this language. The most familiar precursors to criteria pollutants are nitrogen oxides and VOCs, which "are referred to as precursors of ozone."[114] A number of listed HAPs—such as toluene and xylene—are also VOCs.[115] One way to interpret the language of 40 C.F.R. §51.166(b)(49)(iv) might be to say that toluene and xylene emissions do count when calculating the 100 (or 250) tpy cutoff values for major emitting facilities under the PSD program, and that their emissions must be summed with the total emissions of all other VOCs to arrive at a number representing the grand total of VOC emissions.[116] It is this number that must be compared to the relevant 100 (or 250) tpy major emitting facility cutoff.

EPA has suggested that the foregoing analysis is appropriate:

> [A]ny HAP[s] listed in section 112(b)(1) which are regulated as constituents or precursors of a more general [criteria] pollutant listed under section 108 are still subject to PSD as part of the more general pollutant, despite the exemption in section 112(b)(6). For example, VOC (a term which includes benzene, vinyl chloride, methanol, toluene, methyl ethyl ketone, and numerous other compounds) are still regulated as VOC (but not as individual pollutants such as benzene, etc.) under the PSD regulations because these pollutants are ozone precursors, not because they are HAP[s].[117]

"Lead compounds," listed as a HAP by Congress in §112(b)(1),[118] seem to represent almost the reverse situation. Because lead is a criteria pollutant, emissions of this pollutant would plainly count when considering the 100 (or 250) tpy cutoff for major emitting facility status. Without a greater understanding of how lead emissions are computed and weighed, we initially surmised that all lead compounds must be summed when calculating the emissions of this PSD permit trigger pollutant. Nevertheless, EPA has addressed lead as a PSD permit trigger in the following way:

> [S]ection 112(b)(7) states that elemental Pb [lead] (the named chemical) may not be listed by the Administrator as a HAP under section 112(b)(1); therefore, elemental Pb emissions are not exempt from the Federal PSD requirements because section 112(b)(6) exempts only the pollutants listed in section 112. Elemental Pb continues to be a criteria pollutant . . . .
>
> The [PSD] regulations specifying a significance level refer to "Pb" and do not specify whether the Pb covered is "elemental" or "Pb compounds." As noted in EPA's transition guidance, the elemental Pb portion of Pb compounds (as tested for in 40 CFR part 60, appendix A, Method 12) is still considered a criteria pollutant subject to the Pb NAAQS and regulated under PSD. Thus, EPA intends that the reference to "Pb" in the proposed regulations covers *the Pb portion* of Pb compounds. The Agency requests comment on . . . whether references in the regulations should specify "elemental" Pb, or whether the word "elemental" might mislead the public to believe that only Pb that is not part of a Pb compound is covered.[119]

As we understand EPA's position, lead emissions must be calculated and summed when assessing major emitting facility status in the following manner: (1) all elemental lead (lead that is not part of a lead compound) must be included; and (2) the elemental lead portion of lead compounds must be included, even though the lead compounds themselves are excluded by §112(b)(6) from the PSD calculation by virtue of their status as HAPs.[120]

J. Section 112(r) Substances: A Third Look at Hydrogen Sulfide

In the 1990 CAA Amendments, largely in response to the massive deaths resulting from the accidental release of toxic

108. 40 C.F.R. §§51.24(b)(1), 52.21(b)(1) (1978). *See supra* note 70 and accompanying text.

109. *See* Stensvaag, *supra* note 34, at 332-37.

110. CAA §112(b)(6), 42 U.S.C. §7412(b)(6). *See* Stensvaag, Clean Air Act 1990 Amendments Law and Practice §11.3 n.21 (1991).

111. Section 116 allows states and their political subdivisions to adopt and enforce their own air pollution standards, as long as those standards are not "less stringent" than federal law. *See* CAA §116, 42 U.S.C. §7416. EPA seems to have concluded that the language of §112(b)(6) does not preclude continued use by a state of HAPs as PSD permit triggers. *See* 58 Fed. Reg. 33769 (June 21, 1993) ("section 116 of the CAA allows States to continue to regulate selected [hazardous air pollutants] under PSD if they so choose"); *see also* 58 Fed. Reg. 15422, 15427 (Mar. 23, 1993) ("pursuant to [§§]116 and . . . 112(d)(7) . . . states . . . may continue to regulate . . . hazardous air pollutants now exempted from federal PSD, if the State PSD regulations provide an independent basis to do so").

112. 40 C.F.R. §51.166(b)(49)(iv).

113. 67 Fed. Reg. at 80240.

114. 72 Fed. Reg. 33937, 33938 (June 20, 2007). *See* In re Masonite Corporation, PSD Appeal No. 94-1, 1994 WL 615380, 5 E.A.D. 551 (EPA Envtl. App. Bd. Nov. 1, 1994) ("Although VOCs are not regulated under the Act, they are a precursor to the formation of ozone, which is regulated under the Act, and they are therefore treated under the PSD regulations as a proxy for ozone.").

115. *See* 72 Fed. Reg. 38952, 38959 (July 16, 2007). The term "volatile organic compound" is defined in 40 C.F.R. §51.100(s).

116. VOCs are undeniably designated pollutants at designated facilities in approximately 20 NSPS, *see supra* note 95, and we have seen that such pollutants must be included in the 100 (or 250) tpy calculations, regardless of the stationary source category of the new facility. *See supra* notes 90-99 and accompanying text.

117. 61 Fed. Reg. at 38310.

118. CAA §112(b)(1), 42 U.S.C. §7412(b)(1). The statute goes on to say: "listings . . . which contain the word 'compounds' . . . are defined as including any unique chemical substance that contains the named chemical . . . as part of that chemical's infrastructure." *Id*.

119. 61 Fed. Reg. at 38310 (emphasis added); *see also* 57 Fed. Reg. at 18075 ("Lead compounds are exempt from Federal PSD . . . but *the elemental lead portion* of lead compounds . . . is still considered a criteria pollutant . . . regulated under PSD") (emphasis added).

120. New Jersey defines "lead" for purposes of its annual "Emission Statement" requirement as "elemental lead or any compound containing lead measured as elemental lead." N.J. Admin. Code §7:27-21.1. This seems consistent with EPA's position when calculating emissions for purposes of the PSD program's major emitting facility definition.

chemicals from a Union Carbide facility in Bhopal, India,[121] Congress established a new "prevention of accidental releases" program in CAA §112(r).[122] This program governs substances listed in or pursuant to §112(r)(3) and "any other extremely hazardous substance."[123] Congress directed the Administrator to promulgate a list of substances under §112(r)(3), and further mandated that certain substances must appear on that list.[124] One of those mandatory substances is hydrogen sulfide.

Because §112(b)(6) excludes from the PSD program "pollutants listed under this section,"[125] i.e., §112, substances listed in or pursuant to §112(r)(3) are exempt from the PSD program.[126] As EPA has explained:

> Under the plain terms of section 112(b)(6), PSD does not apply to substances by virtue of their inclusion on the list of substances that the Administrator is to promulgate under section 112(r), Prevention of Accidental Releases. . . . Section 112(r) is not intended to address emissions of these pollutants outside of an accident, and certain regulated sources may have no emissions at all outside of accidental releases. It thus makes sense that the PSD program, which is designed to limit and control emissions that occur in the ordinary course of a source's operations, does not apply to substances by virtue of their listing under section 112(r).[127]

The Agency has warned, however, that a substance listed under §112(r)(3) may be subject to the PSD program if the pollutant is also regulated under a different portion of the Act:

> [L]ike substances listed under section 112(b)(1), substances regulated under section 112(r) may still be subject to PSD if they are regulated under other provisions of the Act. For example, EPA believes that even though [hydrogen sulfide] is listed under section 112(r), hydrogen sulfide is still regulated under the Federal PSD provisions because it is regulated under the NSPS program in section 111. This means that the listing of a substance under section 112(r) does not exclude the substance from the Federal PSD provisions; the PSD provisions apply if the substance is otherwise regulated under the Act.[128]

VII. Which Emissions Count?

A. The "Potential to Emit" Riddle

We have now looked in considerable depth at the PSD permit pollutant trigger issue: which pollutants count when analyzing the 100 (or 250) tpy cutoff of the major emitting facility definition? Once we know confidently which pollutants to count, we must confront an additional daunting issue of interpretation: which emissions count?[129] All emissions that could possibly escape from a proposed new facility—under the worst operating conditions with no pollution controls? A lesser quantity that might be emitted if the facility uses cutting-edge, state-of-the-art pollution control equipment to curb its emissions? These are complicated questions, and their answers will have profound effects on the reach of the PSD permit program.

The statute says simply that the term major emitting facility embraces "stationary sources of air pollutants which emit, or have the potential to emit" 100 (or 250) tpy of an air pollutant.[130] Because we are confining our analysis to wholly new facilities, our focus must be on the phrase "potential to emit." How does one assess the emissions potential of a proposed new facility, and which projected emissions must be considered?

If the phrase "potential to emit" refers to uncontrolled emissions, many more sources will fall within the major emitting facility category than if the phrase is interpreted to refer to the quantity of emissions emanating from a facility operating with pollution controls. Similarly, if the phrase embraces fugitive and "secondary" emissions associated with a facility's operation, the scope of the PSD permit program will be considerably broader than if it includes only emissions from such discrete stationary source release points as boiler and furnace stacks.

B. EPA's Initial Position: Worst Case, Uncontrolled Emissions

EPA's initial position was straightforward. In the 1978 PSD regulations promulgated to implement the 1977 CAA Amendments, the Agency defined "potential to emit" as "the capability at maximum capacity to emit a pollutant in the absence of air pollution control equipment."[131] This approach focused on worst case, uncontrolled emissions. Prof. Craig Oren concluded that this interpretation has "considerable support in the legislative history,"[132] and the *Alabama Power* court conceded that the U.S. Senate record lends support to EPA's interpretation.[133]

At first glance, the Agency's initial interpretation of "potential to emit" may seem so extreme as to be silly. As one commentator put it, "the fundamental flaw in EPA's definition was that by ignoring pollution control devices built into a source the agency measured the source 'as it would never be.'"[134] Nevertheless, the Agency's proposed hard-headed approach to "potential to emit" was explained in large part by its fear that air pollution sources would evade the PSD permit program by claiming significant emission reductions that might eventually fail to materialize:

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121. *See* Arnold W. Reitze Jr., *Control of Hazardous Air Pollution*, 28 B.C. Envtl. Aff. L. Rev. 229 (2001).

122. *See* Stensvaag, *supra* note 110, §§12.1-12.13.

123. CAA §112(r)(1), 42 U.S.C. §7412(r)(1).

124. *See id.* §112(r)(3), 42 U.S.C. §7412(r)(3).

125. *Id.* §112(b)(6), 42 U.S.C. §7412(b)(6).

126. *See supra* note 88.

127. 61 Fed. Reg. at 38310.

128. *Id.*

129. This issue may be especially difficult when an existing stationary source is modified: how does one calculate increased emissions resulting from such modification? That topic, however, is beyond the scope of this Article, which looks exclusively at the proposed construction of new facilities.

130. CAA §169(1), 42 U.S.C. §7479(1).

131. 40 C.F.R. §§51.24(b)(3), 52.21(b)(3) (1979). "'Potential to emit' referred largely to the maximum rate at which a 'source' would emit a pollutant without control equipment." 45 Fed. Reg. at 52682; *see also* 43 Fed. Reg. 26388, 26391-92 (June 19, 1978).

132. Oren, *supra* note 1, at 14 n.62.

133. *See* Alabama Power Co. v. Costle, 636 F.2d 323, 355, 10 ELR 20001 (D.C. Cir. 1979).

134. Josh Drew, *Calculating Potential to Emit Under the Clean Air Act: The Importance of Federal Enforceability*, 91 Nw. U. L. Rev. 1114, 1127 n.111 (1997) (quoting Duquesne Light Co. v. EPA, 698 F.2d 456, 474 (D.C. Cir. 1983)).

> The Agency has decided to apply PSD on the basis of uncontrolled emissions . . . for an important practical reason. In enforcement programs, reporting systems have been and must be based on uncontrolled emissions. Otherwise a source with controls to capture 90 percent of the potential emission might well be below the cutoff for reporting, but could virtually turn off the control equipment, emit 10 times the allowed level and not be tracked.[135]

In the incidents discussed earlier in this Article about the civil penalty assessed against Louisiana-Pacific's waferboard operations,[136] the federal government alleged wrongdoing on a grand scale to avoid the PSD permitting process at 11 new facilities built in 8 states. The authorities alleged, for example, that a year-old waferboard plant in Jackson County, Georgia, "was pouring 1,500 tons of volatile organic chemicals into the air each year, more than six times the amount the company said it would emit."[137] If the actual VOC emissions of 1,500 tpy were "more than six times" the company's predicted emissions, the projected emissions apparently fell somewhere below 250 tpy—a projection nicely suited to avoid the 250 tpy PSD permit trigger for a type of facility not enumerated in §169(1).

As is true of many permitting (or licensing) systems, the PSD program cannot work unless potentially regulated entities self-identify and apply for a permit. When an individual fails to secure the necessary driver's license and is perceived behind the wheel in a moving vehicle on a public highway, the enforcement mechanism is swift and sure; there are no ambiguities about either the license requirement or the driver's failure to comply with it while engaging in the regulated activity. So also, an angler caught in public waters with deployed rod and reel and the day's catch in the creel is without defense if he or she lacks the necessary fishing license. These are bright line situations. To be sure, the unlicensed driver and angler may or may not be caught in their proscribed activities, but if they are apprehended, there is precious little wiggle room for evasion of the relevant sanctions.

Similarly, in EPA's initial crack at "potential to emit," the Agency sought to create a bright-line test—a test so easy of application that bad actors could not successfully evade the permit regime. Effectively, EPA told potentially regulated entities: (1) if you construct a new facility which, in fact, emits 100 (or 250) tpy of any air pollutant, and you do so without having first obtained a PSD permit, you have violated the Clean Air Act, because (2) you failed to self-identify as a major emitting facility; and (3) your conduct unequivocally makes you a major emitting facility, so therefore (4) there is nothing left to discuss but the sanctions. Most importantly, EPA's initial approach left no room for the kind of "oops! my bad!" defense that might be invited by a more squishy or elastic definition of major emitting facility.

This approach to defining "potential to emit" was well designed to provide the greatest possible protection against bad actors. From the viewpoint of the regulated community, however, it came at too high a price: good actors, who would never think of lowballing their projected emission calculations—and who would not dream of turning off their pollution control equipment—might be required to jump through the costly, time-consuming hoops of preconstruction review and PSD permit acquisition[138] for stationary sources that would never, in fact, be major emitting facilities: their controlled emissions would never exceed the 100 (or 250) tpy cutoff. Nor would the wasteful commotion of PSD permit-acquisition activities for these "non-major-in-fact" sources be rare; both EPA and the *Alabama Power* court indicated that many facilities with actual, controlled emissions below the 100 (or 250) tpy cutoff would be drawn into the complicated PSD permit process if the Agency's "uncontrolled emissions" approach were implemented.[139]

C. The Alabama Power *Reversal: Only "Controlled" Emissions Count*

As Jack Landau has noted, "[n]early half of the issues in *Alabama Power* focused on the definition of 'major emitting facility' [and] [b]y far the most important question in determining the scope of [that] phrase is the meaning of . . . 'potential to emit.'"[140] The *Alabama Power* court resolved one bedrock uncertainty by ruling definitively that "potential to emit" must be read to refer to controlled, rather than uncontrolled, emissions.[141] In calculating potential emissions, said the court, the Agency "must look to the facility's 'design capacity' a concept which not only includes a facility's maximum productive capacity . . . but also takes into account the anticipated functioning of the air pollution control equipment designed into the facility."[142] With this one ruling, the court greatly narrowed the reach of the PSD permit program by shrinking the universe of stationary sources meeting the major emitting facility definition.

The *Alabama Power* court's "potential to emit" ruling is now well settled. Three of the court's arguments seem particularly compelling. First, the court noted that it would be odd to ignore pollution controls mandated by the very statute containing the potential to emit language:

> Congress was fully aware that many major new sources of air pollution were already required by law to install and operate air pollution control equipment. . . . In this context one would require strong statutory evidence that Congress intended to approach the measurement of emissions in ignorance and disregard of the operation of pollution control equipment already required by law to be designed into a facility. . . .[143]

This reasoning seems sound. To assume when measuring "potential to emit" that all new stationary sources will emit larger quantities of regulated pollutants than allowed by the NSPS would be to assume that new facilities will all operate

135. 43 Fed. Reg. at 26392.

136. *See supra* note 21 and accompanying text.

137. Schneider, *supra* note 21.

138. *See supra* notes 10-20 and accompanying text.

139. *See* 45 Fed. Reg. at 52681 n.3; *id*. at 52688; 44 Fed. Reg. 51924, 51929 (Sept. 5, 1979) ("Many more sources would fall into the category if the phrase referred to the amount of pollution that a source would emit without pollution controls than if it referred to the amount a source would emit with such controls."); *id*. at 51944; Alabama Power Co. v. Costle, 636 F.2d 323, 354, 10 ELR 20001 (D.C. Cir. 1979).

140. Jack L. Landau, Alabama Power Co. v. Costle*: An End to a Decade of Controversy Over the Prevention of Significant Deterioration of Air Quality?*, 10 Envtl. L. 585, 614 (1980).

141. *See Alabama Power Co.*, 636 F.2d at 353-55.

142. *Id*. at 353.

143. *Id*. at 353-54.

illegally under the CAA. Such an approach to the major emitting facility definition would be peculiar.

Second, the *Alabama Power* court pointed to a drafting clue so powerful that it rises to the level of a smoking gun:

> The coverage of the 100 ton-per-annum threshold of the first sentence of section 169(1) extends to 28 categories of facilities. . . . [T]he submissions of the parties establish that *no* operational industrial facility that could be described as within the listed categories would have the "potential to emit" *less* than the threshold amount if the operation of cleansing control equipment is totally discounted. . . .[144]

This logic seems irrefutable. It would indeed have been bizarre for Congress—in the first sentence of §169(1)—to provide that the term major emitting facility includes only those sources falling within the enumerated categories having the potential to emit 100 tpy or more of any air pollutant, if each and every facility falling within the enumerated categories inevitably has the potential to emit such quantities. The court went on to note: "The committee reports and floor debates evidence the understanding that . . . some sources within the 28 industrial categories would be too small to satisfy the threshold tonnage specified in section 169(1). These understandings are inconsistent with EPA's 'uncontrolled emissions' approach."[145]

Third, the *Alabama Power* court pointed out that the difference between controlled and uncontrolled emissions is often so dramatic that Congress was highly unlikely to have intended the interpretation adopted by EPA:

> Congress was presumably . . . aware of the high rate of effectiveness with which control equipment eliminates pollutants from unprocessed industrial emissions. For example, at the time of the enactment of the PSD provisions, technology in operation was capable of eliminating over 99% of the particulate matter from emissions. Thus, a source with the potential according to EPA's "uncontrolled emissions" standard to emit 100 tons per annum of particulate matter would emit in actuality less than one ton per year. The record illustrates that the heating plant operating in a large high school or in a small community college would become "major" sources under such a test. We have no reason to believe that Congress intended to define such obviously minor sources as "major" for the purposes of the PSD provision.[146]

All three of these arguments—especially taken together—support the conclusion that the *Alabama Power* court got it right when making its core potential to emit ruling.

D. Aftermath: EPA's Insistence on Federal Enforceability

The *Alabama Power* court's ruling that potential to emit must be calculated by reference to controlled rather than uncontrolled emissions has turned out to be the beginning, rather than the end, of a continually evolving interpretive process. As EPA has struggled to implement the court's ruling, it has been haunted by two legitimate concerns.

The first concern has to do with the efficacy of pollution controls. If a new facility with projected uncontrolled emissions exceeding the relevant 100 or 250 tpy cutoff evades the PSD permit requirement by asserting that its controlled emissions will fall below the relevant cutoff value, how can the public be assured that the promised controls will, in fact, be reliably and consistently effective?

The second concern has to do with the greatly increased opportunities for good-faith error and for conscious evasion when developers calculate their projected controlled emissions. To quote the agency: "Since potential to emit refers to controlled emissions . . . the scope of PSD preconstruction review will shrink dramatically with many more sources having the opportunity to construct . . . without preconstruction review."[147] In EPA's judgment, the borderline cases where mistakes or evasion could occur will increase sufficiently to justify scrutiny.

These two concerns have led EPA to insist that any controls relied on to constrain "potential to emit," thus evading major emitting facility status (and the associated PSD permit requirement) must be "federally enforceable."[148]

EPA added the "federally enforceable" requirement in 1980, when it promulgated final PSD regulation revisions in response to the *Alabama Power* decision. These regulations included the following definition:

> "Potential to emit" means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation[[149]] on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable.[150]

This new language made it necessary to define the term "federally enforceable," and EPA did so:

> "Federally enforceable" means all limitations and conditions which are enforceable by the Administrator, including those requirements developed pursuant to 40 CFR Parts 60 [NSPS] and 61 [hazardous pollutants], requirements within any applicable State Implementation Plan, and any permit requirements established pursuant to 40 CFR 52.21 [PSD programs administered by EPA] or under regulations approved pursuant to 40 CFR 51.18 [nonattainment] or 40 CFR 51.24 [PSD programs administered by States and Native American tribes].[151]

The "potential to emit" language of §169(1) is echoed in several other places in the CAA,[152] and EPA has also included the federally enforceable condition in reg-

144. *Id*. at 354 (emphasis added).

145. *Id*. at 355.

146. *Id*. at 354. The court also concluded that "the overall legislative history does not support EPA's position." *See id*. at 355.

147. 44 Fed. Reg. at 51944.

148. 40 C.F.R. §§51.24(b)(4), 52.21(b)(4).

149. "As used in the rules . . . 'limitations' on a source's capacity to emit include such things as pollution control equipment, restrictions on operating hours, and restrictions on types or quantity of fuels to be used." 54 Fed. Reg. 27274, 27275 n.4 (June 28, 1989).

150. 40 C.F.R. §§51.24(b)(4), 52.21(b)(4), *promulgated in* 45 Fed. Reg. at 52730-31, 52736.

151. *Id.* §§51.24(b)(17), 52.21(b)(17), *promulgated in* 45 Fed. Reg. at 52732, 52737.

152. *See, e.g.*, CAA §112(a)(1), 42 U.S.C. §7412(a)(1) (major sources of HAPs); CAA §182(c), 42 U.S.C. §7511a(c) (major sources in serious ozone nonattainment areas); CAA §182(d), 42 U.S.C. §7511a(d) (severe ozone nonattainment areas); CAA §182(e), 42 U.S.C. §7511a(e) (extreme ozone nonattainment areas); CAA §302(j), 42 U.S.C. §7602(j) (general major source definition).

ulations promulgated to implement a number of those other sections.[153]

E. EPA Reconsideration and Reaffirmation of the Federal Enforceability Requirement

The federal enforceability requirement was immediately controversial. In fact, it has been "the subject of litigation and rulemaking for more than a generation."[154] Josh Drew has laid out the chronology of the controversy beautifully in a detailed narrative that need not be repeated here.[155] The following highlights shed light on the current state of the law.

In 1983, in response to an industry challenge to the 1980 regulations, EPA proposed to eliminate the word "federally," requiring only that limitations on potential to emit must be "enforceable," and defining the later term to mean "enforceable under federal, State or local law and discoverable by the Administrator and any other person."[156] In support of this proposed change, the Agency declared:

> EPA has no reason to believe either: (1) That a company would take a limitation that is enforceable by a state or local agency any less seriously than it would take a limitation that is enforceable by EPA; or (2) that the enforcement leverage of state and local governments is materially smaller than EPA's.[157]

In 1989, however, EPA reversed its position and published a final rule retaining the "federally enforceable" requirement and definition in the PSD regulations.[158] In doing so, it articulated in considerable detail its substantial justifications for the requirement.[159]

To make it easier for potentially regulated entities to avoid major emitting facility status by obtaining the necessary federally enforceable limits, EPA simultaneously amended the definition of "federally enforceable" by adding the following clause to the end of the 1980 definition: ". . . including operating permits issued under an EPA-approved program that is incorporated into the State implementation plan and expressly requires adherence to any permit issued under such program."[160] The Agency calls a state program establishing a non-Title V permit program under the foregoing clause a federally enforceable state operating permit program (FESOPP); a permit issued under this clause is referred to by the Agency as a federally enforceable state operating permit (FESOP).[161]

F. The Pragmatic Wisdom of the Federal Enforceability Requirement

The best way to explain the pragmatic wisdom of EPA's federally enforceable condition is to return our focus to the idea of bad actors. Assume that a company proposes to build a new industrial plant—of a type not listed in the first sentence of §169(1)—for which uncontrolled emissions of VOCs are projected to be 1,500 tpy. Under EPA's initial 1978 "potential to emit" definition, the proposed facility would have been a major emitting facility (requiring a PSD permit), because its uncontrolled emissions exceed the 250 tpy cutoff value for nonenumerated source categories. Because the *Alabama Power* court struck down that definition, however, only controlled emissions need be counted when assessing major emitting facility status. The company insists that its controlled emissions of VOCs will amount to no more than 240 tpy because: (1) it will operate no more than 8 hours per day, five days per week (approximately 2,080 hours per year); (2) it will produce no more than 100 widgets per day; and (3) it will install and operate certain pollution control devices. After engaging in these calculations, the company proceeds to build and commence operation of its facility without obtaining a PSD permit.

The company immediately ramps up production so that it operates round the clock (8,760 hours per year), producing 400 widgets per day.[162] Moreover, there are indications that the promised pollution control devices have not been correctly installed and are not being operated properly. In any event, the actual VOC emissions from the facility over the course of the first year of operation are 1,500 tons. Most observers would say that such behavior is as unlawful as driving (or fishing) without the required license. Surely, the company should face significant punishment for evading the PSD permit program.

At the pragmatic level, however, enforcement may be difficult. Because the company never notified EPA or made any representations whatsoever to the agency, it is hard to see how the company can be nailed by federal authorities for misrepresentations. There is a powerful argument that the

153. *See, e.g.*, 40 C.F.R. §51.165(a)(xiv) (nonattainment); 40 C.F.R. §63.2 (HAPs).

154. Drew, *supra* note 134, at 1115.

155. *See id.* at 1128-36.

156. 48 Fed. Reg. 38742, 38748 (Aug. 25, 1983).

157. *Id.*

158. *See* 54 Fed. Reg. at 27274.

159. *See id.* at 27277-80. The justifications included the following: (1) federal enforceability is "necessary . . . to ensure that . . . limitations and reductions are actually incorporated into a source's design and followed in practice," *id*. at 27277; (2) "the level of State and local enforcement is uneven, and . . . some States and localities have been unwilling or unable to enforce their programs effectively," *id*.; (3) "in the absence of a Federal enforcement capability to back up State and local efforts, there would be somewhat less incentive for sources to actually observe non-Federal limitations," *id*.; (4) "absent Federal enforcement capability, some State and local governments would be more susceptible to economic and other pressures from industry that could actually make State and local enforcement less effective than it currently is," *id*.; (5) "absent a nationwide, Federal enforcement presence, industry would be inclined to build, or move, sources to States with the least effective enforcement efforts," *id*. at 27277 n.13; (6) "the processes by which federally enforceable limits . . . are imposed (e.g., public notice and comments, notification to EPA) are the best and most reliable ways to ensure, in advance, that a source actually intends to observe a limitation," *id*.; (7) the "Federal enforceability requirement facilitates citizen enforcement," *id*.; (8) absent a federal enforceability requirement, "the only records of many such transactions would be scattered around various State and local offices and would be more difficult to obtain," *id*.; (9) "it is not certain that nonfederally enforceable State permit limitations or other commitments could be enforced [by citizens] under section 304 at all," *id*. at 27277 n.14; (10) courts may be reluctant to punish operating non-permitted major emitting facilities by ordering their shutdown prior to PSD permit issuance, making this an inadequate deterrent. *Id*. at 27278.

160. 54 Fed. Reg. at 27285. EPA explains the state operating permit program option in *id*. at 27281-84.

161. *See, e.g.*, 64 Fed. Reg. 68066, 68068 (Dec. 6, 1999).

162. *Cf.* Schneider, *supra* note 21 (Louisiana-Pacific "said it would produce 240 tons of waferboard a day [but] a routine inspection . . . found that the plant was producing 400 tons . . . a day").

company has violated §165(a)(1)[163] by constructing a major emitting facility without a PSD permit, but the statute technically forbids only the activity of construction—not operation. Moreover, the remedies authorized by §167 seem inadequate: "The Administrator shall, and a State may, take such measures, including issuance of an order, or seeking injunctive relief, as necessary to prevent the construction . . . of a major emitting facility which does not conform to the requirements of this part."[164] It is now too late for such relief. Indeed, in a series of federal enforcement actions alleging that defendants have constructed new or modified major emitting facilities without obtaining the necessary PSD permits, courts have ruled that the violation occurs at the time of construction, so that subsequent operation of the facility does not itself violate the PSD permit requirement under a "continuing violation" theory.[165]

To be sure, §304 authorizes citizen suits "against any person who . . . constructs any new . . . major emitting facility without a permit required under Part C."[166] It also authorizes suit against any person who is alleged to be "in violation of an emission standard or limitation" under the CAA,[167] and the latter term is defined to include "any requirement to obtain a permit as a condition of operations."[168] The language of these two sections may be friendlier to the argument that the ongoing operation of a major emitting facility without a PSD permit is itself actionable.[169] Moreover, the U.S. Court of Appeals for the Sixth Circuit has ruled in a citizen suit that the failure to conform to BACT at a major emitting facility—even one which has failed to apply for and obtain a PSD permit—is a continuing violation of a separate and independent requirement of the PSD regulations.[170]

Considered as a pragmatic matter, the most appropriate remedy for the blatant lawbreaking described in our hypothetical would be a court order holding the company to its PSD-permit-avoiding calculation of 240 tons of VOC emissions per year. However, nothing in the CAA seems to authorize such relief, which would seem to amount to a court-ordered emission limitation.[171] A second-best remedy would be a court decree ordering the company to conform to the assumptions underlying its self-serving calculations: (1) limiting operation to 2,080 hours per year; (2) limiting production to 100 widgets per eight-hour period; and (3) supervising and assuring the correct installation and operation of the pollution control devices used in the company's PSD-avoidance calculations. Again, however, nothing in the CAA seems to authorize such relief.

Against this background, EPA's insistence on federal enforceability makes sense. If the projected hours of operation, production rates, and pollution control devices—all factored in by the developer to drive the calculations down from 1,500 to 240 tpy—had been made federally enforceable, then EPA could exercise all of its §113[172] powers and citizens could invoke the §304[173] citizen suit provisions to force the company to comply with the assumptions relied on to evade the PSD permit requirement. Stated another way, the company's claim that it was not constructing a major emitting facility could be echoed in the real world. "You said you were not building a major emitting facility and—by virtue of this court decree—we will assure that you did not do so."

G. The D.C. Circuit's Rejection of the Federal Enforceability Requirement

Despite the compelling logic of the "federally enforceable" condition, industry groups renewed their challenges to the condition in the PSD and other CAA regulations, ultimately prevailing in a series of three decisions by the D.C. Circuit.[174] The court provided its reasoning in *National Mining Ass'n v. U.S. Environmental Protection Agency*,[175] the first of the three decisions:

> [I]t is certainly permissible for EPA to have refused to take into account ineffective controls . . . But . . . EPA has proposed conditions for achieving "federal enforceability" that go beyond the mere effectiveness of particular constraint as a practical matter . . . Under EPA's regime, even a state program of unassailable effectiveness would not qualify in computing a source's capacity to emit unless it had been submitted not only for EPA approval, but also for inclusion in the SIP . . . . EPA has not

163. "No major emitting facility . . . may be constructed . . . unless . . . a permit has been issued . . . ." CAA §165(a)(1), 42 U.S.C. §7475(a)(1).

164. CAA §167, 42 U.S.C. §7479.

165. *See* United States v. Murphy Oil USA, 143 F. Supp. 2d 1054, 1080-84 (W.D. Wis. 2001); United States v. Campbell Soup Co., No. S-95-1854, 1997 WL 258894 (E.D. Cal. Mar. 11, 1997); United States v. Brotech Corp., No. 00-2428, 2000 WL 1368023 (E.D. Pa. Sept. 19, 2000); United States v. Westvaco Corp., 144 F. Supp. 2d 439, 444 (D. Md. 2001) ("Federal district courts have uniformly held that preconstruction permit violations occur only at the time of the construction or modification of the emitting facility."); Ogden Projects, Inc. v. New Morgan Landfill Co., 911 F. Supp. 863, 876, 26 ELR 20843 (E.D. Pa. 1996); United States v. Louisiana-Pacific Corp., 682 F. Supp. 1122, 1130 (D. Colo. 1987) ("the violation occurs when the actual construction is commenced, and not at some later point in time").

166. CAA §304(a)(3), 42 U.S.C. §7604(a)(3). The Second Circuit has held that a citizen may sue under this section to challenge the determination by a state that a proposed project does not involve a major emitting facility and that therefore no PSD permit is needed for its construction. *See* Weiler v. Chatham Forest Prods., 392 F.3d 532, 536-39 (2d Cir. 2004); *see also id*. at 538 ("section 304(a)(3) provides relief before construction has begun" and lacks the 60-day notice requirement of §304(a)(1)).

167. CAA §304(a)(1), 42 U.S.C. §7604(a)(1). The Second Circuit has stated that, in a case alleging failure to obtain a required PSD permit, "a section 304(a)(1) suit can only be brought against a . . . defendant after a facility has been built and begun operation." *Weiler*, 392 F.3d at 538.

168. CAA §304(f)(4), 42 U.S.C. §7604(f)(4).

169. This raises the odd possibility that a citizen could bring suit under circumstances in which the federal government could not do so.

170. National Parks Conservation Ass'n v. Tennessee Valley Auth., 480 F.3d 410, 418-49, 37 ELR 20056 (6th Cir. 2007).

171. *See* Stensvaag, *supra* note 34, at 224-25; *cf.* Mich. Comp. Laws §1701(2)(b) (2007) (portion of Michigan Environmental Protection Act empowering a court to "direct the adoption of a standard approved and specified by the court").

172. Section 113 authorizes administrative orders, civil judicial enforcement, criminal penalties, and administrative assessment of civil penalties. *See* CAA §113, 42 U.S.C. §7413.

173. Section 304 provides that "any person may commence a civil action . . . against any person . . . alleged . . . to be in violation of . . . an emission standard or limitation under this [Act]." CAA §304(a)(1), 42 U.S.C. §7604(a)(1).

174. *See* National Mining Ass'n v. EPA, 59 F.3d 1351, 25 ELR 21390 (D.C. Cir. 1995) (per curiam) (HAP regulations); Chemical Mfrs. Ass'n v. EPA, 70 F.3d 637 (Table), 1995 WL 650098 (C.A.D.C.), 315 U.S. App. D.C. 76 (D.C. Cir. Sept. 15, 1995) (per curiam) (nonattainment and PSD regulations); Clean Air Implementation Project v. EPA, 1996 WL 393118 (C.A.D.C.), 65 U.S.L.W. 2059 (D.C. Cir. June 28, 1996) (Title V permit program regulations).

175. 59 F.3d 1351, 25 ELR 21390 (D.C. Cir. 1995).

> explained why it is essential that a control be included within a SIP . . .
>
> The states' approaches to regulation varied widely," creating "'a patchwork of differing standards'". . . By no means . . . did Congress mandate that EPA assume the administration and enforcement of all governmental efforts at emissions limits.[176] If such administration and enforcement is necessary to ensure that controls are effective . . . EPA has certainly not made that case and has not indicated how that consideration supports its claim that its interpretation of the statute is reasonable.[177]

The *National Mining Ass'n* court did not vacate the disputed rule, leading EPA to conclude that the §112 potential to emit regulations, requiring federal enforceability, remain in effect.[178]

In the two subsequent D.C. Circuit decisions on the federal enforceability condition, the court did no more than cite its first decision; in these cases, however, the court vacated the PSD, nonattainment, and Title V potential to emit provisions.[179]

H. EPA's Efforts to Salvage a Pragmatic Enforceability Condition

In response to the D.C. Circuit rulings, EPA issued an "interim policy" addressed to all four affected potential to emit definitions.[180] The Agency explained that it intended to "hold discussions with stakeholders [to] propose rulemaking amendments by spring 1996, and to issue final rules by spring 1997."[181] The promised rules have still not been promulgated, and—more than a decade after the court order—the PSD regulations still contain the long-since vacated "federally enforceable" requirement.[182]

The interim policy document explains, however, that the meaning of this unchanged phrase has been effectively altered:

> EPA interprets the court's decision to vacate the PSD/NSR federal enforceability requirement . . . as causing an immediate change in how EPA regulations should be read . . . . Specifically, provisions of the definitions of "potential to emit" and related definitions requiring that physical or operational changes or limitations be "federally enforceable" to be taken into account in determining PSD/NSR applicability, the term "federally enforceable" should now be read to mean "federally enforceable *or legally and practicably enforceable by a state or local air pollution control agency*."[183]

The italicized language seems faithful to the D.C. Circuit's opinion, by yielding—at least for the interim—on the one point for which the court felt the Agency had failed to provide sufficient justification: the requirement that limitations must be enforceable by the Agency.[184]

The cover memo to the interim policy document nevertheless explained that there may be many states in which this relaxed interpretation of the "federally enforceable" language will not apply:

> [T]he requirements in the nationwide rules . . . are not in effect. In many cases, however, individual State rules implementing [the PSD program] have been individually approved in the . . . SIP. The court did not vacate any requirements for federal enforceability in these individual State rules, and these requirements remain in place.[185]

The interim policy document elaborated on this point:

176. This statement does not seem faithful to the grand scheme of the CAA. Considered as a whole, one red thread about enforcement emerges from the statute: federally mandated requirements are invariably made enforceable by EPA and by the federal government. Where states have chosen to implement the statute, all provisions required by the statute must be include in the SIP, which is expressly made subject to the Administrator's approval or disapproval. *See* CAA §110(k), 42 U.S.C. §7410(k). The Administrator is expressly empowered to bring a civil action against any person alleged to be in violation of any requirement or prohibition of a SIP or permit. *See* CAA §113(a)(1)(C), 42 U.S.C. §7413(a)(1)(C). The emission reduction offsets required as a precondition for obtaining a nonattainment permit must be "federally enforceable before such permit may be issued." CAA §173(a), 42 U.S.C. §7503(a). It is true that similar language is not found in the major emitting facility definition of Part C, but that is presumably because Congress was not focused on future arguments by developers that their sources evaded major emitting facility status because of emission reductions. If there are any federally mandated requirements of the CAA that are not enforceable by the Administrator, they must be exceedingly rare.

177. *National Mining Ass'n*, 59 F.3d at 1363-65.

178. *See* John S. Seitz, Release of Interim Policy on Federal Enforceability of Limitations on Potential to Emit (1996), *available at* http://www.epa.gov/ttn/oarpg/t5/memoranda/pte122.pdf [hereinafter Seitz Memo]. The Agency explains: "[T]he Court remanded the section 112 . . . regulation to EPA for further proceedings. EPA must either provide a better explanation as to why federal enforceability promotes the effectiveness of state controls, or remove the exclusive federal enforceability requirement." *Id.*; *see also* Clean Air Implementation Project v. EPA, 65 U.S.L.W. 2059 (D.C. Cir. June 28, 1996) (Rogers, J., concurring in part and dissenting in part) ("there is a possibility that the Agency could justify its original rule on remand").

179. *Chemical Manufacturers Ass'n*, 70 F.3d at 637 (Table); *Clean Air Implementation Project*, 65 U.S.L.W. at 2059.

180. EPA Interim Policy on Federal Enforceability Requirement for Limitations on Potential to Emit 2 (1996) [hereinafter Interim Policy], attached to Seitz Memo, *supra* note 178.

181. Interim Policy, *supra* note 180, at 2. EPA has considered at least five options for calculating potential to emit: (1) crediting only those state or local controls mandated under air pollution regulations; (2) crediting any and all controls required by state or local agencies (for example, even in a solid waste disposal permit) which require reductions in air emissions; (3) crediting state or local controls only if the source carries the burden of demonstrating effectiveness; (4) crediting only those state or local controls which a source agrees to make federally enforceable; and (5) retaining the disputed rule's language but providing the additional justification requested by the D.C. Circuit. *See* 28 Env't Rep. (BNA) 833-34 (Sept. 12, 1997).

182. *See* 40 C.F.R. §§51.24(b)(4), 52.21(b)(4).

183. Interim Policy, *supra* note 180, at 3.

184. It is worth noting, however, that the language of the interim policy would not give credit for state or local controls imposed by entities other than an air pollution control agency. Thus, for example, a state's "blue laws," restricting Sunday operations, might not be given credit when calculating the maximum number of operating hours. *See* 28 Env't Rep. (BNA) 1365 (Nov. 14, 1997).

185. Seitz Memo, *supra* note 178, at 2. For examples of states which apparently retain the "federally enforceability" condition, see 5 Colo. Code Regs. §100-5.I.B.35 (2007) (limitation must be "state and federally enforceable"); 62 Fla. Admin. Code §62-210.200(243) (2007); Iowa Admin. Code §567.33.3(455B) (2007); 401 Ky. Admin. Regs. §51:001(192)(2)(b) (2007); La. Admin. Code tit. 33, §509 (2007); Md. Regs. Code tit. §26.11.02.02 (2007); Mass. Regs. Code tit. 310, §7.00 (2007); Mo. Code Regs. tit. 10, §10-6.020 (2007); Mont. Admin. Reg. §17.8.801(25) (2007); Neb. Admin. Code tit. 129, ch. 19, §007 (2007); N.J. Admin. Code tit. 7, §27-8.1 (2007); N.M. Admin. Code §20.11.61.7(RR) (2007); Or. Admin. R. §340-200-0020(91) (2007) ("enforceable by the Administrator"); S.C. Code Regs. §61-62.5(37) (2007); 30 Tex. Admin. Code §116.12 (2007); 9 Va. Admin. Code §5-10-20 (2007) ("state and federally enforceable"); Wash. Admin. Code §173-400-030(69) (2007); Wis. Admin. Code §NR 405.02(25) (2007).

> EPA interprets the order vacating certain provisions of EPA regulations as not affecting the provisions of any current SIP, or of any permit issued under any current SIP. Thus, previously issued federally enforceable permits, such as permits issued under [FESOPPs] remain in effect. Likewise, EPA-approved state PSD . . . SIP rules requiring that all pollution controls or operational restrictions limiting potential to emit be federally enforceable remain in place, even though such provisions may have been based on the now-vacated terms of EPA regulations . . . . States are free to submit SIP revisions to remove such provisions in light of the vacatur, and to substitute mechanisms that are legally and practicably enforceable by the state for limiting potential to emit in some circumstances under the PSD/NSR program. However, we expect few states to do so pending the outcome of new EPA rulemaking on the broader federal enforceability issues.[186]

This reasoning, too, appears to be sound. Section 116 allows states and their political subdivisions to adopt and enforce their own air pollution standards or requirements, as long as those requirements are not "less stringent" than federal law.[187] State law defining "potential to emit" in a way that refuses credit for limitations unless they are "federally enforceable" may be more stringent than required by the court's mandate, but such law would surely pass muster under §116.

I. The Interim Policy in the Courts

In the decade since the D.C. Circuit rulings, an uneasy truce seems to have developed between EPA and industry. Judge Judith Rogers, in his separate opinion in the third of the D.C. Circuit rulings, described the interim policy in the following way:

> The Agency's interim policy . . . includes limitations on a source's potential to emit that are "federally enforceable or legally and practically enforceable by a state or local air pollution control agency." Movants make no claim that the interim policy is inconsistent with §§112 and 501(2) of the Act or with the mandate in *National Mining*.[188]

A 2004 opinion by the U.S. Court of Appeals for the Second Circuit similarly suggests that the interim policy is valid and should be given legal effect.[189] After quoting the portion of the interim policy document specifying how the term "federally enforceable" must be read,[190] the court said:

> In short, then, a proposed facility that is physically capable of emitting major levels of the relevant pollutants is to be considered a major emitting facility under the Act unless there are legally and practicably enforceable mechanisms in place to make certain that the emissions remain below the relevant levels.[191]

Developers proposing to construct a new stationary source should accordingly assume that potential to emit must be calculated by whichever of the following is the more demanding standard: (1) the interim policy language (crediting "legally and practicably enforceable by a state or local air pollution control agency"); or (2) relevant state law, which may retain the original "federally enforceable" language.

VIII. Conclusion

Developers of new stationary sources and their legal advisers will ordinarily wish to avoid the PSD permit obligation if at all possible. They can do so only if they fully understand the PSD permit trigger, particularly the major emitting facility definition. The seemingly straightforward statutory definition cloaks a number of difficult interpretive issues. During the past 30 years, EPA and the courts have answered and addressed many of those issues, sometimes in surprisingly complex ways. One issue in particular—the role of federal enforceability in calculating potential to emit—is still only partially resolved, with EPA, the courts, individual states, and industry representatives continuing to feel their way toward solutions that may vary from state to state.

This Article has attempted to explore in an organized way the current elements of the PSD permit trigger for new stationary sources. Attorneys who understand these elements will readily perceive that the most successful measures to avoid the PSD permit requirement are likely to involve: (1) steps to reduce projected pollutant emissions below the relevant 100 or 250 tpy cutoff; and (2) efforts to memorialize such emission curtailments in a manner sufficient to satisfy federal and state authorities that the limitations meet the relevant enforceability criteria.

186. Interim Policy, *supra* note 180, at 4-6. For examples of states which have apparently relaxed the "federal enforceability" requirement, see Ala. Admin. Code §335-3-14-.04(2)(d) (2007) (limitation must be "enforceable"); Alaska Admin. Code §50.990(8)(B) (2007) ("enforceable as a practical matter"); Ga. Comp. R. & Regs. §391-3-1.02(2)(v) (2007) ("enforceable as a practical matter"); Ind. Admin. Code tit. 326, §2-2-1(nn) (2007) ("enforceable as a practical matter"); Mich. Admin. Code §336.2801 (2007) ("legally enforceable"); Ohio Admin. Code §3745-31-01(UUUU) (2007) ("federally enforceable or and practicably enforceable by the state"); Okla. Admin. Code §252:100-8-31 (2007) ("enforceable"); 25 Pa. Admin. Code §121.1 (2007) ("legally and practically enforceable by an operating permit condition"); Tenn. Comp. R. & Regs. §1200-3-9-.01(5) (2007) ("legally enforceable"); Utah Admin. Code §R307-101 (2007) ("enforceable"); W. Va. Code St. R. §45-14-2.58 (2007) ("federally enforceable or . . . enforceable by the Secretary"); Wyo. Admin. Code ch. 6, §4 (2007) ("enforceable").

187. CAA §116, 42 U.S.C. §7416.

188. Clean Air Implementation Project v. EPA, 65 U.S.L.W. 2059 (D.C. Cir. June 28, 1996) (Rogers, J., concurring in part and dissenting in part).

189. Weiler v. Chatham Forest Prods., 392 F.3d 532 (2d Cir. 2004).

190. *See supra* note 183 and accompanying text.

191. *Weiler*, 392 F.3d at 535.