United States Court of Appeals

FOR THE DISTRICT OF COLUMBIA CIRCUIT

Argued January 24, 2002 Decided April 19, 2002

No. 99-1452

National Wildlife Federation, et al.,
Petitioners

v.

Environmental Protection Agency
and Christine Todd Whitman, Administrator,
Environmental Protection Agency,
Respondents

American Forest and Paper Association Inc.,
Intervenor

Consolidated with
99-1454, 99-1455, 99-1456

On Petitions for Review of a Final Rule of the
Environmental Protection Agency

Neil S. Kagan argued the cause and filed the briefs for petitioners National Wildlife Federation, et al.

Raymond B. Ludwiszewski argued the cause for petitioners Alliance for Environmental Technology, et al. With him on the briefs were Peter E. Seley and Scott H. Segal. Gene E. Godley entered an appearance.

Carol Ann Siciliano, Attorney, U.S. Environmental Protection Agency, and Jon M. Lipshultz, Attorney, U.S. Department of Justice, argued the cause for respondents. With them on the brief was John C. Cruden, Assistant Attorney General. Seth M. Barsky and Karen L. Egbert, Attorneys, U.S. Department of Justice, entered appearances.

Russell S. Frye argued the cause for intervenor American Forest and Paper Association Inc. With him on the brief was Richard Wasserstrom.

Before: Sentelle, Henderson and Rogers, Circuit Judges.

Opinion for the Court filed PER CURIAM.

PER CURIAM: A coalition of environmental organizations and a Native American tribe led by the National Wildlife Federation (collectively "NWF") and the Alliance for Environmental Technology, Boise Cascade Corporation, International Paper Company, The Mead Corporation, and Westvaco Corporation (collectively "Industry Petitioners") separately challenge the Final Effluent Limitations Guidelines, Pretreatment Standards, and New Source Performance Standards for the Pulp, Paper, and Paperboard Category. 63 Fed. Reg. 18,504 (April 15, 1998) ("Final Rule"). Their challenge is confined to that portion of the Final Rule promulgated by the Environmental Protection Agency ("EPA") under the Clean Water Act as applied to one subcategory of the pulp and paper industry--the bleached papergrade kraft and soda subcategory (often referred to as the "BPK" subcategory). The American Forest & Paper Association, Inc. intervenes in support of the Final Rule. We deny the petitions.

I.

The Clean Water Act of 1977 ("CWA") requires EPA to promulgate limitations on the discharge of pollutants into the waters of the United States. 33 U.S.C. s 1311 (1994). These limitations are referred to as effluent limitations. The effluent limitations are based on the discharge levels achievable by what EPA determines to be the "best available technology economically achievable" (known as the "BAT") for existing discharging sources (defined as "point sources" in the statute), id. s 1311(b)(2)(A), (C), (D), & (F), and a different technology--the best available demonstrated control technology or "BADT"--for new pollutant sources, known as the new source performance standard or "NSPS," id. s 1316(b)(1)(B). In determining a BAT and BADT, EPA evaluates existing or "available" technologies and considers their cost and capabilities among other factors. Id. s 1314(b)(2)(B). EPA then promulgates discharge limitations that correspond to the application of the identified technology but does not require dischargers to install that technology.

Pursuant to a 1988 consent decree entered into by EPA in settlement of Environmental Defense Fund and National Wildlife Federation v. Thomas, Civ. No. 85-0973 (D.D.C.), EPA committed to reviewing effluent limitations guidelines under the CWA for pulp and paper mills producing bleached pulp. 58 Fed. Reg. 66,078, 66,089 (Dec. 17, 1993). EPA also anticipated that it would be imposing substantial new air pollution control requirements on these mills under the Clean Air Act ("CAA"), 42 U.S.C. s 7412. In order to avoid incompatible and potentially overly burdensome rulemaking, EPA commenced a "Cluster Rulemaking" that would jointly establish effluent limitations guidelines under the CWA and hazardous air pollutant standards under the CAA. Involved in the instant appeal is the portion of the Cluster Rules that apply to the BPK subcategory within the pulp and paper industry. These provisions establish limitations on the discharge of several pollutants as identified by EPA. See 40 C.F.R. ss 430.20-430.28. These pollutants include dioxin, abbreviated as TCDD, furan, abbreviated as TCDF, 12 specific chlorinated phenolic pollutants, chloroform, and adsorbable

organic halides ("AOX"). National Emission Standards & Effluent Limitations Guidelines, 63 Fed. Reg. 18,504, 18,542 (Apr. 15, 1998).

To understand these limitations and the process by which they were determined, we provide a brief description of the paper production process. One of the components of wood (the basis of paper products) that must be removed during the pulping process is called lignin. The process of removing lignin is called "delignification." The degree of delignification is expressed as a "kappa" number. Prior to bleaching, additional lignin can be removed through either of two extended delignification processes: extended cooking or oxygen delignification ("OD"). Supplemental Technical Development Document ("STDD") s 7.2.3, at 7-4 and s 7.2.6, at 7-9 (Oct. 15, 1997). During bleaching, traditional bleaching agents that are used lead to the formation of a number of pollutants that are ultimately discharged into external streams. Using a process known as elemental chlorine free ("ECF") bleaching lowers chemical consumption during bleaching and thereby reduces the formation of undesired pollutants. The material removed from the pulp in bleaching is typically discharged to the mill wastewater treatment system. This wastewater is known as effluent; its environmental quality at discharge depends in part on the quantity of lignin in the pulp remaining after bleaching.

For the model technologies, EPA considered a number of options, each in turn involving a package of technologies for prevention of pollution within a pulp mill and treatment of wastewater once it leaves the mill, 58 Fed. Reg. at 66,109-10, ultimately focusing, after public comment on additional data, on two technologies, referred to as Option A and Option B. 61 Fed. Reg. 36,835, 36,838-39. In the Final Rule, Option A was defined as conventional pulping followed by ECF bleaching. 63 Fed. Reg. at 18,542. Option B did the same but added oxygen delignification and/or extended cooking that resulted in a kappa number at or below 20 for softwoods and below 13 for hardwoods. Id. EPA determined that Option B was too costly to be the BAT, naming it instead as the BADT for new sources and naming Option A as the BAT. Id. at

18,549-53. The projected capital cost of Option B was more than twice that of Option A (already almost $1 million) and would result in mill closures and the likely bankruptcy of major paper companies. Id. at 18,550. EPA further determined that imposing limitations based on Option B technology would result in little incremental reduction in toxic pollutants and would produce no difference in monetized water quality benefits. See id. at 18,545; 61 Fed. Reg. at 36,841. Cf. 63 Fed. Reg. at 18,590 with 63 Fed. Reg. at 18,592. EPA did adopt, however, an innovative Voluntary Advanced Technology Incentives Program, which offered various benefits to mills that installed beyond-BAT technology, such as OD plus ECF or totally chlorine free ("TCF") processes. 63 Fed. Reg. at 18,593-611.

EPA declined to establish separate limitations for mills bleaching exclusively hardwood or softwood, even though unbleached hardwood pulp contains less lignin than unbleached softwood pulp, in view of both the absence of complete data on how these mills work and the difficulty of applying separate limitations, as many mills pulp both hardwood and softwood in varying proportions, or swing between the two. See, e.g., 58 Fed. Reg. at 66,167; Proposed Technical Development Document for Pulp, Paper, and Paperboard Category Effluent Limitations Guidelines, Pretreatment Standards, and New Source Performance Standards (Oct. 29, 1993) DCN 08517 at 2-3; STDD at 5-7. EPA also declined to set effluent limitations for color, finding that the natural coloring of receiving waters varies, with the result that the aesthetic and aquatic impacts of color discharges on a particular receiving water is driven by highly site-specific conditions, best left to regulation under federal and state permitting procedures. 63 Fed. Reg. at 18,538.

In these appeals, the petitioners are at either extreme in challenging the Cluster Rules under the CWA regarding the BPK subcategory of the pulp and paper industry. Essentially, NWF contends that the Final Rule is too lax, because EPA should have based the BAT for the BPK subcategory on Option B, technology that EPA wrongly found too costly, while Industry Petitioners contend that the Final Rule is too

strict, moving far beyond the adoption of ECF bleaching as the BAT and the NSPS, and thus beyond EPA's authority. Supporting the rule, the industry association as Intervenor points out that the Final Rule is not only the result of a unique process involving simultaneous development of air and water regulations, but the result of many years of research and analysis by both EPA and the pulp and paper industry and the result of a process in which environmental interest groups also had substantial involvement. Who is right about the Final Rule as it applies to BPK in an ultimate sense is not the concern of the court.

The question before the court is limited to whether EPA has acted arbitrarily or capriciously, or otherwise not in accordance with law. 5 U.S.C. s 706(2)(A); see American Iron & Steel Inst. v. EPA, 115 F.3d 979, 1004 (D.C. Cir. 1997). This standard is a narrow one, Citizens to Preserve Overton Park, Inc. v. Volpe, 401 U.S. 402, 415-16 (1971), and if the "agency's reasons and policy choices ... conform to 'certain minimal standards of rationality' ... the rule is reasonable and must be upheld." Small Refiner Lead Phase-Down Task Force v. EPA, 705 F.2d 506, 521 (D.C. Cir. 1983) (citation omitted). Furthermore, particular deference is given by the court to an agency with regard to scientific matters in its area of technical expertise. Baltimore Gas & Elec. Co. v. Natural Res. Def. Council, 462 U.S. 87, 103 (1983); Appalachian Power Co. v. EPA, 249 F.3d 1032, 1051-52 (D.C. Cir. 2001). This deference extends, moreover, to the agency's interpretation of a statute it administers, particularly in a notice and comment rulemaking context. United States v. Mead Corp., 533 U.S. 218, 227-31 (2001); Chevron, U.S.A., Inc. v. Natural Res. Def. Council, 467 U.S. 837, 842-45 (1984). In Part II, we address NWF's contentions. In Part III, we address Industry Petitioners' contentions.

In Part IV, we address Industry Petitioners' motion to sanction NWF counsel.

II.

NWF challenges the Final Rule on seven grounds.

A.

In-plant Limitations. NWF contends that EPA lacked the authority to define Option B in the manner that it did. By specifying that Option B involved extended delignification that resulted in particular kappa numbers, NWF contends that EPA defined Option B in a way that would have imposed in-plant limitations on regulated entities. Because, NWF contends, EPA lacks the authority to impose such limits, defining Option B in this way unlawfully inflated EPA's evaluation of Option B's cost, thus invalidating its cost-driven rejection of Option B as the BAT.

NWF's contentions are not well taken. As Intervenor points out, NWF's contention is based on inaccurate assumptions about the technical basis for EPA's decision. There is nothing in the record to suggest that EPA defined Option B in a way that would have imposed in-plant restrictions on the lignin content of unbleached pulp had EPA selected Option B as the BAT technology. Rather, NWF infers such limitations in the face of direct EPA statements to the contrary. 63 Fed. Reg. at 18,546. EPA has an obligation to identify the technology options it is considering with sufficient particularity that the industry to be regulated as well as environmental groups such as NWF can review and comment upon proposed effluent limitation guidelines and standards. See BASF Wyandotte Corp. v. Costle, 598 F.2d 637, 644-45 (1st Cir. 1979), cert. denied, 444 U.S. 1096 (1980); Kennecott v. U.S. EPA, 780 F.2d 445, 452-53 (4th Cir. 1985); see also Connecticut Light & Power Co v. NRC, 673 F.2d 525, 530-31 (D.C. Cir.), cert. denied, 459 U.S. 835 (1982). Consistent with its obligation, the technology that EPA identified as Option B involved extended delignification that pulped to particular kappa levels for hardwoods and softwoods. However, the effluent limitations deriving from that technology would not have required particular mills to reach kappa numbers within the mill prior to discharges of wastewater into external streams, but rather would only have placed limitations on the discharge amount of dioxin, furan, chloroform, AOX, and a collection of chlorinated phenolic pollutants. This is evident from the NSPS, which reflects the limitations for new sources

based on the operation of Option B technology. 40 C.F.R. s 430.25(1) & (2). Indeed, as Intervenor points out, identifying a BAT technology that included effective operation of OD that would result in a kappa number of 20 or less for softwood and below 13 for hardwood, 63 Fed. Reg. at 18,542, is no different than EPA's statements that Option A and Option B included "effective brownstock washing, i.e., washing that achieves a soda loss of less than or equal to 10 kg Na2SO4 per ADMT of pulp (equivalent to approximately 99% recovery of pulping chemicals from the pulp)," 100% substitution of chlorine dioxide for chlorine, and "efficient biological wastewater treatment, achieving removal of approximately 90 percent or more of influent BOD5." Id. As EPA counsel suggested at oral argument, because mills are not required to employ the BAT to achieve the effluent limitations, a mill could implement an alternative technology that would achieve the limitations by making adjustments in other parameters and without achieving the kappa numbers associated with Option B. See, e.g., Effluent Limitations Guidelines, Pretreatment Standards, and New Source Performance Standards dards: Pharmaceutical Manufacturing Category, 60 Fed. Reg. 21,592, 21,497 (May 2, 1995) (to be codified at 40 C.F.R. pt. 439). Thus, it is apparent that no in-plant kappa number requirements would have been imposed on mills had Option B been selected as the BAT. Because EPA did not establish in-plant lignin limitations, we have no occasion to reach NWF's contention that EPA was without authority to impose in-plant technology limitations or that EPA failed to provide the required notice and opportunity to comment before imposing such limitations.

NWF's claim is perplexing because it contends that EPA erred in rejecting a technology option that according to NWF it would have been unlawful for EPA to impose. That is, NWF is simultaneously contending that the definition of Option B was unlawful but that EPA should have selected it as the BAT. NWF cannot have it both ways. If Option B was unlawful, then EPA was right to reject it. But this is not the case. NWF does not truly advocate the adoption of Option B; rather, it is seeking the adoption of a non-existent

"Option C," which would embody some but not all of the elements of Option B. EPA is not obliged to develop anew a technology for consideration as the BAT; rather, it must "survey the practicable or available pollution-control technology for an industry and assess its effectiveness." E.I. du Pont de Nemours & Co. v. Train, 430 U.S. 112, 131 (1977). That is what EPA did here and we find no error in its definition of Option B or its rejection as the BAT. Thus, we deny NWF's petition to vacate EPA's identification of Option A as the BAT.

B.

Capital Cost Estimate for Option B. NWF next contends that EPA erred when it included the cost of installing oxygen delignification ("OD") on hardwood lines in its determination of the capital costs of extended delignification technology for Option B. This is error, contends NWF, because OD technology is only necessary on hardwood lines to achieve a kappa number lower than thirteen, a goal that is an invalid in-plant limitation and costs for invalid limitations cannot be considered. Alternatively, NWF contends that if the court does not view the kappa number requirement as an invalid in-plant restriction, consideration of the costs of installing OD on hardwood lines is still beyond EPA's authority because that technology is not required for hardwood lines to meet the effluent limitations. As a result, EPA's estimate of Option B's capital costs was grossly inflated, contributing to its rejection as the BAT. NWF also contends that the cost of Option B was further inflated by EPA's wrongful decision to use the most modern OD equipment as the basis for its pricing analysis. NWF finally contends, in a separate line of argument, that even if it was within EPA's authority to consider costs not necessary to achieve the effluent limitations, it was arbitrary and capricious for EPA actually to include such costs.

We decline to reach the merits of NWF's cost estimate challenges because neither NWF nor any other party before the agency raised any of these contentions during the admin-

istrative phase of the rulemaking process. It is well established that issues not raised in comments before the agency are waived and this Court will not consider them. E.g. Nat'l Elec. Mfrs. Ass'n v. EPA, 99 F.3d 1170, 1171 n.1 (D.C. Cir. 1997); Washington Ass'n for Television & Children v. FCC, 712 F.2d 677, 681 (D.C. Cir. 1983). Further, this principle does not apply only to newly raised factual issues as NWF suggests. Indeed, there is a near absolute bar against raising new issues--factual or legal--on appeal in the administrative context. Appalachian Power Co. v. EPA, 251 F.3d 1026, 1036 (D.C. Cir. 2001).

Although neither NWF nor any other party raised the issue that the cost of OD technology for all mills should not be included in the Option B cost estimates or that the assumption that modern equipment would be installed was improper, NWF attempts to justify its acknowledged failure to raise these issues by stating that "EPA did not provide any notice or opportunity to comment on its inclusion of costs to meet an in-plant limitation" and "the NWF Petitioners could not have known that EPA would impose any such in-plant limitation after they submitted their comments." This claim is patently false. In its BAT and Best Management Practices ("BMP") Compliance Cost Estimates Report, EPA clearly states, "Option B employs reduction of the lignin content of the unbleached pulp through oxygen delignification (OD), extended cooking (EC), or both. These extended pulping technologies result in a typical kappa number of approximately 15 for softwood and 10 for hardwood." EPA went on to itemize the cost of Option B with reference to the individual component technologies that comprise that Option in Table 2-8 of the same report. In this Table, two separate line items under the headings of "Capital Cost Component" and "Operating Cost Component" are entitled "Kappa Reduction (OD/EC)." Those line items report costs for this component as not applicable ("N/A") to Option A and exceeding a total of $1.5 billion for Option B. Thus, NWF had notice that EPA was including OD technology in Option B, that it expected this technology to apply to both softwoods and hardwoods, and that the cost of OD technology was a component of the

total cost of Option B. As a result, NWF's claim of no notice is meritless and it is left with no circumstance excusing its failure to raise the issue. The cases on which NWF relies are to no avail. Darby v. Cisneros, 509 U.S. 137 (1993), addresses exhaustion of administrative remedies, not waiver of claims, and is thus wholly inapposite; Nat'l Ass'n of Mfrs. v. Department of the Interior, 134 F.3d 1095 (D.C. Cir. 1998), is directly contrary to NWF's position that it has not waived its OD cost claims, stating that "Our cases ... require complainants, before coming to court, to give the [agency] a fair opportunity to pass on a legal or factual argument." Id. at 1111 (quoting Washington Ass'n for Television & Children v. FCC, 712 F.2d 677, 681 (D.C. Cir. 1983)). We thus hold that NWF has waived the OD costing issues and decline to pass on their merits.

C.

Failure to Explain the Reasonableness of EPA's Economic Assessment of Option B. NWF next contends that EPA's rejection of Option B was arbitrary and capricious because EPA failed to demonstrate the reasonableness of its assessment that Option B is not affordable by the bleach paper kraft subcategory as a whole. Because "we do not review EPA's cost figuring de novo, but accord EPA discretion to arrive at a cost figure within a broad zone of reasonable estimate," Weyerhauser Co. v. Costle, 590 F.2d 1011, 1049 (D.C. Cir. 1978), in view of the complex nature of economic analysis typical in the regulation promulgation process, NWF's burden to show error is high. As the Fourth Circuit put it, "While EPA must take seriously its statutory duty to consider cost, courts of review should be mindful of the many problems inherent in an undertaking of this nature and uphold a reasonable effort made by the Agency." FMC Corp. v. Train, 539 F.2d 973, 979 (4th Cir. 1976). Thus, when reviewing economic analyses of EPA, "a court's 'inquiry will be limited to whether the Agency considered the cost of technology, along with the other statutory factors, and whether its conclusion is reasonable.' " Chem. Mfrs. Ass'n v. EPA, 870 F.2d 177, 250 (5th Cir. 1989) (quoting Ass'n of Pacific Fisheries, 615 F.2d 794, 818 (9th Cir. 1980)). The court

should not "undertake its own economic study, but must uphold the regulations if EPA has established in the record a reasonable basis for its decision." Kennecott v. EPA, 780 F.2d 445, 456 (4th Cir. 1986); accord Chem. Mfrs., 870 F.2d at 251.

NWF contends that EPA's economic analysis was inadequate because it failed to give sufficient specifics to support the reasonableness of its conclusions regarding economic impact. Reference to EPA's duties under statutory and case law with respect to cost assessments reveal that this contention is without merit. EPA is statutorily required to take into account the cost of achieving effluent reduction. 33 U.S.C. s 1314(b)(2)(B). However, the court has interpreted this statute to mean that "the Agency need not on its own undertake more than a net cost-benefit balancing to fulfill its obligation under section 304." Weyerhaeuser Co. v. Costle, 590 F.2d 1011, 1048 (D.C. Cir. 1978). Although its analysis may be general, EPA "has the heaviest of obligations to explain and expose every step of its reasoning." American Lung Ass'n v. EPA, 134 F.3d 388, 392 (D.C. Cir. 1998). This duty to explain arises out of the need for reviewing courts to be able to discern the basis for EPA's decision. Id.

In view of our deferential standard of review it is not difficult to conclude that NWF's contentions regarding EPA's cost analysis must fail. NWF's chief contention is that "EPA failed ... to substantiate its claim by specifying the identity of the 'large' firm or firms, how large the firm or firms are, or the number of mills in the BPK subcategory owned by the firm or firms." NWF Petitioner's Br. at 37. This is not the type of contention that will topple an EPA cost assessment, particularly in the context of an economic analysis as thorough and considered as the one EPA undertook in the instant rulemaking. EPA provided a detailed explanation of the bases for its economic conclusions both in the Federal Register, 63 Fed. Reg. 18,549-51, and in the accompanying report entitled "Economic Analysis for the National Emission Standards for the Hazardous Air Pollutants for Source Category: Pulp and Paper Production--Phase I (Oct. 27, 1997)" ("Economic Analysis").

Specifically, EPA articulated its methodology, applied it to industry data, and presented the results in verbal and tabular form making clear the information upon which EPA based its conclusion that Option B's costs were too high. In the Economic Analysis EPA explains that compliance costs included both capital costs and annual operating costs. EPA described its market impact analysis methodology under heading 3.2 of that report, explaining that it used elasticities to estimate market price increases and factored those into the financial and economic analysis. Financial impact was described as encompassing facility closure, employment, and output impacts resulting from compliance costs. As EPA explained, if "the present value of post-compliance net earnings is less than the salvage value of the mill ... the mill is projected to close because closure is more economically advantageous to the owner." EPA went on to explain that "[w]hen the closure analysis projects a facility closure, all employment, production, and exports reported for the facility are considered lost." Regarding bankruptcy analysis, EPA explained that it would use the Altman Z-score analysis, comparing pre- and post-compliance Z-scores and determining that a score dropping below 1.81 was indicative of a compliance-induced bankruptcy.

EPA applied this methodology to reach several conclusions, which it presented in the Economic Analysis report. It concluded that for the 29 public companies with facilities regulated by the BAT, "the final BAT/PSES option [Option A] results in no additional bankruptcies" while "[o]ne or more companies move into the 'bankruptcy likely' category with BAT/PSES Option B." EPA then went on to outline the many adverse economic consequences associated with bankruptcy which rendered any option that induced bankruptcy an economically unachievable alternative under the statute. See 33 U.S.C. s 1311 (b)(2)(A), (C), (D) & (F). Regarding facility closures, EPA determined that Option B would have twice the adverse impact of Option A, resulting in two plant closures, a loss of $273 million worth of shipments, $19 million in exports, and 900 jobs. The differences between Options A and B were

exacerbated when compliance costs of the entire Cluster Rules were analyzed; Option B in conjunction with the air quality regulations would result in 4 plant closures, lost shipments of $1.3 billion, $24 million in lost exports, and a loss of 4,800 jobs. This is compared to two plant closures, a loss of $273 million worth of shipments, $19 million in exports, and 900 jobs associated with the compliance costs of Option A combined with the air quality standards.

This description of how EPA applied its methodology constitutes just a portion of the detailed economic and financial analysis conducted and presented by EPA. This analysis hardly arises to a failure to explain "the reasonableness of its assessment that Option B is not affordable by the BPK subcategory as a whole" as NWF contends. EPA sufficiently fulfills its duty to explain when it makes an "attempt at explanation or justification" sufficient to provide the reviewing court with a "way to know the agency's methodology." Engine Mfrs. Ass'n v. EPA, 20 F.3d 1177, 1182 (D.C. Cir. 1994). Here, EPA offered a thorough explanation and the court hardly has to "guess at the theory underlying the agency's action." SEC v. Chenery Corp., 332 U.S. 194, 196-97 (1947). Indeed, EPA's "theory" is clear: Option B costs a certain amount, that cost renders facility closure a more economically advantageous option, and facility closures result in the loss of jobs and output formerly associated with those plants.

Furthermore, any ambiguity in EPA's analysis is unrelated to the methods, rationales, or assumptions of its analysis. Rather, the ambiguity in the analysis and complained of by NWF relates to the specific identities of the firms adversely impacted in the manner that EPA predicts. Such ambiguity is insufficient to undermine the explanatory value of EPA's analysis for two reasons. First, because much of the firm-specific information NWF seeks constitutes protected confidential business information ("CBI") that may not be publicly disclosed, EPA cannot be faulted for keeping such information confidential. See 33 U.S.C. s 1318(b). Second, the provision of the identity of the specific firms at risk of bankruptcy--either through naming or through the sharing

of sufficient descriptive information to allow interested persons to figure out the identity--is not a requisite of an adequately explained economic analysis because a plant-by-plant analysis is not required under the statute. Chem. Mfrs. Ass'n v. EPA, 870 F.2d 177, 219 n.157 (5th Cir. 1989). EPA need only be concerned with the nature of the impact on the industry as a whole. Id. at 238.

In sum, EPA has provided more than an adequate explanation of its economic analysis. EPA determined through methods it clearly described that a certain number of bankruptcies and plant closures would occur under Option B. EPA then determined that such economic impact rendered Option B economically unachievable. Whether Firm A or Firm Z was the firm involved in the potential bankruptcy or plant closure would not alter the outcome that those bankruptcies and closures would occur. The court will not second-guess EPA's analysis nor "undertake [its] own economic study"; rather, the court must "uphold the regulations if EPA has established in the record a reasonable basis for its decision." Kennecott v. EPA, 780 F.2d 445, 456 (4th Cir. 1986). A reasonable basis exists here. We thus hold that EPA's analysis was sufficiently detailed to provide an understanding of the basis of its decision and that EPA's conclusion that Option B was not economically achievable was not arbitrary and capricious.

D.

Altman Bankruptcy Model. NWF next asserts EPA erred in using Edward I. Altman's Z-score analysis to predict the likely incidence of bankruptcies in the cost analysis of Option B. We may reject an agency's choice of a scientific model "only when the model bears no rational relationship to the characteristics of the data to which it is applied." Appalachian Power Co. v. EPA, 135 F.3d 791, 802 (D.C. Cir. 1998) (citing Am. Iron & Steel Inst. v. EPA, 115 F.3d 979, 1005 (D.C. Cir. 1997); Chem. Mfrs. Ass'n v. EPA, 28 F.3d 1259, 1265 (D.C. Cir. 1994)). That is not the case here.

NWF contends EPA's use of the Altman model is arbitrary and capricious because (1) the model has become outdated

since its adoption in 1968, (2) it was devised to predict bankruptcies of companies smaller than those involved here, (3) it has an error rate of at least 15% and (4) in applying it, EPA collected data from only a single year. We reject each objection in turn. First, as recently as 1993 Altman confirmed the model's continuing reliability, noting it had been "quite accurate over these last 25 years and remains an objective, established tool." See Edward I. Altman, Corporate Financial Distress and Bankruptcy 179 (2d ed. 1993). Second, as EPA points out, Altman himself has cited the financial decline of LTV Corp., International Harvester and Chrysler Corp., all large companies, to illustrate the accuracy of his Z-score analysis. Id. at 197-99, 201-02. Third, the 15% inaccuracy rate does not seem so large as to call into question the model's reliability, especially given that the decision to enter bankruptcy vel non can be influenced by factors other than mere financial distress. See id. at 197 (characterizing "bankruptcy" as "a behavioral event" that "manifests due to the combined 'efforts' of an ineffective firm and its management and the decision on the part of creditors to try to recover their investment within the confines of the Bankruptcy Code"). Finally, although Altman recommended gathering multi-year data, he recognized that this might not always be practical and so admonished that "[t]he analyst interested in practical utilization of the Z-score model is therefore advised to be careful." Id. at 206.

E.

No Limits for Color. Next, NWF challenges EPA's decision not to establish nationwide standards for discharge of "color." EPA determined instead that color pollution should be "dealt with on a case-by-case basis through individual [National Pollutant Discharge Elimination System] permits or, when appropriate, through local limits." 63 Fed. Reg. at 18,538. NWF contends EPA lacks authority to address the problem of color pollution piecemeal but is required by section 301(b)(2) of the CWA to establish a single, national standard. We believe EPA acted both reasonably and within its authority in adopting a case-by-case approach.

Section 301(b)(2) of the CWA governs standards for pollutants such as color:

> [T]here shall be achieved--
>
> ...
>
> (2)(A) for pollutants identified in subparagraphs (C), (D), and (F) of this paragraph,1 effluent limitations for categories and classes of point sources, other than publicly owned treatment works, which (i) shall require application of the best available technology economically achievable for such category or class, which will result in reasonable further progress toward the national goal of eliminating the discharge of all pollutants, as determined in accordance with regulations issued by the Administrator pursuant to section 1314(b)(2) of this title, which such effluent limitations shall require the elimination of discharges of all pollutants if the Administrator finds, on the basis of information available to him (including information developed pursuant to section 1325 of this title), that such elimination is technologically and economically achievable for a category or class of point sources as determined in accordance with regulations issued by the Administrator pursuant to section 1314(b)(2) of this title....

33 U.S.C. s 1311(b)(2)(A) (footnote and emphasis added). EPA found below that elimination of discharge is not "technologically and economically achievable" for color pollutants as a category or class but, to the contrary, that a case-by-case approach was necessary because "[t]he potential for significant aesthetic or aquatic impacts from color discharges is driven by highly site-specific conditions." 63 Fed. Reg. at 18,538.2 In light of this finding, EPA's decision does not

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1 Color is among the "pollutants identified in subparagraph[ ] ... (F)," the catchall subparagraph for all pollutants not identified in subparagraph (C), (D) or (E).

2 EPA has long adhered to this position, which it explained more fully in a 1982 rulemaking:

conflict with its statutory responsibilities under section 301(b)(2) and its decision to handle color on a case-by-case basis must be upheld as reasonable. Cf. Maier v. EPA, 114 F.3d 1032 (10th Cir.), cert. denied, 522 U.S. 1014 (1997) ("When we apply the deference due an administrative agency which Chevron mandates, '[t]he permissive nature of the statute implies broad agency discretion in selecting the appropriate manner of regulation.' EPA's position that the statute allows the agency to impose limits for [nitrogenous biochemical oxygen demand] on a case-by-case basis through the permitting process is a reasonable and permissible reading of the statute, to which we must defer.") (quoting Professional Drivers Council v. Bureau of Motor Carrier Safety, 706 F.2d 1216, 1221 (D.C. Cir. 1983)).

III.

Next we consider, and reject, each of the challenges raised by Industry Petitioners.

A.

AOX Limits. Industry Petitioners first challenge EPA's decision to set limits on the discharge of AOX and to require daily monitoring of AOX levels. For the following reasons, we conclude EPA's decision was within its authority and not arbitrary or capricious.

The Agency is withdrawing the existing effluent limitations and standards for color and we are not establishing any new ones based on our evaluation that color is not a pollutant of national significance in this industry. In some cases, it has been shown that color can interfere with light transmission and the process of photosynthesis in the aquatic environment. However, in most instances, color is simply an aesthetic pollutant. Thus, EPA no longer believes that color is a pollutant of uniform national concern in this industry.

Pulp, Paper, and Paperboard and the Builders' Paper and Board Mills Point Source Categories Effluent Limitations Guidelines, Pretreatment Standards, and New Source Performance Standards, 47 Fed. Reg. 52,006, 52,014 (1982).

Industry Petitioners complain EPA should not have imposed AOX limits because AOX is not itself harmful and it is a poor predictor of the presence of chlorinated pollutants that are harmful, notably dioxin and furan. The petitioners explain that because ECF bleaching reduces the amount of dioxin and furan, which make up only a small percentage of total AOX,3 much more quickly than it reduces other AOX components, AOX levels in treated wastewater do not accurately reflect the remaining levels of dioxin and furan. Industry Petitioners may be correct that AOX is not a good surrogate for dioxin and furan but EPA does not justify the AOX limits on the basis that it is. EPA proposes AOX limits and testing as a means to monitor BAT/NSPS technological compliance at a mill and thereby to indirectly ensure reduction of dioxin and furan levels through compliance. EPA

notes this method is both less expensive than the alternative of daily measuring the specific chlorinated pollutants, see 63 Fed. Reg. at 18,537 ("monitoring for AOX as required in today's rule is considerably less expensive" than monitoring for dioxin, furan, chloroform and the 12 regulated chlorinated phenolic pollutants), and more effective as well, see 63 Fed. Reg. at 18,537 ("[T]he presence of AOX can be readily measured in mill effluent, in contrast to the presence of many of the chlorinated organic compounds regulated in today's rule, which for the most part are likely to be present at levels that cannot be reliably measured by today's analytical methods."); "Justification for Establishing Limitations and Standards for AOX" 1 ("Limitations on AOX provide much more certainty than monitoring directly for [dioxin and furan] because AOX is detectable when [dioxin and furan] concentrations are below the analytical method minimum level.").

In response, Industry Petitioners do not dispute that measuring AOX levels is an effective means of monitoring BAT and NSPS compliance. They do, however, cite cheaper alternatives they contend will also be effective. First, they suggest EPA could rely on weekly or monthly testing which

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3 AOX "is a measure of the total chlorinated organic matter in wastewaters." 63 Fed. Reg. at 18,537.

would adequately determine compliance. EPA reasonably concluded below, however, that daily testing is required to ensure consistent and effective treatment; otherwise a mill could switch its bleaching chemicals between testings. See id. at 14 (With only monthly monitoring, "there is nothing to stop a mill running with some chlorine, and switching to ClO2 bleaching for a few days prior to the day that [dioxin and furan] are monitored."). Second, Industry Petitioners suggest EPA could simply authorize mills to "certify" that they are in compliance in lieu of testing. EPA responds, again reasonably, that certification will not prevent treatment lapses attributable to human error.

B.

Definition of "New Source." Industry Petitioners next contend that EPA unreasonably broadened the existing definition of "new source" by designating supplemental fiber lines as "new sources" in the Rule's preamble, and thereby subjecting supplemental fiber lines to Option B technology under the New Source Performance Standard ("NSPS"). We conclude, as did the relevant parties at oral argument, that this argument is "much ado about nothing" given the language of the regulatory text.

Section 306 of the Act defines a "new source" as "any source, the construction of which is commenced after the publication of proposed regulations prescribing a standard of performance under this section which will be applicable to such source, if such standard is thereafter promulgated in accordance with this section." 33 U.S.C. s 1316(a)(2); see also 40 C.F.R. s 122.2 (general definition of "new source" for direct dischargers). A "source" is defined as "any building, structure, facility, or installation from which there is or may be the discharge of pollutants." 33 U.S.C. s 1316(a)(3); 40 C.F.R. s 122.29(a)(2). If a source is designated as a "new source," then it must adhere to the NSPS.

In 1984, EPA promulgated a final rule which made it clear that the NSPS applies only to sources that meet the "new source" definition in 40 C.F.R. s 122.2, as well as one of the

following three criteria: (i) it is constructed at a site at which no other source is located (i.e., a greenfield site); (ii) it totally replaces the process or production equipment that causes the discharge of pollutants at an existing source; or (iii) its processes are substantially independent of an existing source at the same site. 40 C.F.R. s 122.29(b)(1). If new construction does not satisfy 40 C.F.R. s 122.2 and one of the three criteria set forth in 40 C.F.R. s 122.29(b)(1), then the construction is generally classified as a "modification" and is not subject to the NSPS.

The 1984 rule also included two factors to assist in determining whether new processes are "substantially independent" from an existing source under 40 C.F.R. s 122.29(b)(1)(iii). See National Pollutant Discharge Elimination System Permit Regulations, 49 Fed. Reg. 37,998, 38,043 (1984). The first factor examines the degree to which new processes are integrated with existing ones. "Under this first factor, if the new facility is fully integrated into the overall existing plant, the facility will not be a new source.... However, on the other extreme, if the only connection between the new and old facility is that they are supplied utilities such as steam, electricity, or cooling water from the same source or that their wastewater effluents are treated in the same treatment plant, then the new facility will be a new source." 49 Fed. Reg. at 38,043. The second factor is whether and to what extent "the construction results in facilities or processes that are engaged in the same general type of activity as the existing source." Id. This factor looks to whether "the proposed facility is engaged in a sufficiently similar type of activity as the existing source," in which case the facility "will not be treated as a new source." Id.

In the Cluster Rules, EPA promulgated a new definition of "new source" for pulp and paper mills in the bleached papergrade kraft and soda and papergrade sulfite subcategories. See 40 C.F.R. s 430.01(j). This new definition completely adopted the three criteria from the general definition in Part 122 (compare 40 C.F.R. s 122.29(b)(1)(i), (ii) & (iii) with 40 C.F.R. s 430.01(j)(1)(i), (ii) & (iii)). It also clarified the second criterion by stating that the "total replacement of a

fiber line" could trigger a new source determination. Compare 40 C.F.R. s 430.01(j)(1)(ii) with 40 C.F.R. s 122.29(b)(1)(ii); see also National Emission Standards for Hazardous Air Pollutants for Source Category: Pulp and Paper Production, 63 Fed. Reg. 18,504, 18,552 (1998). EPA thus specifically identified a particular type of construction that would trigger a new source determination under 40 C.F.R. s 430.01(j)(1)(ii). EPA also explained in the Rule's preamble that a "new fiber line built to supplement an existing fiber line" would be considered a "substantially independent" source within the meaning of 40 C.F.R. s 430.01(j)(1)(iii), and would consequently be considered a "new source" subject to the NSPS. See 63 Fed. Reg. at 18,552, 18,567-68; 40 C.F.R. s 430.01(j)(1)(iii). EPA did not, however, incorporate this concept into the regulatory text of 40 C.F.R. s 430.01(j)(1)(iii); s 430.01(j)(1)(iii) remains identical to s 122.29(b)(1)(iii). Moreover, EPA made clear in its Response to Comments that its new definition was not intended to include as a new source any new facilities that "would not otherwise be captured by the current definition of new source at 40 C.F.R. 122.29(b)(1)." EPA also explained during oral argument that while the preamble states an "expectation" regarding supplemental fiber lines based on the evidence in the record, the "new source" definition was not intended to be inconsistent with its earlier definition.

Despite the unchanged language from s 122.29(b)(1)(iii) to s 430.01(j)(1)(iii), Industry Petitioners and EPA devote significant portions of their briefs to arguing whether supplemental fiber lines are "substantially independent" such that they fit the definition of "new source," and, consequently, whether they should be subject to the NSPS. Industry Petitioners argue that, through the Final Rule's preamble, EPA has created an irrebuttable presumption that all supplemental fiber lines are "substantially independent" from existing sources and therefore subject to the NSPS. Industry Petitioners further argue that EPA cannot, as a matter of law, make that presumption. EPA must instead make independent determinations of supplemental fiber lines based on the two factors in the "substantially independent" test. At oral

argument, Industry Petitioners stated that they would not object to the new source definition if we found that such an irrebuttable presumption was inappropriate, and instead relied on the "substantially independent" test for new source determinations.

We find that EPA did not establish an irrebuttable presumption that supplemental fiber lines are new sources under the Final Rule. Consequently, Industry Petitioners' objection to the "new source" definition is moot. The definition of "new source" included in the text of the Final Rule as it pertains to supplemental fiber lines is altogether unchanged from EPA's earlier definition of "new source." To the extent the preamble suggests a change in EPA's "new source" determinations, that suggestion is rejected. The preamble to a rule is not more binding than a preamble to a statute. "A preamble no doubt contributes to a general understanding of a statute, but it is not an operative part of the statute and it does not enlarge or confer powers on administrative agencies or officers." Ass'n of American R.Rs. v. Costle, 562 F.2d 1310, 1316 (D.C. Cir. 1977) (citing Yazoo Railroad Co. v. Thomas, 132 U.S. 174, 188 (1889)). "Where the enacting or operative parts of a statute are unambiguous, the meaning of the statute cannot be controlled by language in the preamble." Id. Section 430.01(j)(1)(iii) (the section applicable to supplemental fiber lines) remains unchanged from EPA's earlier "new source" definition set forth in 40 C.F.R. s 122.29(b)(1)(iii). When we examine the text of 40 C.F.R. s 430.01(j)(1)(iii), together with EPA's statements both in its Response to Comments and during oral argument that it did not intend to change the definition of 40 C.F.R. s 122.29(b)(1), there is nothing left of the Industry Petitioners' objection to the "new source" definition. Permitting authorities will continue to make "new source" determinations using the regulatory text and the two factors of the "substantially independent" test identified by EPA to assist in making such determinations--criteria that have not been changed in any fundamental respect from EPA's earlier rule. In short, EPA did not act arbitrarily or capriciously in promulgating its "new source" definition.

C.

Selection of Option B Technology for "New Sources." Industry Petitioners next challenge EPA's decision to adopt Option B technology as the NSPS. See 63 Fed. Reg. at 18,553. Industry Petitioners object to Option B on two grounds: 1) extended cooking/oxygen delignification will only result in measurable decreases in AOX, not known pollutants; and 2) in light of EPA's "new source" definition applying to supplemental fiber lines, Option B's cost is not justified.

We addressed, and dismissed, Industry Petitioners' first argument under our discussion of "AOX Limits," supra, and we need not repeat our analysis here. As for Industry Petitioners' second argument, we find that much of it results from their assumption that the Rule's preamble language creates an "irrebuttable presumption" that supplemental fiber lines will be considered new sources under the Final Rule. We dismissed this assumption under our previous section, noting that it is the language of the regulatory text, and not the preamble, that controls. To the extent that construction of a supplemental fiber line meets the long-held and un-changed criteria of the "substantially independent" test (and thus constitutes a "new source"), then that supplemental fiber line would be subject to Option B technology--as would any "new source" construction.

In any event, EPA's economic analysis concerning Option B technology for the NSPS was not arbitrary or capricious. First, appellate courts give EPA considerable discretion to weigh and balance the various factors required by statute to set NSPS. See, e.g., BP Exploration & Oil, Inc. v. EPA, 66 F.3d 784, 802 (6th Cir. 1995). "The CWA does not state what weight should be accorded to the relevant factors; rather, the Act gives EPA the discretion to make those determinations." Id. Second, as Industry Petitioners concede, section 306 requires that, when setting the NSPS, the Administrator must take costs into consideration, but does not require that she conduct a cost-benefit analysis. "[T]he Administrator must inquire into the initial and annual costs of applying the technology and make an affirmative determination that those

costs can be reasonably borne by the industry." Chem. Mfrs. Ass'n v. EPA, 870 F.2d 177, 262 (5th Cir. 1989); see also CPC Int'l, Inc. v. Train, 540 F.2d 1329, 1341 (8th Cir. 1976) ("There is no language in s 306 requiring a cost-benefit analysis. Rather, EPA is required only to take costs under 'consideration.' We conclude, therefore, that a cost-benefit analysis is not required in determining the reasonableness of the cost of achieving the new source standards."). Section 306(b)(1)(B) requires only that "[i]n establishing or revising Federal standards of performance for new sources ... the Administrator shall take into consideration the cost of achieving such effluent reduction, and any non-water quality environmental impact and energy requirements." 33 U.S.C. s 1316(b)(1)(B). This EPA has done.

After conducting its economic analysis, EPA rejected Option B technology for existing sources because EPA concluded it would cause severe economic disruption that could not be reasonably borne by the pulp and paper industry. See 63 Fed. Reg. at 18,550-51. With respect to its cost analysis at new sources, EPA concluded that "[t]he incremental capital cost of complying with the selected NSPS for all pollutants, as compared to the costs of complying with the standards based on the next best technology, BAT Option A, is only .5 to 2.0% of the total capital cost of constructing either a new source fiber line at an existing mill or a new greenfield mill." 63 Fed. Reg. at 18,553. Thus implementing Option B technology would only increase the costs of constructing a new mill or fiber line by 0.5% to 2%. As such, EPA concluded that the cost of implementing Option B technology for new sources was reasonable. Indeed, Industry Petitioners concede that this economic analysis alone would likely satisfy section 306. Industry Petitioners instead take issue with the perceived "irrebuttable presumption" concerning supplemental fiber lines set out in the Rule's preamble. Such a presumption, argues Industry Petitioners, renders EPA's economic analysis arbitrary and capricious because EPA "failed to take into account the tremendous cost of retrofitting existing mills to accommodate the Option B technology as required under the expanded definition of new source." Ac-

cording to Industry Petitioners, existing mills will, in fact, be required to implement Option B technology--at a cost that EPA has already found to be prohibitive.

Industry Petitioners' argument depends on an expanded definition of "new source." Without reliance on the expanded definition, Industry Petitioners have already conceded that EPA's economic analysis will likely pass judicial review. They are correct. And because we have already rejected the "expanded definition" of "new source" (drawn from the Rule's preamble) in favor of the existing definition of "new source" (based on the traditional "substantially independent" test), we find no merit to Industry Petitioners' argument challenging EPA's economic analysis.

D.

Monthly Effluent Limitations. Industry Petitioners next object to EPA's decision to set the monthly maximum effluent limitation at the 95th percentile of the distribution of monthly measurements rather than the 99th percentile. For the reasons that follow, we find that EPA did not act arbitrarily or capriciously in setting the monthly limitation at the 95th percentile.

EPA monitors a mill's discharge of pollutants by setting and monitoring daily and monthly standards of performance that mills must achieve. The Cluster Rules require plants to achieve effluent limitations that are based on the proper operation of mills using the model technologies. According to EPA, "limitations ... are numerical values that are bounds on the amounts of pollutants that may be discharged and are, in effect, measures of how well the production processes and wastewater treatment systems must be operated." The daily maximum limitation is a restriction on the amount of pollutant in any one daily sample. The type of limitation at issue here, the monthly average limitation, is a restriction on the average of daily measurements taken during a month.

Briefly, the limitations are derived using the following process: EPA determines an average performance level, or long-term average, that a well-designed mill using the model

technologies can achieve. Recognizing variability among treatment processes, pollutant concentrations, sampling, and analysis, EPA incorporates "variability factors" into the limitations to account for these sources of variability. Because the variability factors for the Cluster Rules were derived from mills using the model technologies, EPA asserts that the effluent limitations "already account for any reasonable variability likely to occur and thus well operated mills implementing technologies representing the appropriate levels of control will be capable of compliance at all times." EPA then calculates limitations based on percentiles using the products of long-term averages and variability factors. The chosen percentiles are intended to accommodate reasonably anticipated variability within the mill's control while at the same time reflect a level of performance consistent with BAT and BADT.

EPA has consistently used the 99th percentile of the distribution of daily measurements as the basis for daily maximum limitations, and has at times used the 99th percentile of the distribution of monthly averages as the basis for monthly average effluent limitations. In its Cluster Rules, EPA set the daily maximum limitation for BAT technology at the 99th percentile, and it set the monthly maximum limitation for BAT technology at the 95th percentile. Industry Petitioners argue that EPA deviated from past precedent by setting the monthly average limitations at the 95th percentile rather than the 99th percentile, and that EPA has designed a system that ensures a well-operated mill using the model technologies will exceed the monthly average limitations 5% of the time.

We reject Industry Petitioners' arguments and uphold EPA's decision to set the monthly average limitation at the 95th percentile. EPA has considerable discretion in determining a technical approach that will ensure that effluent limitations reasonably account for expected variability in plant operations while still maintaining an effective level of control. See Weyerhaeuser Co. v. Costle, 590 F.2d 1011, 1056-58 (D.C. Cir. 1978). While EPA set monthly average limitations at the 99th percentile for the pulp and paper industry in 1982 and 1986 rulemakings for Best Practicable

Technology ("BPT") and Best Conventional Technology ("BCT"), Industry Petitioners ignore the fact that after those rule-makings, EPA determined, "as a matter of policy, that the 95th percentile was a more appropriate choice for monthly average limitations in all industrial effluent guidelines rulemakings because the variability of monthly averages is less than the variability of daily measurements." EPA has followed that policy in developing monthly average limitations in all effluent guidelines rulemakings since 1987. It was neither arbitrary nor capricious for EPA to continue that policy here.

EPA carefully explained that its purpose in setting the monthly average limitations at the 95th percentile was to ensure that a mill achieves the long-term average effluent levels. EPA explained that the daily maximum limitations are set at a higher percentile level to account for the greater variability expected from daily measurements. But consistent compliance with the daily maximum limitation alone would not ensure compliance with the long-term average. Continuous operation at or near the daily maximum would in fact result in discharges that exceed the long-term average. Likewise, setting monthly limitations at the 99th percentile would not insure that the long-term average is met. EPA therefore set the monthly average limitation at a lower level to ensure that mills operate more closely around the long-term average. EPA reasonably anticipated that, because monthly average limitations are based on averages of more than one daily measurement, less variability would be present in monthly measurements than in daily measurements. As EPA observed in its Response to Comments: "In establishing monthly average limitations, EPA's objective is to provide an additional restriction that supports EPA's objective of having facilities control their average discharges at the long-term average. The monthly average limitation requires continuous dischargers to provide on-going control, on a monthly basis, that complements controls imposed by the daily maximum limitation. In order to meet the monthly average limitation, a facility must counterbalance a value near the daily maximum limitation with one or more values well below the daily

maximum limitation. To achieve compliance, these values must result in a monthly average value at or below the monthly average limitation."

Industry Petitioners argue that even if they employ the model technologies, they will still exceed the monthly average limitations five percent of the time. The "fundamental flaw" in using the 95th percentile, according to Industry Petitioners, is EPA's assumption that variability of discharges can be adequately controlled through quality control of plant processes and treatment procedures. They argue that not all variances or exceedances will result from improper quality control or treatment procedures, and cite the presence of two elevated levels of chlorinated phenolic compounds recorded by mills using the model technologies. We reject this argument. First, EPA did not establish monthly average limitations for chlorinated phenolic compounds. The relevance of this argument by Industry Petitioners is therefore unclear. Second, Industry Petitioners completely ignore the "upset provision" that is available should an exceedance arise due to an unforeseen or unexplainable event. If such an event occurs, operators may raise this "upset defense" as an affirmative defense in an enforcement action. See 40 C.F.R. s 122.41(n).

EPA's approach to developing monthly limitations was reasonable. It established limitations based on percentiles achieved by facilities using well-operated and controlled processes and treatment systems. It is therefore reasonable for EPA to conclude that measurements above the limitations are due to either upset conditions or deficiencies in process and treatment system maintenance and operation. EPA has included an affirmative defense that is available to mills that exceed limitations due to an unforeseen event. EPA reasonably concluded that other exceedances would be the result of design or operational deficiencies. EPA rejected Industry Petitioners' claim that facilities are expected to operate processes and treatment systems so as to violate the limitations at some pre-set rate. EPA explained that the statistical methodology was used as a framework to establish the limitations based on percentiles. These limitations were never

intended to have the rigid probabilistic interpretation that Industry Petitioners have adopted. Therefore, we reject Industry Petitioners' challenge to the effluent limitations.

IV.

Motion for Sanctions. As a final matter, we consider Industry Petitioners' motion to sanction NWF counsel. A summary of the events leading up to Industry Petitioners' motion is included below.

EPA, acting under its authority in 33 U.S.C. s 1318(a), collected certain industry confidential business information ("CBI") during the development of the Cluster Rules. On November 9, 1998, NWF Petitioners filed a motion in the Ninth Circuit to compel production of all CBI that EPA had collected. Nat'l Wildlife Fed'n v. Browner, No. 98-70506 (9th Cir. filed Nov. 9, 1998). Specifically, NWF sought the number of mills with hardwood lines that used oxygen delignification. Both EPA and Industry Petitioners opposed the motion. This Court (after receiving the transferred case) denied NWF Petitioners' motion on the ground that the CBI sought was "the type of sensitive information and confidential or trade secret information that EPA can properly withhold from public view." Nat'l Wildlife Fed'n v. EPA, No. 99-1452 (D.C. Cir. Feb. 2, 2000) (order denying motion to compel disclosure of information in the administrative record) (citing Natural Res. Def. Council v. Thomas, 805 F.2d 410, 418 n.13 (D.C. Cir. 1986)).

In 1999, NWF Petitioners requested information from EPA regarding bleached kraft mills. In response, EPA emailed a computer file attachment to an NWF law clerk, who then forwarded the email attachment to NWF counsel on June 16, 1999. The file attachment contained three spreadsheets, the second of which contained CBI and included the notation "CBI" above the spreadsheet.

According to NWF, NWF counsel opened the file, printed the spreadsheets, and reviewed them in May 2000 without immediately noticing that the second spreadsheet, which included nine separate pages, was marked as "CBI." He did,

however, determine that the information contained on the second spreadsheet included the information he had sought in his motion to compel (i.e., the number of mills running hardwood lines). Only after NWF counsel attempted to locate the information in the administrative record did he notice that the spreadsheet was labeled "CBI." According to NWF's counsel, the CBI notation was only located on the first page of the second spreadsheet, and was in all other ways inconspicuous.

That same day, NWF counsel consulted an attorney regarding his ethical obligations with respect to the CBI. The attorney advised NWF counsel that a DC Ethics Opinion supported the position that he could use the information that was inadvertently disclosed to him. NWF counsel then notified EPA's in-house counsel that he received a document labeled "CBI." EPA's counsel requested return of the document--NWF counsel forwarded the email, but informed EPA counsel that he intended to use the information included in the CBI in a brief filed under seal with this Court. EPA's counsel of record then contacted NWF counsel, urged him not to refer to the CBI in NWF's brief, and provided him with a citation to the sources in the confidential portion of the administrative record supporting the information included in the CBI. NWF Petitioners used this citation in its brief to this Court.

Despite requests to return the CBI, NWF counsel refused on grounds he would need the information if another party contested the accuracy of the information in NWF's brief. Only after EPA stipulated to certain CBI on July 17, 2000, did NWF counsel return the CBI. The next day, Industry Petitioners filed a motion to impose sanctions, including dismissing the NWF petition or, in the alternative, striking portions of the merits brief filed by the NWF Petitioners and awarding attorney fees and costs to Industry Petitioners, on grounds the NWF counsel improperly disclosed CBI and improperly used CBI to extract additional data from EPA and a stipulation from EPA in support of NWF's litigation position.

NWF argues that its counsel acted properly throughout the present litigation with respect to the CBI. NWF assures this Court that its counsel did not know that the email contained CBI when he first reviewed it, and relies on a DC Ethics Opinion which provides that an attorney who receives inadvertently disclosed information, and who has no knowledge that the information was disclosed inadvertently, does not act unethically in using that information to his advantage. See District of Columbia Legal Ethics Comm., Formal Op. 256 (1995). (NWF does not suggest that counsel would have been able to use the information if he knew that it was confidential when he initially reviewed it.) NWF also denies that NWF counsel used the CBI as a bargaining chip with EPA. Finally, NWF argues that NWF counsel did not violate this Court's Order denying NWF's motion to compel because the order was silent as to whether NWF could use information released to it by EPA.

We begin and end our analysis with this Court's Order denying NWF's motion to compel. NWF insists that its attorney did nothing wrong in retaining and using the CBI because our Order did not specifically address whether the information could be used if EPA disclosed it, but was instead limited to whether EPA could, in fact, disclose it. This argument is disingenuous at best. We issued our Order in direct response to NWF's request for CBI--the CBI it subsequently received, used, and retained. Our Order stated clearly that "[t]he confidential business information NWF seeks is the type of sensitive information and confidential or trade secret information that EPA can properly withhold from public view." The effect of our Order was simple: NWF requested access to the information; we denied the request. That NWF later received this information inadvertently in no way changes our designation of this material as "confidential," "sensitive," and similar to "trade secret information," and in no way changes our position that NWF counsel should not have had access to it. Because of that, we fail to understand how NWF counsel, after receiving the information and learning of the inadvertent disclosure, could justify retaining and using the information in his possession.

NWF counsel, and the attorney he consulted, relied on ethics and judicial opinions which hold that under some circumstances, a privilege is waived if inadvertently released by the privilege holder. In doing so, NWF counsel and his attorney appear to have mischaracterized the operative facts and been unaware of caselaw from this Circuit that closely resembles the question at hand: whether the inadvertent disclosure of privileged or confidential information maintained by a third party (here, EPA) constitutes waiver. See SEC v. Lavin, 111 F.3d 921 (D.C. Cir. 1997). In Lavin, we noted that cases wherein a holder of the privilege inadvertently discloses information provide "limited guidance on whether disclosures by third parties over whom the holder of the privilege has virtually no control, i.e., involuntary disclosures," constitute waiver. Id. at 930. We then adopted the reasoning of the Ninth Circuit in United States v. de la Jara, 973 F.2d 746, 749-50 (9th Cir. 1992), holding that the privilege is preserved in involuntary disclosures if the privilege holder has made reasonable efforts designed to protect and preserve the privilege. See Lavin, 111 F.3d at 930. In so holding, we observed that "[u]nless communications remain privileged as long as the holder has acted reasonably in attempting to protect them, involuntary disclosures by third parties may render illusory the privilege's guarantee of privacy." Id. We find that Industry Petitioners' efforts in opposing NWF's motion to compel the CBI was indeed a reasonable attempt to protect its confidential business information, and any protection afforded that information was not waived through the inadvertent disclosure of that information by EPA.

We understand, however, that the present situation involves an Order of this Court concerning trade secret information rather than an evidentiary privilege. The holding of Lavin then, while instructive, is not necessarily controlling. The Lavin holding does instruct us, however, to seriously question the propriety of counsel's actions, especially when taken together with the language of our Order denying NWF access to the very information NWF now argues it was entitled to use. For these reasons, rather than impose

sanctions against NWF counsel, we refer this matter to the Committee on Admissions and Grievances for its consideration and such recommendation or petition to the Court as the Committee may see fit to present. See In re Door, 195 F.2d 766, 770 (D.C. Cir. 1952).

V.

For the reasons stated, the petitions for review and the motion for sanctions are denied.