



Am. Petroleum Inst. v. EPA, 540 F.2d 1023, 9 ERC 1252 (10th Cir. 1976),
Court Opinion

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United States Court of Appeals for the Tenth Circuit

American Petroleum Institute et al., Petitioners,
v.
Environmental Protection Agency et al., Respondents.

Nos. 74-1465, 74-1466, 74-1621 and 74-1622.

August 11, 1976.

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Michael D. Graves, Dept. of Justice and Alan W. Eckert, Deputy Associate Gen. Counsel, E.P.A., Washington, D. C. (Peter R. Taft, Asst. Atty. Gen., Alfred T. Ghiorzi, Dept. of Justice, Robert V. Zener, Gen. Counsel, E.P.A., Washington, D. C., on the brief), for respondents.

Before SETH, BREITENSTEIN and DOYLE, Circuit Judges.

[*1026] BREITENSTEIN, Circuit Judge.

The American Petroleum Institute, an incorporated trade association of companies in the petroleum industry, and ten companies engaged in petroleum refining and related activities, have petitioned for review of regulations promulgated by the Administrator of the Environmental Protection Agency under the Federal Water Pollution Control Act Amendments of 1972. *33 U.S.C. 1251-1376*. The regulations are contained in 40 C.F.R. Part 419, Petroleum Refining Point Source Category. The Administrator at times will be referred to as EPA. The statutory references will be those found in the Act as set out in 86 Stat. 816 et seq.¹ Petitioners will be referred to as Refineries.

Section 509(b)(1)(E) confers jurisdiction on the court of appeals. *American Petroleum Institute v. Train*, 10 Cir., 526 F.2d 1343, sustains that jurisdiction and will not be reconsidered.

I.

THE ACT

The Act resulted from dissatisfaction with predecessor statutes which relied unsuccessfully on water quality standards as the primary method of pollution control. See S.Rep. No. 92-414, 92 Cong. 2d Sess., 2 U.S.Code Cong. & Adm.News '72 3668, 3674. The objective of the Act "is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." 101(a). The goal is the elimination by 1985 of "the discharge of pollutants into the navigable waters." 101(a)(1). *Section 301(a)* provides that "the discharge of any pollutant by any person shall be unlawful" except "as in compliance" with specified sections of the Act. The number of dischargers has been variously estimated from 30,000 to 70,000.

The control is by effluent limitations on discharges from point sources. See 301. The Act provides progressively severe limitations. By July 1, 1977, the limitations "shall require the application of the best practicable control technology currently available" (BPT). For July 1, 1983, the requirement is "the best available technology economically achievable," (BAT). For new sources, i. e., those whose construction commences after the promulgation of pertinent regulations, the Act provides a "standard of performance" reflecting "the greatest degree of effluent reduction which the Administrator determines to be achievable through application of the best available demonstrated control technology, processes, operating methods, or other alternatives," (BADT).

Primary enforcement of the Act is secured through the permit system established by 402. Discharge permits may be issued by the Administrator, 402(a)(1), or by a state which has adopted a permit program approved by the Administrator. 402(b). The Administrator has veto power over a state issued permit. 402(d)(2). The Administrator may withdraw approval of a state permit program if he finds that it is not being administered in accordance with the Act. 402(c)(3). All permits shall comply with the applicable provisions of 301 (effluent limitations), 306 (new source standards), and other specified sections of the Act. See 402(a)(1) and (b)(1)(A).

The issuance or denial of a permit may be reviewed by the appropriate court of appeals. 509(b)(1)(F). A violation of any conditions or limitations imposed by specified sections of the Act or by a permit may result in the imposition of both civil and criminal penalties. 309. "Citizen Suits" alleging violations of the Act may be brought under 505.

Section 304(a)(1) provides that within one year after enactment the Administrator [***1027**] must publish "criteria for water quality accurately reflecting the latest scientific knowledge" on enumerated subjects. Within the same period the Administrator shall publish regulations "providing guidelines for effluent limitations." 304(b). Subsection (b)(1)(A) applies to the 1977 step and subsection (b)(2)(A) to the 1983 step. Each subsection mandates consideration of specified factors.

The Administrator did not act within the one year requirements of 304. Compliance was not within the realm of reality. An estimated 30,000 applications for permits were filed. EPA characterizes the Act as "incredibly complex and demanding." See *duPont II* infra. A private suit was brought to compel compliance. *Natural Resources Defense Council, Inc. v. Train (NRDC)*, 166 U.S.App.D.C. 312, 510 F.2d 692. The result was a

court imposed timetable. *Ibid.* at 710-714. The regulations here under attack were promulgated in May and September, 1974, and some were amended in May, 1975.

The EPA regulations relating to industrial discharge of pollutants have produced much litigation. Decisions to date of various courts of appeals are, in chronological order:

1--*CPC International, Inc. v. Train*, 8 Cir., 515 F.2d 1032 (Corn Wet Milling);

2--*American Iron and Steel Institute v. Environmental Protection Agency*, 3 Cir., 526 F.2d 1027 (Iron and Steel Manufacturing);

3--*American Meat Institute v. Environmental Protection Agency*, 7 Cir., 526 F.2d 442 (Meat Products);

4--*American Petroleum Institute v. Train (API I)*, 10 Cir., 526 F.2d 1343 (Jurisdiction);

5--*E. I. duPont de Nemours & Company v. Train (duPont I)*, 4 Cir., 528 F.2d 1136. Filed December 30, 1975, cert. granted 425 U.S. 933, 96 S.Ct. 1662, 48 L.Ed.2d 174 (Jurisdiction);

6--*E. I. duPont de Nemours & Company v. Train (duPont II)*, 4 Cir., 541 F.2d 1018. Filed March 10, 1976, cert. granted ___ U.S. ___, 96 S.Ct. 3165, 49 L.Ed.2d ___ (Inorganic Chemicals);

7--*Tanners' Council of America, Inc. v. Train*, 4 Cir., 540 F.2d 1188. Filed March 10, 1976 (Leather Tanning);

8--*FMC Corporation v. Train*, 4 Cir., 539 F.2d 973. Filed March 10, 1976 (Plastic and Synthetic Materials);

9--*Hooker Chemicals & Plastics Corp. v. Train*, 2 Cir., 537 F.2d 620. Filed April 28, 1976 (Phosphorous Manufacturing--existing sources);

10--*Hooker Chemicals & Plastics Corp. v. Train*, 2 Cir., 537 F.2d 639. Filed April 28, 1976 (Phosphorous Manufacturing--new sources);

11--*Natural Resources Defense Council, Inc. v. Environmental Protection Agency*, 2 Cir., 537 F.2d 642. Filed April 28, 1976 (Variance Clauses);

12--*American Frozen Food Institute v. Train*, D.C.Cir., 539 F.2d 107. Filed May 11, 1976 (Frozen Potato Products); and

13--*Appalachian Power Co. v. Train*, 4 Cir., Nos. 74-2096 etc., opinion filed July 16, 1976 (Steam Electric Power).

A cursory glance at the above listed decisions reveals the difficulties which the federal courts of appeals have had with the Act. Popular demand for legislative action to control water pollution is shown by the fact that on the votes to override the presidential veto, only 12 senators and 23 representatives voted to sustain the veto.

Perhaps the pressure on Congress to do something was a major cause of the unsatisfactory legislation. The Act is difficult to understand, construe and apply. We can add nothing to the comments of other courts. See Second Circuit, *Hooker Chemicals* at 626-627; Third Circuit, *Steel Institute*, 526 F.2d at 1037 n. 14a; and Fourth Circuit, *duPont II*, at 1026-1027.

The two volume, 1766 page, legislative history does not help us much. The Second Circuit has said, *Hooker Chemicals*, at p. 627, that "[t]he legislative history compounds the difficulty." See also statements [*1028] of Fourth Circuit, *duPont II*, at 1027. A comparison of the discussion of the legislative history by the Eighth Circuit in the *Corn Wet Milling* case, 515 F.2d at 1039-1042 with that found in *E. I. duPont de Nemours and Company v. Train, W.D.Va.*, 383 F.Supp. 1244, 1254-1255, highlights the problem. We can add nothing to the explication of legislative history by the Third Circuit in the *Steel Institute* case, 526 F.2d at 1043-1045, and by the Seventh Circuit in the *Meat Institute* case, 526 F.2d at 451-452.

In a case involving the Act before us, *Train v. Colorado Public Interest Research Group, Inc.*, the Supreme Court said, ___ U.S. ___, 96 S.Ct. 1938, 48 L.Ed.2d 434, in a quote from *United States v. American Trucking Associations*, 310 U.S. 534, 543-544, 60 S.Ct. 1059, 84 L.Ed. 1345 that "[w]hen aid to construction of the meaning of words, as used in the statute, is available, there certainly can be no 'rule of law' which forbids its [legislative history's] use, however clear the words may appear on 'superficial examination.'" (Footnotes omitted). The difficulty with the present case is that sometimes the statutory words, phrases, and provisions are clear and sometimes they are not. The same can be said of the legislative history.

We consider both the statute and its legislative history. As said by the Second Circuit, *Hooker Chemicals*, at p. 627: "The very magnitude of the task undertaken by Congress and delegated to the EPA for fulfillment probably accounts for the lack of clarity." In the discussion which follows, the guiding star is the intent of Congress to improve and preserve the quality of the Nation's waters. All issues must be viewed in the light of that intent.

II.

SCOPE OF REVIEW

The Refineries attack generally all of the pertinent regulations on the grounds of lack of authority and of noncompliance with the Act. They attack certain specific regulations both on the legal ground of noncompliance with the Act and on the factual ground that the record does not sustain the actions of the EPA. We are concerned with informal rule-making by EPA in the exercise of functions delegated to it by the Act. The record consists of notice of proposed action, comments of interested parties, agency consideration of those comments, and ultimate promulgation of regulations. The regulations, to some extent, must be anticipatory because, although improvements in the techniques of pollutant control can be reasonably expected, we do not know what those improvements will be. The immediate problem is the scope of judicial review.

Much has been written on this subject in the decisions bearing on the Act before us. See e. g., *Steel Institute*, 526 F.2d at 1047 and *Meat Institute*, 526 F.2d at 452-453. Essentially they rely on and adopt the principles stated in *Citizens to Preserve Overton Park, Inc. v. Volpe*, 401 U.S. 402, 416, 91 S.Ct. 814, 28 L.Ed.2d 136. In

substance it says that the function of judicial review is to determine (1) authority of the agency, (2) compliance by the agency with the prescribed procedures, and (3) any claim that agency action is arbitrary, capricious, or an abuse of discretion. *Ibid.* at 415-417, 91 S.Ct. 814.

On legal issues the controlling principles are well defined. Trouble arises in connection with factual issues. *Overton Park* says that the Administrative Procedure Act, 5 U.S.C. 706, requires "the reviewing court to engage in a substantial inquiry", and a "probing, in-depth review." *Ibid.* 401 U.S. at 415, 91 S.Ct. [814] at 823. This is not an adoption of the *Universal Camera Corp. v. National Labor Relations Board*, 340 U.S. 474, 488, 71 S.Ct. 456, 95 L.Ed. 456, test of substantial evidence in the light of the entire record. It does require consideration and evaluation of the facts. Perhaps agency action which is not based on substantial evidence is arbitrary and capricious.

Many of the regulations are related to EPA policy and the the presently unknowable technologies of the future for pollution [*1029] control. As was said in *Permian Basin Area Rate Cases*, 390 U.S. 747, 790, 88 S.Ct. 1344 , 1372, 20 L.Ed.2d 312, "the breadth and complexity of the Commission's responsibilities demand that it be given every reasonable opportunity to formulate methods of regulation appropriate for the solution of its intensely practical difficulties." Our concern is with a regulatory statute which demands preventive or curative action. Factual certainty of future technologies is impossible. We can do no more than consider whether the record facts supporting EPA action are "adequately adduced and rationally applied." Note, *Judicial Review of the Facts in Informal Rulemaking*, 84 Yale L.J. 1750, 1764.

The grounds upon which the agency acted must be clearly disclosed in, and sustained by, the record. The agency must make plain its course of inquiry, its analysis, and its reasoning. See *duPont II*, at p. 1026 and cases there cited. After the fact rationalization by counsel in brief and argument does not cure noncompliance by the agency with the stated principles. *Ibid.* and *Hooker Chemicals*, at pp. 633-634. The court may not substitute its judgment for that of the agency. *Overton Park*, 401 U.S. at 416, 91 S.Ct. 814. If the agency's construction of the controlling statute is "sufficiently reasonable", it should be accepted by the reviewing court. *Train v. Natural Resources Defense Council, Inc.*, 421 U.S. 60, 75, 95 S.Ct. 1470, 43 L.Ed.2d 731.

III.

VALIDITY AND EFFECT OF REGULATIONS

The Refineries say that EPA may not impose effluent limitations on existing sources by regulation. Their position is that effluent limitations on existing sources may be imposed only by the permit issuer. The predicate for the argument is that 304(b) specifically provides that EPA shall publish "regulations, providing guidelines for effluent limitations says nothing about regulations."

The problem has been considered by several circuits. The Eighth Circuit has held, *CPC*, 515 F.2d at 1037, that EPA may not promulgate regulations establishing effluent limitations for existing sources. All other circuits considering the problem have held to the contrary. See Second Circuit, *Hooker Chemicals*, at p. 628; Third Circuit, *Steel Institute*, 526 F.2d at 1040-1042; Fourth Circuit, *du Pont II*, at pp. 1026-1027; Seventh Circuit, *Meat Institute*, 526 F.2d at 449-452; and D.C. Circuit, *Frozen Food Institute*, at pp. 127-129.

All of the above cases, except *duPont II*, considered the problem in connection with determination of jurisdiction of the court of appeals. *Section 509(b)*, which provides for judicial review of agency action, does not include action taken under 304. Except for CPC, the courts rejected the argument that 301 does not authorize the promulgation of effluent limitations by regulation and, hence, 509(b) does not permit review in the court of appeals. Our situation is the same as that presented in *duPont II*. Jurisdiction had been decided and, in the exercise of that jurisdiction, we must determine the authority of EPA to promulgate the regulations.

The Administrator did not meet the one-year requirement for the publishing of regulations "providing guidelines for effluent limitations." 304(b). The enormity of the task precluded compliance. After the imposition of a court mandated timetable, *NRDC*, 510 F.2d at 710-714, he published "effluent limitations guidelines", and in so doing said that the action was taken under both 301 and 304, along with other sections. *API I*, 526 F.2d at 1345. Nothing in the Act forbids the combination of 301 effluent limitations with 304 guidelines.

At the moment our concern is with authority to promulgate. *Section 501(a)* authorizes the Administrator "to prescribe such regulations as are necessary to carry out his functions under this Act." His functions are "to administer this Act." 101(d). The attainment of the congressional intent to protect and preserve water purity comes through control of pollutant discharge. *Section 301(e)* refers to the establishment of effluent limitations but does [*1030] not say who does the establishing. *Section 502(11)* defines effluent limitations as "any restriction established by a State or the Administrator." Subsections 402(a)(1) and (b)(1) say that permits shall comply with 301, 306, and other sections not including 304.

[1] The permit issuer can be either EPA or a conforming state. The division of authority does not determine the authority of EPA to promulgate the regulations. The effect of the regulations presents a separate question. For the reasons stated in *duPont II*, at 1026-1027, the promulgation of the limitations was a reasonable exercise of a congressionally delegated power. The action is reasonable and we accept it.

IV.

EFFLUENT LIMITATIONS

The basic dispute between the Refineries and EPA is whether the regulations are 301 effluent limitations or 304 guidelines. EPA contends that the regulations are uniformly applicable throughout the nation and, with some exceptions, must be mechanically cranked into each permit by the issuer. The Refineries insist that the regulations are guidelines for the information and consideration of, but not binding on, the permit issuer. In essence, the conflict concerns national uniformity versus state power and responsibility.

The Act is ambivalent. *Section 101(a)* refers to the "integrity of the Nation's waters," "the national goal," and "the national policy." *Section 101(b)* declares the policy of Congress "to recognize, preserve, and protect the primary responsibilities and rights of States to prevent, reduce, and eliminate pollution." The legislative history confuses, rather than clarifies, the issue.

In *Palmer v. Massachusetts*, 308 U.S. 79, 84, 60 S.Ct. 34, 36, 84 L.Ed. 93, the Court said that: the "absorption of state authority is a delicate exercise of legislative policy in achieving a wise accommodation between the

needs of central control and the lively maintenance of local institutions." (Footnote omitted). The definition of the roles of each government is essentially a matter for Congress, not for the courts.

The Act is ineffective unless somebody fixes effluent limitations. The Administrator has done so and we have upheld his authority. If the limitations must be applied automatically to each permit application, the Act destroys rather than preserves the rights of the states which 101(b) says that Congress protects. If each state may go its own way, the national policy declared by 101(a) is inhibited. Some accommodation is necessary.

[2] We can do no more than the Fourth Circuit did in *duPont II*. It said that the EPA limitations are presumptively applicable and controlling unless rebutted by a permit applicant. At 1028. The burden is thus placed on an applicant to convince the permit issuer that the general limitations do not apply to his particular situation. As said by the Fourth Circuit, *Ibid.* at 1028, "The balance of general rule and narrow exceptions assures all possible uniformity without sacrifice of the flexibility needed to adjust for disparate plants in dissimilar circumstances."

The Refineries insist that the permit issuer must consider the factors stated in 304(b)(1)(B) for the 1977 step and in (b)(2)(B) for the 1983 step and exercise his discretion in applying them. We are concerned with rule-making, not with adjudication. Our holding is that the Administrator had authority to promulgate the limitations for existing sources and that the effect of the regulations so promulgated is not contrary to the Act. In particular instances, modification or variation may be necessary. If that problem arises, the issues may be determined by judicial review on the basis of actual facts under 509(b)(1)(F).

V.

SINGLE NUMBERS

The regulations impose effluent limitations in terms of single numbers rather than in a range of numbers. The Refineries point out that 304(b) requires EPA to publish "regulations, providing guidelines for effluent limitations." The use of [*1031] "guidelines" is said to intend a range, not a fixed number.

The Refineries emphasize the use of the word "amounts" in the 304(b)(1)(A) provision that the regulations shall "identify, in terms of amounts of constituents and chemical, physical, and biological characteristics of pollutants, the degree of effluent reduction attainable * * *." "Amounts" refers to pollutants. When "amounts" are determined, EPA then fixes the "degree" of effluent reduction attainable. "Degree" may be either a "range" or a single number.

The imprecise wording of 304(b)(1)(A) and (B) makes difficult the ascertainment of congressional intent. Congress does not use the word "range" or any equivalent. The Senate Committee Report, Leg.Hist. 1468, says that Congress "expects" EPA "to define a range of discharge levels," and again, *Ibid.* that EPA "should establish the range of best practicable levels." In the face of the statutory language, the statements in the Senate Report are mystifying.

Three circuits have considered the problem. In the *Steel Institute* case, 526 F.2d 1027, the Third Circuit treated

the effluent limitations as establishing a ceiling, fixing the maximum permissible amount of pollutant discharge. *Ibid.* at 1044-1045. EPA determines the base by consideration of "the numerous differences in processes and capabilities of point sources." (Footnote omitted). *Ibid.* at 1045. The base is the minimum degree of effluent control permissible and the ceiling is the maximum discharge permissible. *Ibid.* Thus the 304 "guidelines are intended to provide precise guidance to the permit-issuing authorities in establishing a permissible level of discharge that is more stringent than the ceiling." *Ibid.* Taken literally, the Third Circuit opinion may mean that in issuing a permit a state may not exercise the option inherent in 510 of adopting a limitation more stringent than the base which EPA has fixed.

The Second Circuit rejected the argument that the regulations are invalid because EPA failed to establish permissible ranges of discharges and instead promulgated single number maximum discharge levels. The court said, at p. 630:

"[W]e * * * believe that whenever Congress spoke of 'ranges' in the debates over the Act, it meant only the spectrum comprised of varying discharge levels on a subcategorical, rather than individual, basis. (citation omitted) Although variances are conceivable at the permit-granting stage (citation omitted) Congress intended that the regulations establish a single discharge level for a given subcategory. This is implicit in the Congressional choice of the superlative form in the statutory language requiring achievement of the degree of effluent reduction attainable by application of 'best' technology."

In *duPont II*, the Fourth Circuit disagreed with the Third. In so doing, it pointed out, at pp. 1029-1030, that nothing in the Act prohibits EPA from using single numbers in establishing effluent limitations. The use of a single number permits any discharge from zero up to the allowed amount. If a range is required, a zero discharge provision violates the Act which has as its objective the elimination of all pollutant discharges by 1985. *Section 101(a)(1)*. The court said "The expertise of the Administrator is persuasive as to whether the limitations be fixed in single numbers or ranges." *Ibid.* at 1029. It upheld the use of single numbers in the inorganic chemicals subcategories which were before it.

[3] We agree with the Second and Fourth Circuits. The promulgation of the regulations was a form of rule-making. Rules are necessarily general. The parties confront us with hypothetical situations. We do not know how the rules will work out in practice. We reject the EPA claim that the regulations must be mechanically cranked into every permit which may be issued. We also reject the claim of the Refineries that the permit issuer has unbridled discretion in the application of the regulations to any permit application. The correct answer lies somewhere between these extremes. The intent of Congress was to clean up the [*1032] Nation's waters. This cannot be done overnight. On the road to attainment of the no discharge objective some flexibility is needed. The extent of that flexibility may be determined by Congress through precise amendments to the Act or by the courts in the decision of cases presenting facts rather than hypotheses. For the purpose of general rule-making, we accept the use of single numbers in the effluent limitations under consideration.

VI.

VARIANCE

The Refineries attack the 1977 step variance provisions found at 40 C.F.R. 419.12, 419.22, 419.32, 419.42, and 419.52. These provisions are substantially identical to similar provisions found in each of the categories and subcategories covered by EPA regulations under the Act. For the 1983 step the statute provides for variances. See 301(c). It does not do so for the 1977 step.

Section 419.12 is typical of the 1977 variance provisions with which we are concerned. It says in its first sentence that EPA in establishing limitations took into consideration specified factors, including "age and size of plant, raw materials, * * treatment technology available, energy requirements and costs." The second sentence recognizes the possibility that "data which would affect these limitations have not been available" and that as a result, the limitations should be adjusted for certain plants in the industry. The third sentence says that a discharger may submit evidence:

"[t]hat factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines."

The fourth sentence says that the permit issuer "will make a written finding that such factors are or are not fundamentally different."

Again we have an area of uncertainty. There is not only a conflict between circuits but also a conflict within one circuit. In *NRDC v. EPA*, the Second Circuit held, at p. 647, that the promulgation of the variance clauses for the 1977 step is "a valid exercise of the EPA's rule-making authority pursuant to 501(a)." The court also said, *Ibid.* that the interpretation of the variance clauses "should await the disclosure and development of concrete factual controversies involving a single point source and its permit."

In the *Steel Institute* case the Third Circuit said, 526 F.2d at 1046:

"We also note that the variance procedure provides for less flexibility than we believe Congress contemplated, since it permits deviations from otherwise rigid and unitary limitations only where the circumstances of the particular plant are 'fundamentally different' than those from which the effluent limitation was derived."

The Third Circuit perhaps overlooked the fact that Congress did not provide any variance procedure for the 1977 step.

In *duPont II* the Fourth Circuit declined to determine the validity of the variance provisions, saying that the administration of those provisions is presently speculative and will arise when a claim for a variance is made in a permit application.

In *Appalachian Power Company v. Train*, the Fourth Circuit, with one judge dissenting, set aside the 1977 variance provisions applicable to a subcategory of the Steam Electric Power Generating Point Source Category, 40 C.F.R. 423.12(a). It interpreted the clause to mean that "only technical and engineering factors, exclusive of cost, may be considered in granting or denying a variance." Slip op. at p. 17 (footnote omitted). In so doing the court relied on a memorandum from the EPA Assistant Administrator for Enforcement and General Counsel to all regional administrators. The court said that this administrative interpretation

distinguished the Appalachian Power case from duPont II.

The court further held that the 1977 limitations "were not intended to be applied [*1033] any less flexibly" than the 1983 limitations. *Ibid.* p. 18. In so acting the court did not have before it any specific claim, grant, or denial of a variance. It was concerned with a general rule which was considered on a hypothetical basis and had no regard for an existing and specific fact situation.

[4] The Refineries do not make clear their reasons for attacking the regulatory variance regulations for the 1977 step. The statute says nothing about variances for that step. We agree with the Second Circuit that the 1977 variance provisions are a valid exercise of EPA's rule-making authority under 501(a). We also agree with *duPont II* that variances are appropriate to the regulatory process, at p. 1028, and that the 1977 BPT technology may not be construed more stringently than the 1983 BAT technology. We reject the Fourth Circuit holding that the 1977 variance provisions are "unduly restrictive" and hence void. *Appalachian Power*, slip op. at p. 17. Such a holding forgets that Congress did not provide for any 1977 variance.

Without record support, the Refineries assert that no variance has been granted. Even if true, the statement proves nothing. Any permit applicant dissatisfied with action on a variance claim may petition for review under 509(b)(1)(F). From the standpoint of general rule-making, the regulatory variance provisions for the 1977 phase are reasonable. Their interpretation and application must await action on a variance claim asserting specific facts. We will not speculate what the result may be.

VII.

1977 STEP

(1) *In-Plant Process Changes.*

Important to determination of effluent limitations are flow rates and concentration of discharge components. In arriving at its regulations EPA considered in-plant flow modifications. Refineries argue that the BPT (1977 step) technologies can only apply to end-of-pipe treatment systems and that EPA cannot consider and require in-plant process changes.

The Act uses different language in its provisions for the 1977 and 1983 steps. In 304(b)(1)(A) the reference is to "control technology" whereas in 304(b)(2)(A) the reference is to "control measures and practices" including process innovations. Both sections specify "the process employed" as one of the factors to be taken into consideration. 304(b)(1)(B) and (b)(2)(B).

Two circuits have wrestled with the problem. In *duPont II*, at pp. 1030-1031 the Fourth Circuit noted the statutory language and rejected the argument that for the 1977 step EPA was confined to end-of-pipe treatment systems. In *FMC*, at p. 981, the Fourth Circuit said that EPA was to rely "principally" on end-of-pipe technology and that "In-process control measures may be required, however, if they are considered normal practice within the industry." *Ibid.* (footnote omitted). In *Hooker Chemicals*, the Second Circuit held, June 14, 1976, memo modifying original opinion, that "no 'in process' changes can be mandated for 1977 unless they may be considered normal practices within the industry." At p. 637.

Refineries make much of the statement in the House Report, Leg.Hist. 788, that "control technology * * * means the treatment facilities at the end of a manufacturing * * * process rather than * * * within the manufacturing process itself." We decline to accept this statement of one chamber of Congress. If both chambers had agreed, the language of the statute would have been changed. Indeed, the Refineries concede, see reply brief, p. 28 n. 28, and R. 7326, that pre-treatment processes may be required if they are normal practice within the industry.

[5] EPA's designation of in-plant technology for the 1977 step was based on "control practices widely used within the petroleum refining industry." Dev.Doc. 165 and R. 6065. This conclusion is supported by record evidence. *Ibid.* at 70, 95 and R. 5970, 5995. We find no record support for the claim that more than half of the Nation's refineries will have to make substantial and widespread internal reconstruction to comply with the regulations. EPA has relied [***1034**] principally on end-of-pipe technology in its regulations for the 1977 step. Whatever in-plant modifications may be necessary are reasonably within normal industry practice. EPA action is within the statutory requirements.

(2) *Exemplary Plants.*

The statutory mandate for 1977 is "best practicable control technology currently available." 301(b)(1)(A). Refineries say that EPA must look to the average of the industry and EPA says that it may look to the average of the best technology used in the industry.

With varying language the circuits agree that EPA may base its regulations on the results from the plants using the best technology. See *Hooker Chemicals*, at p. 632; *Steel Institute*, 526 F.2d at 1057, *duPont II*, at p. 1031; *Meat Institute*, 526 F.2d at 453; and *Frozen Food Institute*, at p. 132. We agree. There is no reason for us to enlarge what has been said in the cited decisions. It is conceded that at least 12 of the refineries are already in compliance with the 1977 regulations. See petitioners Tech. Brief 37, n. 23, and Reply Brief 24, n. 22. The EPA action was proper.

(3) *Granular Media Filtration.*

Refineries contest the 1977 limitations for Total Suspended Solids (TSS) and Oil and Grease (O&G) on the basis that EPA has required granular media filtration and that such technology is neither practicable nor currently available.

Granular Media Filtration is only one of the control practices widely and currently used within the petroleum refining industry. Dev.Doc. 165 and R. 6065. The regulations do not require the use of granular media filtration. Any one of a number of technologies or combination of technologies may be used. *Ibid.*

Refineries do not contest that many plants are already meeting the O&G limitations. EPA based its TSS limitations on three exemplary plants. These met the TSS limitations during 90%, 80%, and 70% of the monthly samples during 1973 and 1974. During its reconsideration of the regulations, EPA concluded that any failures to meet the limitations were due to improperly operated filters or use of filters beyond design capacity.

Refineries objections to EPA's use of data obtained after promulgation is not well taken. The new data was not the basis for the regulations. It serves to establish that the EPA technologies are both practicable and currently

available. After promulgation, events indicating the truth or falsity of agency predictions should not be ignored. *Amoco Oil Co. v. Environmental Protection Agency*, 163 U.S.App.D.C. 162, 501 F.2d 722, 729 n. 10. This is not a case like *duPont II* where new, non-record evidence was rejected as the sole basis for agency action, at p. 1037. In the instant case the record made before promulgation sustains the regulations. The new data is pertinent to show the validity of the EPA actions. The 1977 TSS and O&G limitations are upheld.

(4) *Net or Gross Limitations.*

Net limitations apply only to the excess of pollutants discharged over the pollutants, if any, in the intake water. Gross limitations apply to the total amount of pollutants discharged regardless of pollutants in the intake water. Refineries say that the limitations must be net.

In *Steel Institute*, the Third Circuit recognized the problem and said that "an adjustment would seem required by due process" because otherwise a plant would be penalized "because of circumstances beyond its control." 526 F.2d at 1056. EPA has agreed that net limitations are allowable where a source discharges to the same body of water from which it draws its water. In 1975 EPA added a new regulation, 125.28, to its general regulations applicable to the administration of the Act. 40 Fed.Reg. 29850. This new regulation allows adjustment of the limitations "to reflect credit for pollutants in the applicant's water supply if the source of the applicant's water supply is the same body of water into which the [*1035] discharge is made", if certain requirements are met. 125.28(a).

EPA concedes that its concentrations are based on gross limitations. The Refineries say that the concession requires a remand. We do not agree. *Section 125.28(a)(2)* allows a permit applicant to demonstrate that pollutants in the intake water will not be removed by treatment systems designed to reduce process wastewater pollutants to the levels required by the applicable limitations. In an appropriate situation, gross will be reduced to net and a plant will not be penalized for something which it cannot prevent. See discussion in *Appalachian Power*, slip op. 77-80. From the standpoint of general rule-making the amendment is satisfactory. Its application may be determined in a controversy arising out of specific facts.

(5) *Storm Water Runoff.*

During periods of rainfall, a refinery must treat not only wastewater flow from the refinery but also storm water runoff. The pertinent regulations, 40 C.F.R. 419.12(c)(1) and 419.15(c)(1) provide:

"The allocation allowed for storm runoff flow * * * shall be based solely on that storm flow (process area runoff) which is treated in the main treatment system. All additional storm runoff (from tank fields and non-process areas), that has been segregated from the main waste stream for discharge, shall not exceed * * * [stated limitations]."

These regulations are made applicable to all subparts in Part 419.

[6] EPA furnishes no record reference to support this regulation. It relies on after-the-fact rationalization in its brief but such rationalization is no substitute for agency action not sustained by the record. *duPont II*, at pp. 1026, 1035, 1039. EPA says that "'process area runoff' is intended to encompass all 'process waste water' pollutants as defined in 40 C.F.R. 401.11(q)." EPA Br. at 110. That regulation has general applicability to

Subchapter N which includes the regulations for the Petroleum Refining Industry. In *duPont II*, at pp. 1032-1033, the Fourth Circuit noted that EPA was preparing an amendment to 401.11(q) and set that regulation aside. We are not told what, if anything, EPA has done to rewrite the regulation.

The statement in the EPA brief of how the storm runoff regulation is intended to work is interesting but unsatisfactory. We have no definition of the term "storm runoff." The EPA brief says, p. 111, that "all storm runoff is to be collected and monitored." Taken literally this means that the refineries will have to collect diffused surface runoff in channels and discharge it through a discrete source. There is no statutory or record support for such requirement.

Sections 419.12(c)(1), 419.15(c)(1), and subsequent sections based thereon are set aside and remanded for reconsideration.

(6) *Variability Factors.*

Even in the best treatment systems, changes occur in ability to treat wastes. Sixteen factors which cause variability are listed in 40 Fed.Reg. 21941. EPA defines, B.R. at 113, the daily variability factor "as the 99th percentile probability of occurrence value divided by the mean." The result is "the multiplier by which the long-term achievable values must be multiplied in order to derive the value not permitted to be exceeded." *Ibid.* For the 30 day variability factor the 98th percentile is used. The application of the formula is shown at 419.42(b)(3).

The briefs on variability disclose much rhetoric and a turmoil of numbers. We disregard the first and struggle with the second. Refineries claim that the use of the 99 and 98 percentiles is improper. They attack EPA's statistical methodology. They say that EPA used "an insufficient and geographically biased data base", API Tech. Br. at 94, and disregarded "differences among refinery subcategories." *Ibid.* at 99.

Statistical methodology is for the experts. The EPA statement of its procedures and of the bases therefor found at 40 Fed.Reg. 21941-21942[*1036] convinces us that the EPA variability factors have substantial record support. In promulgating the final regulations EPA analyzed data from 10 refineries with a geographical distribution which included Virginia, Texas and California. On petition for reconsideration EPA rechecked the variability data from seven refineries some of which are located in cold climates, e. g., the Amoco refinery in Mandan, North Dakota. With regard to the differences among the five subcategories, the refineries furnish us with no record data showing that variability changes from one subcategory to another.

Refineries urge that "excursions" should be permitted. An "excursion" is a period when the required concentrations may be exceeded. Because EPA selected the 99th percentile, the refineries say that they must be afforded at least four days a year, 1% of 365, when they may make excess discharges without fear of penalty. The reasoning does not impress us. There is always a theoretical chance that a plant achieving the limitations on a long-term basis will exceed the monthly and daily limits. In *FMC*, the Fourth Circuit said that: "Plant owners should not be subjected to sanctions when they are operating a proper treatment facility." 539 at p. 986. The court went on to say that "appropriate excursion provisions" should be incorporated in the regulations. *Ibid.*

The Fourth Circuit was considering a factual situation different from that before us. On the present record we

are unconvinced that the refineries should be granted any specific number of days during a year when they may make excess discharges. The temptation to store pollutants for future discharge would be enticing. The permissible maximums for any one day are about twice the average daily values for a month. See tables found in 419.12(a) and (b). The spread permits considerable flexibility.

The whole problem of variability factors presents a practical effort to accommodate for variations in plant operations. As technology for control of pollutant discharges improves, the variations should lessen. The choice of statistical methods lies within the sound discretion of EPA. EPA has acted properly and reasonably in establishing the variability factors before us.

(7) *Petrochemical Plants.*

EPA divided the petroleum refining industry into five subcategories. Two of these, Subparts C and E, relate to refineries which engage in petrochemical operations. Refineries argue that the stringent regulations imposed on Subparts C and E place the plants subject thereto at a competitive disadvantage with the organic chemicals industry and with refineries which do not conduct petrochemical operations. The challenge based on the organic chemical industry has a hollow ring. The Fourth Circuit has set aside the effluent limitations applicable to the organic chemical industry. See *Union Carbide Corp. v. Train*, 4 Cir., Nos. 74-1459 etc., order of February 10, 1976. We do not know what will be the regulations applicable to that industry.

Refineries' reliance on *Industrial Union Department, AFL-CIO v. Hodgson*, 162 U.S.App.D.C. 331, 499 F.2d 467, and *Portland Cement Association v. Ruckelshaus*, 158 U.S.App.D.C. 308, 486 F.2d 375, cert. denied, 417 U.S. 921, 94 S.Ct. 2628, 41 L.Ed.2d 226, is misplaced. Industrial Union was involved with the Occupational Safety and Health Act. With reference to industrial standards the court said, 499 F.2d at 480:

"Separate standards for different industries would not appear to create opportunities for employers in one industry to challenge their standards on the grounds that standards for another industry were less demanding."

Portland Cement was concerned with the Clean Air Act. The court said, 486 F.2d at 389, that "the Administrator is not required to present affirmative justifications for different standards in different industries."

[7] We find nothing in the Act or its legislative history which requires EPA to consider the competitive effect of its regulations. EPA did consider the comments relative to [*1037] petrochemical operations, 40 Fed.Reg. 21948-21949, and said:

"Since the regulations are based upon actual performance by refineries in each subcategory, it would be absurd to attempt to modify them on the basis of regulations designed for other industries."

In this attack on the regulations pertaining to petrochemical operations, the refineries do not contest the methodology, the data base, or the achievability of the limitations for the two subcategories in question. EPA has used the same general approach in setting the limitations for all the categories in the petroleum industry. The record sustains the pertinent EPA action. The regulations applicable to petrochemical operations, 40 C.F.R. 419.32 and 419.52 are upheld.

(8) *Costs.*

Section 304(b)(1)(B) requires that the EPA regulations for the 1977 step shall specify BPT factors including "consideration of the total cost of application of technology in relation to the effluent reduction benefits to be achieved from such application." Refineries say that EPA did not comply with this statutory requirement.

The Refineries' costs of compliance with the 1977 regulations will be substantial and will be reflected in increased passed-on-costs to the consuming public. The need for, and attainment of, societal benefits are essentially issues for congressional determination. Congress has delegated to EPA the task of giving "consideration" to "total cost" in relation to "effluent reduction benefits." The judicial responsibility is to determine whether EPA has complied with the mandate.

The Senate committee recognized that "there must be a reasonable relationship between costs and benefits if there is to be an effective and workable program." Leg.Hist. 1465. The same Committee said that "no mathematical balance can be achieved in considering relative costs and benefits nor would any precise formula be desirable." *Ibid.* at 1466.

In *duPont II* the Fourth Circuit rejected the argument that benefits "must be quantified in monetary terms", and said: "Nothing in the Act requires this action." At p. 1030. We agree. The judicial problem is whether EPA adequately considered costs and benefits.

EPA estimated the capital investment costs to be 1,112 million dollars for existing sources. The Refineries estimate, which includes "Expansions of Existing Refineries" is 1,558 million dollars. The annual costs for existing refineries are estimated to be 449 million dollars. The Refineries' estimate, which also includes expansion costs, is 544 million dollars. In the area of capital costs, the Refineries put the expansion costs at 490 million dollars. Subtraction of this amount from the Refineries' total of 1,558 million produces 1,068 million, a figure slightly below that of EPA.

Refineries object that EPA used stale cost figures. Cost increases are inherent during a period of inflation. EPA points out that the important consideration is not the level of abatement costs but rather the resulting impact on the industry. EPA's "Economic Analysis of Proposed Effluent Guidelines, Petroleum Refining Industry," R. 5788-5889, considers the problem both from the standpoint of world markets and of United States markets. In doing so EPA discusses prices, profitability, production effects, employment effects, industry growth, and balance of trade. Although the dollar amount of the abatement costs may be high, one commentator stated that the capital requirements of the regulations amount to 3.3% of the total capital requirements of the industry. R. 5545.

Refineries urge that EPA must make a cost-benefit analysis. EPA says that its cost-effectiveness analysis satisfies the statute. Labels are neither important nor determinative. EPA said that costs depend "essentially" on waste water flow rate and prepared a table comparing costs with flow rates. EPA computed costs for several combinations of refinery size, waste water discharge rate, and extrapolated costs of in-plant modifications to reduce [*1038] waste water flow. The selection of the point of diminishing returns is for agency determination. The technical objections of the Refineries do not impress us.

The record shows that the effluent limitations imposed by the regulations will reduce the pollutants discharged

into the Nation's waters. The value of the resulting benefits is not capable of present-day determination. We are convinced that EPA made a serious, careful, and comprehensive study of the costs which compliance will impose on the industry. If Congress believes that the cost is too high, it can amend the Act. All we say is that EPA has complied with the statutory mandate.

VIII.

1983 STEP

For the 1983 BAT technology EPA proposed an end-of-pipe treatment system "based on the addition of activated carbon adsorption in fixed bed columns, to the treatment system" proposed as 1977 BPT technology. Dev.Doc. 174, R. 6074. In so doing EPA noted that its limitations were "based upon pilot plant data" and that revision may be required "as actual performance data becomes available." *Ibid.* The Refineries contend that the carbon adsorption technology is not available or economically achievable. We agree.

EPA concedes in its brief, p. 138, that:

"As for carbon adsorption, the Agency readily acknowledges that it needs further development before it will show the high degree of effectiveness in large-scale operation that it has already shown in pilot plant demonstrations."

In its response to comments that carbon adsorption had not been demonstrated as a proper base for 1983 limitations, EPA relied on named technical articles and on "The BP, Marcus Hook, 1974, pilot plant study of Filtration and Activated Carbon." 40 Fed.Reg. 21948-21949, R. 17614. EPA concedes, brief p. 143, that "the BP Marcus Hook system does not meet the BAT limitations."

EPA now says that the BP data was relied on only for O&G and that these limitations have been shown achievable by later data from a non-record refinery not using carbon adsorption. Also EPA now claims that the TSS limitations are based on "municipal wastewater experience." Brief at 143. The record reference cited in the brief is an unidentified, illegible, handwritten sheet which means nothing to us.

[8] Examination of EPA's record citations and appraisal of its shifting and inconsistent rationales make it difficult for us to discern upon what, if any, basis EPA promulgated the 1983 limitations. The failure of the BP plant to achieve the limitations when placed in full-scale operation may not be ignored. We can ascertain no reasonable basis for the 1983 limitations. See *FMC*, at pp. 981-982, n. 16; cf. *Tanners' Council*, at p. 1195. We reject the 1983 regulations because of their reliance on the carbon adsorption technology. In the circumstances there is no need to consider the other attacks of the Refineries on those regulations. The questions raised, particularly those relating to costs, should be considered by EPA on remand.

The 1983 regulations, 40 C.F.R. 419.13, 419.23, 419.33, 419.43, and 419.53, are set aside.

IX.

NEW SOURCES

EPA established standards fixing the BAPT technology for new sources by adding the 1983 flow limitations to the control technology applicable to the 1977 BPT step. The attack of the Refineries has three bases, (1) invalidity of the 1977 limitations, (2) unattainability of the 1983 limitations by existing sources, and (3) the use of stale cost figures.

We have upheld the 1977 limitations as supported by the record. Hence, the fact that the new source limitations are derivative is no ground for attack. Cf. *Tanners' Council*, at 1194. Because of our disposition of the 1983 limitations, we did not reach the issue of whether the flow reductions are attainable. Even if the 1983 flow reductions are unattainable by existing refineries, it does not follow that new plants could not be designed so as to incorporate [*1039] the means of attaining the lower flow rates. There is no record support for the claim that the flow rates for new sources are unattainable. The matter of costs has been discussed in connection with the 1977 step, see Part VII(8) of this opinion, and need not be considered further. The regulations pertaining to new source standards, 40 C.F.R. 419.15, 419.25, 419.35, 419.45, and 419.55 are upheld.

X.

DISPOSITION

The following regulations, all contained in 40 C.F.R., are severally set aside and remanded for reconsideration: Storm water runoff (419.12(c)(1) and 419.15(c)(1)) and with regard to storm water runoff only: 419.22(c)(1), 419.25(c)(1), 419.32(c)(1), 419.35(c)(1), 419.42(c)(1), 419.45(c)(1), 419.52(c)(1), and 419.55(c)(1) and 1983 step (419.13, 419.23, 419.33, 419.43, and 419.53).

^{fn}1. The parallel U.S. Code citations for the most frequently mentioned sections are:

Section 101--33 U.S.C. 1251,

Section 301--33 U.S.C. 1311,

Section 304--33 U.S.C. 1314,

Section 306--33 U.S.C. 1316,

Section 402--33 U.S.C. 1342,

Section 501--33 U.S.C. 1361,

Section 502--33 U.S.C. 1362,

Section 509--33 U.S.C. 1369.

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