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Texas Oil & Gas Ass'n v. United States EPA

United States Court of Appeals for the Fifth Circuit

December 10, 1998, Decided

No. 97-60042, No. 97-60321

Reporter

161 F.3d 923 *; 1998 U.S. App. LEXIS 30989 **; 146 Oil & Gas Rep. 541; 29 ELR 20397; 47 ERC (BNA) 1801

TEXAS OIL & GAS ASSOCIATION; MARATHON OIL COMPANY; TRUSTEES FOR ALASKA; NATURAL RESOURCES DEFENSE COUNCIL; COOK INLET KEEPER; NATIONAL WILDLIFE FEDERATION; ALASKA CLEAN WATER ALLIANCE; GREENPEACE; ALASKA CENTER FOR THE ENVIRONMENT; ALASKA MARINE CONSERVATION COUNCIL; KACHEMAK BAY CONSERVATION SOCIETY; ALASKA WAVERIDERS; UNION OIL CO. CA; PHILLIPS PETROLEUM; SHELL OIL CO.; RAILROAD COMMISSION OF TEXAS; STATE OF TEXAS, Petitioners, v. UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, Respondent. AMERICAN PETROLEUM INSTITUTE, Petitioner, VERSUS UNITED STATES ENVIRONMENTAL PROTECTION AGENCY; CAROL M. BROWNER, ADMINISTRATOR, UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, Respondents. RAILROAD COMMISSION OF TEXAS; STATE OF TEXAS, Petitioners, VERSUS UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, Respondent.

Subsequent History: [****1**] As Revised December 17, 1998.

Prior History: [Petitions for Review of Orders of the Environmental Protection Agency. 61 Fed Reg 66085.](#)

Disposition: All petitioners' Petitions for Review of Orders of the Environmental Protection Agency DENIED.

Core Terms

facilities, coastal, zero, subcategory, sand, dischargers, pollutants, limits, effluent, drilling, reduction, technology, permits, wastes, estimates, oil and gas, factors, oil, promulgated, rulemaking, effluent limitation, regulations, percent, arbitrary and capricious, variances, per year, reinjection, washing, pounds, costs

Case Summary

Procedural Posture

Multiple petitioners from six consolidated actions sought review and reversal of final effluent limitation guidelines for coastal oil- and gas-producing industry promulgated by Environmental Protection Agency (EPA) pursuant to provisions of Clean Water Act and from EPA's issuance of National Pollution Discharge Elimination System general permit.

Overview

Multiple petitioners challenged the Environmental Protection Agency's (EPA) promulgation of zero discharge limits on produced water and produced sand in final effluent limitation guidelines, the EPA's decision to set more lenient discharge limits for coastal facilities in Cook Inlet, Alaska, than for other coastal facilities, and the EPA's issuance of a general permit banning the discharge of produced water from coastal facilities in Texas. The court denied the petitions. The EPA adequately considered the age factor in promulgating the zero discharge limit, and setting the limit based on nearly uniform industry practice was valid. The EPA gave adequate attention to the "no free oil" alternative and properly rejected the sand washing option. The EPA did not act contrary to the Clean Water Act when it set separate discharge limits on produced water and drilling wastes for Cook Inlet without designating a separate subcategory. By upholding the zero discharge effluent limitations, all issues challenging the general permit were moot.

Outcome

Decisions affirmed because EPA did not act arbitrarily or capriciously when it set zero discharge limits on produced water and produced sand in effluent limitation guidelines, nor act contrary to Clean Water Act when it set more lenient effluent limits for certain facilities

without designating separate subcategory, and general permit challenge was moot.

contiguous zone, or the ocean, including schedules of compliance. [33 U.S.C.S. § 1362\(11\)](#).

LexisNexis® Headnotes

Environmental Law > ... > Clean Water Act > Coverage & Definitions > Point Sources

Environmental Law > Water Quality > General Overview

[HN1](#) [↓] Coverage & Definitions, Point Sources

A "point source" is any discernible, confined, and discrete conveyance from which pollutants are or may be discharged. [33 U.S.C.S. § 1362\(14\)](#).

Environmental Law > ... > Enforcement > Discharge Permits > Effluent Limitations

Environmental Law > Water Quality > General Overview

[HN2](#) [↓] Discharge Permits, Effluent Limitations

Effluent limitation guidelines are the rulemaking device prescribed by the Clean Water Act to set national effluent limitations for categories and subcategories of point sources. [33 U.S.C.S. § 1314\(b\)](#).

Environmental Law > ... > Enforcement > Discharge Permits > Effluent Limitations

Environmental Law > Water Quality > General Overview

Environmental Law > ... > Clean Water Act > Coverage & Definitions > General Overview

[HN3](#) [↓] Discharge Permits, Effluent Limitations

An "effluent limitation" is any restriction established by a state or the administrator on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources into navigable waters, the waters of the

Environmental Law > Water Quality > General Overview

[HN4](#) [↓] Environmental Law, Water Quality

Effluent limitations are technology-based rather than harm-based; that is, they reflect the capabilities of available pollution control technologies to prevent or limit different discharges rather than the impact that those discharges have on the waters.

Environmental Law > ... > Enforcement > Discharge Permits > Effluent Limitations

Environmental Law > Water Quality > General Overview

[HN5](#) [↓] Discharge Permits, Effluent Limitations

The Clean Water Act prescribes progressively more stringent technological standards that the Environmental Protection Agency must use as a guidepost in setting discharge limits for regulated pollutants. [33 U.S.C.S. § 1311\(b\)\(1\)](#).

Environmental Law > ... > Enforcement > Discharge Permits > Effluent Limitations

Environmental Law > Water Quality > General Overview

[HN6](#) [↓] Discharge Permits, Effluent Limitations

In promulgating effluent limitation guidelines the Environmental Protection Agency (EPA) must set discharge limits that reflect the amount of pollutant that would be discharged by a point source employing the best available technology that the EPA determines to be economically feasible across the category or subcategory as a whole. "Best available technology economically achievable" is the Clean Water Act's most stringent standard. Congress intended these limitations to be based on the performance of the single best-performing plant in an industrial field.

Environmental Law > Water Quality > General Overview

[HN7](#) Environmental Law, Water Quality

See [33 U.S.C.S. § 1314\(b\)\(2\)\(B\)](#).

Environmental Law > ... > Enforcement > Discharge Permits > Effluent Limitations

Environmental Law > Water Quality > General Overview

[HN8](#) Discharge Permits, Effluent Limitations

The Environmental Protection Agency (EPA) has considerable discretion in evaluating the relevant factors and determining the weight to be accorded to each in reaching its ultimate "best available technology economically achievable" (BAT) determination. Thus, the EPA has significant leeway in determining how the BAT standard will be incorporated into final effluent limitation guidelines.

Environmental Law > ... > Enforcement > Discharge Permits > Effluent Limitations

Environmental Law > Water Quality > General Overview

Environmental Law > ... > Enforcement > Discharge Permits > General Overview

[HN9](#) Discharge Permits, Effluent Limitations

Effluent limitation guidelines (ELGs) are not self-executing. They cannot be enforced against individual dischargers, and individual dischargers are under no legal obligation to obey the limits set by ELGs. Rather, ELGs achieve their bite only after they have been incorporated into National Pollutant Discharge Elimination System permits.

Real Property Law > Zoning > Variances
Business & Corporate Compliance > Real Property > Zoning > Variances

Environmental Law > ... > Enforcement > Discharge Permits > Effluent Limitations

Environmental Law > Water Quality > General Overview

Environmental Law > ... > Enforcement > Discharge Permits > General Overview

[HN10](#) Zoning, Variances

The Clean Water Act makes it unlawful to discharge any pollutant from any point source without a National Pollutant Discharge Elimination System (NPDES) permit. [33 U.S.C.S. § 1311\(a\)](#). These permits must generally incorporate, as a technology-based floor, all applicable effluent limitation guidelines (ELGs) promulgated by the Environmental Protection Agency (EPA) for the pertinent point source category or subcategory. [33 U.S.C.S. § 1342\(a\)\(1\)](#). There are only two ways for an individual discharger to avoid the incorporation of applicable ELGs into an NPDES permit: first, where the discharger is operating under a permit that was issued prior to the promulgation of the ELGs; or second, in rare cases, where the EPA grants the discharger a variance based on the discharger's demonstration that it is "fundamentally different" from other dischargers in the category or subcategory. [33 U.S.C.S. § 1311\(n\)](#); [40 C.F.R. §§ 122.21\(m\)\(1\)](#), 125.30-125.32.

Environmental Law > ... > Enforcement > Discharge Permits > Effluent Limitations

Environmental Law > Water Quality > General Overview

[HN11](#) Discharge Permits, Effluent Limitations

In situations where the Environmental Protection Agency (EPA) has not yet promulgated any effluent limitation guidelines (ELGs) for the point source category or subcategory, National Pollutant Discharge Elimination System (NPDES) permits must incorporate such conditions as the Administrator determines are necessary to carry out the provisions of the Clean Water Act. [33 U.S.C.S. § 1342\(a\)\(1\)](#).

Energy & Utilities Law > Natural Gas Industry > General Overview

Environmental Law > ... > Enforcement > Discharge Permits > General Permits

Energy & Utilities Law > Oil & Petroleum
Products > General Overview

Review

Energy & Utilities Law > Waste Prevention

Environmental Law > Administrative Proceedings &
Litigation > Judicial Review

Environmental Law > Water Quality > General
Overview

Administrative Law > Judicial Review > Standards
of Review > General Overview

Environmental Law > ... > Enforcement > Discharge
Permits > General Overview

[HN14](#) [↓] **Standards of Review, Arbitrary &
Capricious Standard of Review**

[HN12](#) [↓] **Energy & Utilities Law, Natural Gas
Industry**

National Pollutant Discharge Elimination System (NPDES) permits may be either individual or general; that is, either site-specific or generally applicable to a whole category or subcategory of point sources. General NPDES permits are permissible only where the point sources: (1) all involve the same or similar types of operations; (2) discharge the same types of wastes; and (3) require the same or similar monitoring. [40 C.F.R. § 122.28](#).

An agency rule is arbitrary and capricious if the agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise. The court must make a searching and careful review to determine whether an agency action was arbitrary and capricious, but the ultimate standard of review is a narrow one.

Administrative Law > Judicial
Review > Administrative Record > General
Overview

Business & Corporate Law > ... > Duties &
Liabilities > Causes of Action &
Remedies > Burdens of Proof

Environmental Law > Administrative Proceedings &
Litigation > Judicial Review

Environmental Law > Administrative Proceedings &
Litigation > Judicial Review

Governments > Legislation > Statutory Remedies &
Rights

[HN15](#) [↓] **Causes of Action & Remedies, Burdens of
Proof**

[HN13](#) [↓] **Judicial Review, Administrative Record**

Review of petitions that challenge substantive conclusion made by the Environmental Protection Agency is governed by the Administrative Procedure Act, [5 U.S.C.S. §§ 551-59](#), 701-06, which establishes a deferential standard of review for agency action. To invalidate an agency action, the court must determine that it was "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law"; "in excess of statutory jurisdiction, authority, or limitations, or short of statutory right"; or "without observance of procedure required by law." [5 U.S.C.S. § 706\(2\)\(A\),\(C\)-\(D\)](#).

Under the deferential standard applicable to agency action, the court may not substitute its own judgment for that of the agency. Rather, the court must determine whether the agency action bears a rational relationship to the statutory purposes and whether there is substantial evidence in the record to support it. If the agency's reasons and policy choices conform to minimal standards of rationality, then its actions are reasonable and must be upheld.

Administrative Law > Judicial Review > Standards
of Review > Arbitrary & Capricious Standard of

Environmental Law > Water Quality > General
Overview

Environmental Law > Administrative Proceedings &
Litigation > Judicial Review

[HN16](#) [↓] **Environmental Law, Water Quality**

In assessing the validity of the Coastal Subcategory effluent limitation guidelines, the Environmental Protection Agency's (EPA) decision is entitled to a presumption of regularity. This presumption places a considerable burden on the challenger to overcome the EPA's chosen course of action. This is particularly true where the agency's decision rests on an evaluation of complex scientific data within the agency's technical expertise.

Environmental Law > Water Quality > General Overview

Governments > Legislation > Interpretation

Environmental Law > Administrative Proceedings & Litigation > Judicial Review

[HN17](#) **Environmental Law, Water Quality**

Although the Environmental Protection Agency (EPA) has significant discretion in deciding how much weight to accord each statutory factor under the Clean Water Act (CWA), it is not free to ignore any individual factor entirely. Both the CWA, [33 U.S.C.S. § 1314\(b\)\(2\)](#), and the EPA's own regulations, [40 C.F.R. § 125.3\(c\)-\(d\)](#), state that the EPA shall take into account (or apply) certain factors in making a "best available technology economically achievable" determination, including the age of equipment and facilities involved. [33 U.S.C.S. § 1314\(b\)\(2\)\(B\)](#); [40 C.F.R. § 125.3\(d\)\(3\)\(I\)](#). Failure to consider the age factor is therefore, under the plain meaning of the Act and its implementing regulations, an abuse of discretion.

Environmental Law > Administrative Proceedings & Litigation > Judicial Review

[HN18](#) **Administrative Proceedings & Litigation, Judicial Review**

An agency's choice to proceed on the basis of "imperfect" information is not arbitrary and capricious unless there is simply no rational relationship between the means used to account for any imperfections and the situation to which those means are applied.

Civil Procedure > Appeals > Standards of Review > Clearly Erroneous Review

Environmental Law > Administrative Proceedings & Litigation > Judicial Review

[HN19](#) **Standards of Review, Clearly Erroneous Review**

A regulation cannot stand if it is based on a flawed, inaccurate, or misapplied study. When an agency adopts a regulation based on a study that is not designed for the purpose and is limited or criticized by its authors on points essential to the use sought to be made of it, the administrative action is arbitrary and capricious and a clear error in judgment.

Environmental Law > Water Quality > General Overview

[HN20](#) **Environmental Law, Water Quality**

In applying the "best available technology economically achievable" (BAT) standard, the Environmental Protection Agency (EPA) is not obligated to evaluate the reasonableness of the relationship between costs and benefits. Indeed, the EPA may prescribe effluent limitation guidelines whose costs are significantly disproportionate to their benefits, just as long as the BAT determination remains economically feasible for the industry as a whole.

Environmental Law > Water Quality > General Overview

[HN21](#) **Environmental Law, Water Quality**

The benefit to be achieved from adopting a particular pollution control technology is not an element of that technology's cost. The cost of complying with a regulation based on the "best available technology economically achievable" standard can be gauged by reference to the cost of the technology itself, even if the benefits of using that technology are unclear.

Administrative Law > Judicial Review > Standards of Review > Abuse of Discretion

Environmental Law > Administrative Proceedings & Litigation > Judicial Review

Administrative Law > Judicial

Review > Administrative Record > General Overview

[HN22](#) **Standards of Review, Abuse of Discretion**

If, following a searching and careful review, the court finds that the agency's reasons and policy choices conform to minimal standards of rationality, then its actions are reasonable and must be upheld.

Administrative Law > Judicial Review > Standards of Review > Deference to Agency Statutory Interpretation

Environmental Law > Administrative Proceedings & Litigation > Judicial Review

[HN23](#) **Standards of Review, Deference to Agency Statutory Interpretation**

Challenges to an agency interpretation of a statute that the agency administers are governed by a two-step standard of review. First, the court determines whether Congress has directly spoken to the precise question at issue. If the intent of Congress is clear, that is the end of that matter; for the court, as well as the agency, must give effect to the unambiguously expressed intent of Congress. Second, if Congress has not directly addressed the precise question at issue, the court asks whether the agency's interpretation "is based on a permissible construction of the statute. As long as the agency's construction of an ambiguous statute is permissible, it must be upheld.

Environmental Law > ... > Enforcement > Discharge Permits > Effluent Limitations

Environmental Law > Water Quality > General Overview

[HN24](#) **Discharge Permits, Effluent Limitations**

Section 301(b)(2) of the Clean Water Act requires that effluent limitation guidelines be established for "categories and classes" of point sources, [33 U.S.C.S. § 1311\(b\)\(2\)](#), while § 304(b)(2)(B) of the Clean Water Act mandates that the "best available technology economically achievable" factors be applied within such categories or classes, [33 U.S.C.S. § 1314\(b\)\(2\)\(B\)](#).

Administrative Law > Agency Rulemaking > General Overview

Environmental Law > Water Quality > General Overview

[HN25](#) **Administrative Law, Agency Rulemaking**

The fact that the Environmental Protection Agency (EPA) must promulgate rules for classes of polluters rather than individual polluters does not mean that the EPA is required to treat all polluters within each class identically. The phrases "for categories and classes" and "within such categories or classes" simply do not, by their terms, exclude a rule allowing less than perfect uniformity within a category or subcategory.

Environmental Law > Water Quality > General Overview

[HN26](#) **Environmental Law, Water Quality**

Nothing in the Clean Water Act specifies that the Environmental Protection Agency must apply these uniform guidelines uniformly to all point sources within industry categories, no matter what. Although exalting the value of uniformity, the statute simply does not require uniformity in all circumstances.

Environmental Law > ... > Enforcement > Discharge Permits > Effluent Limitations

Environmental Law > Water Quality > General Overview

[HN27](#) **Discharge Permits, Effluent Limitations**

The Clean Water Act does not suggest that Congress intended to prevent the Environmental Protection Agency from promulgating different effluent limits for different point sources in a single category or subcategory.

Civil Procedure > ... > Justiciability > Mootness > General Overview

Environmental Law > ... > Enforcement > Discharge Permits > Effluent Limitations

Environmental Law > ... > Enforcement > Discharge Permits > General Overview

Environmental Law > ... > Enforcement > Discharge Permits > General Permits

[HN28](#) **Justiciability, Mootness**

A case is moot where the issues presented are no longer live or the parties lack a legally cognizable interest in the outcome.

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For UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, Respondent: Mary Ellen Myers Levine, Washington, DC. Carol Browner, Environmental Protection Agency, Washington, DC. Mary F Edgar, US Department of Justice, Washington, DC. Cherie L Rogers US Department of Justice Environment & Natural Resources Division, Washington, DC.

For INTERSTATE OIL AND GAS COMPACT COMMISSION, Amicus Curiae: William J Wynne, El Dorado, AR.

Judges: Before REAVLEY, DAVIS, and DUHE', Circuit Judges.

Opinion by: W. EUGENE DAVIS

Opinion

[*927] W. EUGENE DAVIS, Circuit Judge:

Eighteen petitioners from six consolidated actions seek review and reversal of a series of final effluent limitation guidelines for the coastal oil- and gas-producing industry, promulgated on January 15, 1997 by the United States **[**2]** Environmental Protection Agency ("EPA") pursuant to Sections 301, 304, 306-08, and 501 of the Clean Water Act ("CWA" or "Act"), [33 U.S.C. §§ 1311, 1314, 1316-18, 1361](#). Three of the petitioners also seek review of a general National Pollution Discharge Elimination System permit issued on January 9, 1995 by EPA Region 6 ("Region 6") pursuant to Section 402 of the CWA, [33 U.S.C. § 1342](#). Petitioners challenge the EPA's promulgation of zero discharge limits on produced water and produced sand, the EPA's decision to set more lenient discharge limits for coastal facilities


in Cook Inlet, Alaska than for other coastal facilities, and Region 6's issuance of a general permit banning the discharge of produced water from coastal facilities in Texas.


For reasons that follow, we uphold the EPA's zero discharge limits for produced water and produced sand in the effluent limitation guidelines and its order setting more lenient discharge limits for produced water and drilling wastes in Cook Inlet. This decision makes it unnecessary for us to reach the challenges to the general permit.

I.

Congress enacted the CWA in 1972 "to restore and maintain the **[**3]** chemical, physical, and biological integrity of the Nation's waters." [33 U.S.C. § 1251\(a\)](#). As part of this mission, the Act declared a national goal that the discharge of pollutants into the navigable waters be eliminated by 1985. [33 U.S.C. § 1251\(a\)\(1\)](#). It was designed to achieve this goal through a system of effluent limitations guidelines ("ELGs") and National Pollutant Discharge Elimination System ("NPDES") permits that set technology-based discharge limits for all categories and subcategories of water pollution point sources.¹ Although the statutory framework of the CWA has already been detailed at length by both the Supreme Court and this Court, see [EPA v. Nat'l Crushed Stone Ass'n, 449 U.S. 64, 101 S. Ct. 295, 66 L. Ed. 2d 268 \(1980\)](#); [Am. Petroleum Inst. v. EPA, 661 F.2d 340 \(5th Cir. 1981\)](#), a brief review of ELGs and NPDES permits is helpful in understanding the present case.

[4]** [HN2](#) 

ELGs are the rulemaking device prescribed by the CWA to set national effluent limitations for categories and subcategories of point sources. [33 U.S.C. § 1314\(b\)](#). [HN3](#)  An "effluent limitation" is "any restriction established by a State or the Administrator on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources into navigable waters, the waters of the contiguous zone, or the ocean, including schedules of compliance." [33 U.S.C. §](#)

¹ [HN1](#)  A "point source" is "any discernible, confined, and discrete conveyance . . . from which pollutants are or may be discharged." [33 U.S.C. § 1362\(14\)](#). The CWA requires the EPA to identify and categorize all point sources warranting effluent guidelines. [33 U.S.C. §§ 1314\(m\), 1316\(b\)\(1\)\(A\)](#).

[1362\(11\)](#). [HN4](#) [↑] These limitations are technology-based rather than harm-based; that is, they reflect the capabilities of available pollution control technologies to prevent or limit different discharges rather than the impact that those discharges have on the waters. See generally [E.I. du Pont de Nemours & Co. v. Train](#), 430 U.S. 112, 130-31, 97 S. Ct. 965, 976-77, 51 L. Ed. 2d 204 (1977); [Am. Petroleum Inst.](#), 661 F.2d at 343-44. [HN5](#) [↑] The CWA prescribes progressively more stringent technological standards that the EPA must use as a guidepost in setting discharge limits for regulated pollutants. [33 U.S.C. § 1311](#) [**5] (b)(1).

Under this scheme, since March 31, 1989, a majority of ELGs—including most of those [**928] at issue in the present case—have been required to represent the "best available technology economically achievable" ("BAT"). [33 U.S.C. §§ 1311\(b\)\(2\)](#), [1314\(b\)\(2\)](#). In other words, [HN6](#) [↑] in promulgating ELGs the EPA must set discharge limits that reflect the amount of pollutant that would be discharged by a point source employing the best available technology that the EPA determines to be economically feasible across the category or subcategory as a whole. BAT is the CWA's most stringent standard. "Congress intended these limitations to be based on the performance of the single best-performing plant in an industrial field." [Chem. Mfrs. Ass'n v. EPA](#), 870 F.2d 177, 226 (5th Cir. 1989).

The CWA specifies several factors that must be considered by the EPA in determining BAT limits:

[HN7](#) [↑] Factors relating to the assessment of best available technology shall take into account the age of equipment and facilities involved, the process employed, the engineering aspects of the application of various types of control techniques, process changes, the cost [**6] of achieving such effluent reduction, non-water quality environmental impact (including energy requirements), and such other factors as the Administrator deems appropriate

[33 U.S.C. § 1314\(b\)\(2\)\(B\)](#). [HN8](#) [↑] The EPA nonetheless has considerable discretion in evaluating the relevant factors and determining the weight to be accorded to each in reaching its ultimate BAT determination. See [Natural Resources Defense Council v. EPA](#), 863 F.2d 1420, 1426 (9th Cir. 1988). Thus, the EPA has significant leeway in determining how the BAT standard will be incorporated into final ELGs.

Despite their central role in the framework of the CWA, [HN9](#) [↑] ELGs are not self-executing. They cannot be enforced against individual dischargers, and individual dischargers are under no legal obligation to obey the limits set by ELGs. Rather, ELGs achieve their bite only after they have been incorporated into NPDES permits. See [Am. Paper Inst., Inc. v. EPA](#), 302 U.S. App. D.C. 80, 996 F.2d 346, 350 (D.C. Cir. 1993) (the "rubber hits the road" only when ELGs are incorporated into NPDES permits); [Am. Petroleum Inst.](#), 661 F.2d at 344 (NPDES [**7] permits "transform[] generally applicable effluent limitations . . . into obligations (including a timetable for compliance) of the individual discharger.") (quoting [EPA v. California Ex Rel. State Water Resources Control Bd.](#), 426 U.S. 200, 205, 96 S. Ct. 2022, 2025, 48 L. Ed. 2d 578 (1976)).


NPDES permits are the CWA's implementation mechanism; they are the instrument by which ELGs are made binding on individual dischargers. [HN10](#) [↑] The CWA makes it unlawful to discharge any pollutant from any point source without an NPDES permit. ² [33 U.S.C. § 1311\(a\)](#); [Am. Petroleum Inst. v. EPA](#), 787 F.2d 965, 969 (5th Cir. 1986). These permits must generally incorporate, as a technology-based floor, all applicable ELGs promulgated by the EPA for the pertinent point source category or subcategory. [33 U.S.C. § 1342\(a\)\(1\)](#). There are only two ways for an individual discharger to avoid the incorporation of applicable ELGs into an NPDES permit: first, where the discharger is operating under a permit that was issued prior to the promulgation of the ELGs ³; or second, in rare cases, where the EPA grants the discharger [**8] a variance based on the discharger's demonstration that it is "fundamentally different" from other dischargers in the category or subcategory. [33 U.S.C. § 1311\(n\)](#); [40 C.F.R. §§ 122.21\(m\)\(1\)](#), 125.30-125.32.

[HN11](#) [↑] In situations where the EPA has not yet promulgated any ELGs for the point source category or subcategory, NPDES permits must incorporate "such

² NPDES permits may be issued either by the EPA or, in those jurisdictions where the EPA has authorized a state agency to administer the NPDES program, by a state agency subject to EPA review. See [33 U.S.C. § 1342\(a\)-\(d\)](#).

³ A preexisting NPDES permit is not altered by the creation of new ELGs. No NPDES permit, however, may be issued for a term exceeding five years. [33 U.S.C. § 1342\(a\)\(3\)](#), (b)(1)(A). This ensures that all newly reissued permits will incorporate the most recent ELGs.

conditions as the Administrator determines are necessary to carry out the provisions of the Act." **[**9]** [33 U.S.C. § 1342\(a\)\(1\)](#). See also [Am. Petroleum Inst., 787 F.2d at 969](#). In practice, this means that **[*929]** the EPA must determine on a case-by-case basis what effluent limitations represent the BAT level, using its "best professional judgment." [40 C.F.R. § 125.3\(c\)-\(d\)](#). Individual judgments thus take the place of uniform national guidelines, but the technology-based standard remains the same.

HN12  NPDES permits may be either individual or general; that is, either site-specific or generally applicable to a whole category or subcategory of point sources. General NPDES permits are permissible only where the point sources: 1) all involve the same or similar types of operations; 2) discharge the same types of wastes; and 3) require the same or similar monitoring. [40 C.F.R. § 122.28](#). The EPA frequently uses such general permits for the oil and gas industry.

We turn now to the specific issues raised in this appeal.

II.

The consolidated petitions challenge various actions taken by the EPA in fulfilling its statutory mandate under the CWA with respect to the Coastal Subcategory of the Oil and Gas Extraction Point Source Category. The Coastal **[**10]** Subcategory consists of oil and gas exploration, drilling, production, and well treatment facilities located in or on a water of the United States--including wetlands--landward of the inner boundary of the territorial seas. Except for facilities in Cook Inlet, Alaska, most coastal oil and gas facilities are located on wetlands or relatively shallow bodies of water. The Cook Inlet coastal facilities consist of platforms in relatively deep water, similar to offshore oil and gas facilities.

The Coastal Subcategory generates a number of pollutant waste streams, including produced water, produced sand, and drilling wastes. Produced water is highly saline water brought up from wells along with oil and gas during the production phase. Among the toxic pollutants found in it are phenol, benzene, naphthalene, ethylbenzene, and toluene. Produced sand consists of slurred particles that surface from hydraulic fracturing and accumulated formation sands and other particles generated during production. It may also include sludges generated in produced water treatment systems. Produced sand contains toxic metals and essentially the same toxic organic pollutants found in produced water. Drilling wastes **[**11]** consist of drilling fluids and drill cuttings generated during exploration and

well development operations. They contain a number of toxic pollutants, including organics and metals.

Petitioners challenge two separate EPA regulatory actions affecting members of the Coastal Subcategory. First, they challenge as arbitrary and capricious a General Permit issued by Region 6 regulating discharge of produced water for coastal oil and gas facilities in Texas and Louisiana. Second, they challenge as arbitrary, capricious, and unlawful the final ELGs promulgated by the EPA regulating discharge of produced water, produced sand, and drilling wastes for the entire Coastal Subcategory. The pertinent history of each action is laid out below.

A.

The challenged General Permit was issued in 1995 by Region 6, acting without the guidance of any ELGs and therefore exercising its best professional judgment. In December 1992, Region 6 proposed to issue a General Permit governing the discharge of produced water and produced sand for coastal oil and gas facilities in Texas and Louisiana. The permit proposal was preceded by an examination of the various types of produced water and produced sand control technologies **[**12]** available to coastal operators in Texas and Louisiana. From this examination, Region 6 determined in its best professional judgment that the BAT standard required the use of reinjection technology, which produces no discharge. Region 6 therefore concluded that a zero discharge requirement on produced water and produced sand best represented the BAT standard, and included such a limit in the proposed General Permit.

Region 6 received extensive comments on the proposed General Permit from industry representatives, environmental groups, and the Railroad Commission of Texas ("RRC"). Following a reevaluation of its analyses based on these comments, Region 6 determined that a zero discharge requirement remained **[*930]** economically achievable for coastal oil and gas facilities in Texas and Louisiana overall, even though some smaller operators might experience economic failure. Region 6 also determined that a zero discharge requirement was necessary to prevent violations of state water quality criteria for toxicity and salinity.

On January 9, 1995, Region 6 issued a final General Permit prohibiting the discharge of produced water and produced sand from all existing and future coastal **[**13]** oil and gas facilities in Texas and

Louisiana.⁴ The effective date of the General Permit was February 8, 1995. Region 6 also issued an Administrative Order at the same time allowing coastal operators two years--until January 1, 1997--to come into compliance with the General Permit.

The final General Permit contained a provision that was absent in the General Permit as originally proposed. Section B of the final General Permit provided that dischargers could apply for individual permits exempting them from the requirements of the General Permit and imposing more lenient discharge limitations. There is evidence that this provision was added at the urging of the RRC and Texas operators to mitigate the economic consequences of the General Permit with respect to those facilities in Texas that would be forced to shut down as a result of the General Permit's zero discharge limit. There is also evidence that the General Permit was not challenged within **[**14]** the 120-day statutory time limit, [33 U.S.C. § 1369\(b\)\(1\)\(F\)](#), only because Region 6 had informed the RRC and Texas operators that it would not grant any individual permits if the General Permit were challenged. Eighty-two operators have applied for individual permits, but none have been granted.

B.

The challenged ELGs represent the culmination of nearly two decades of rulemaking efforts by the EPA. In 1979, the EPA first published ELGs governing waste streams discharged by the Coastal Subcategory. [44 Fed. Reg. 22,069](#) (Apr. 13, 1979), codified at 40 C.F.R. Part 435, Subpart D. These ELGs, however, were based on the CWA's then-governing technological standard of "best practicable control technology currently available" ("BPT"). [33 U.S.C. § 1311\(b\)\(1\)](#). BPT is the CWA's least stringent standard. The 1979 ELGs became outdated in 1989, when the CWA-mandated standard shifted from BPT to BAT. See [33 U.S.C. § 1311\(b\)\(2\)](#).

The EPA first took action to establish BAT-based limits in 1989, when it published a notice of information and request for comments on the Coastal Subcategory. This notice was followed **[**15]** by voluminous comments from industry representatives, environmental groups, and government agencies like the RRC. In 1992, the EPA distributed a 99-page questionnaire ("Section 308 Survey" or "Survey") to all known coastal operators

pursuant to its authority under Section 308 of the CWA, which authorizes the EPA to collect information necessary to carry out the objectives of the CWA. [33 U.S.C. § 1318](#). Other information-gathering activities performed by the EPA included collecting samples and gathering technical data at three drilling operations in coastal Louisiana; visiting ten coastal oil and gas production facilities in Texas and Louisiana to collect samples of produced water and associated wastes and to collect technical and cost data; and reviewing state permit data for all known Texas and Louisiana operators to obtain detailed information on produced water discharges.

In February 1995, shortly after Region 6 issued the General Permit, the EPA published its proposed ELGs for the Coastal Subcategory. [60 Fed. Reg. 9,428](#) (Feb. 17, 1995). This resulted in another round of comments and public meetings, followed by publication of the final ELGs **[**16]** for the Coastal Subcategory on December 16, 1996. [61 Fed. Reg. 66,085](#) (Dec. 16, 1996), to be codified at 40 C.F.R. Part 435. The final ELGs set a zero discharge limit on produced water and drilling wastes for all coastal oil and gas facilities except those located in Cook Inlet, Alaska. The final ELGs also set a zero discharge limit on produced sand for all coastal oil and **[*931]** gas facilities, including those located in Cook Inlet.

The discharge limit on produced water was based on a number of EPA findings. First, the EPA found that--due to a combination of factors including operational preference, waterflooding, and state or federal requirements--no coastal facilities in California, Florida, Mississippi, Alabama, or the North Slope of Alaska were discharging produced water. The EPA further found that 99.9 percent of coastal facilities in Louisiana and Texas either had already stopped discharging produced water or soon would as a result of new Louisiana water quality regulations and Region 6's General Permit, both of which were set to take full effect in January 1997. The EPA also noted that 62 percent of coastal facilities along the Gulf of Mexico had been **[**17]** practicing zero discharge since at least 1994. Of 876 facilities in the Coastal Subcategory, the EPA concluded that only fourteen would be able to discharge produced water lawfully after January 1997. All but six of those facilities were located in Cook Inlet.

The EPA next considered the control technologies available to coastal dischargers, and concluded that the BAT standards required all dischargers outside of Cook Inlet to reinject produced water. The EPA noted that

⁴The general permits did not address discharge of drilling wastes.

reinjection was already widely practiced throughout the Coastal Subcategory, with the exception of Cook Inlet. Because reinjection results in a zero discharge level, the EPA determined the proper discharge limit on produced water to be zero.

Lastly, assessing the economic achievability of the zero discharge standard, the EPA found that only the six coastal facilities not already covered by either the General Permit or the new Louisiana water quality standards would incur additional compliance costs as a result of the limit, and none of the six facilities would be forced to close. Moreover, the EPA found the total economic costs considered in the context of the coastal subcategory as a whole to be minimal.

The EPA **[**18]** also conducted an "alternative baseline" analysis in which it assumed that the General Permit's zero discharge standard would not apply to the eighty-two Texas dischargers seeking individual permits, and that Louisiana's new water quality standards would not apply to eighty-two Louisiana open bay dischargers. It estimated that 80 percent of coastal facilities in Texas and Louisiana would still be meeting or be required to meet zero discharge by January 1997, meaning that those 80 percent would still incur no additional compliance costs. Assuming that the ELGs would cause incremental compliance costs to all eighty-two Texas individual permit applicants and all eighty-two Louisiana open bay dischargers, the EPA concluded that up to ninety-four wells--or approximately 2 percent of all Gulf of Mexico coastal wells--could be first year shut-ins under the zero discharge standard, and that a maximum of one firm among Louisiana open bay dischargers and three firms among the Texas individual permit applicants could fail as a result of the standard. Because this potential failure rate represented less than 1 percent of all Gulf of Mexico coastal facilities, the EPA determined that zero discharge **[**19]** remained economically achievable for the Coastal Subcategory as a whole (except Cook Inlet) despite its potentially significant economic effect on some individual operators.

The EPA provided pollution reduction estimates for both the current requirements analysis and the alternative baseline analysis. Under the current requirements analysis, the EPA estimated that the zero discharge limit would reduce discharges of conventional pollutants by 2,780,000 pounds per year, of nonconventional pollutants by 1,490,000,000 pounds per year, and of toxic pollutants by 228,000 pounds per year. Under the alternative baseline analysis, the EPA projected a

reduction of conventional pollutants by 11,300,000 pounds per year, of nonconventional pollutants by 4,590,000,000 pounds per year, and of toxic pollutants by 880,000 pounds per year.

The discharge limit on produced sand was based on the EPA's finding that only one operator in the country was discharging produced sand, and that even the one discharging operator had reported plans to cease doing so. Examining available control technologies, the EPA concluded that the BAT standard required some combination of landfarming, underground injection, **[**20]** landfilling, **[*932]** and on-site storage. Because none of these techniques involved the discharge of produced sand, the EPA determined the appropriate discharge limit for produced sand to be zero. Likewise, because the zero discharge limit reflected current industry practice, the EPA found the economic effect of the zero discharge limit also to be zero.

The discharge limit on drilling wastes was based on the EPA's finding that, outside of Cook Inlet, the entire Coastal Subcategory had already attained zero discharge of drilling wastes. Examining available control technologies, the EPA determined that the BAT standard required coastal facilities outside of Cook Inlet either to grind and inject drilling wastes or to dispose of drilling wastes onshore. Because neither method results in any drilling waste discharge, the EPA found the appropriate discharge limit on drilling wastes to be zero. The EPA estimated that operators would incur no costs under this limit because it reflected current practices.

In distinguishing Cook Inlet facilities from other coastal facilities, the EPA found that Cook Inlet facilities face substantially different circumstances from those faced by other **[**21]** coastal facilities. The Cook Inlet facilities are located in relatively deep water, and operate more like offshore oil and gas facilities than like other coastal oil and gas facilities. There is a scarcity of land disposal facilities in the vicinity of Cook Inlet, and, more significantly, geologic formations in the area are generally unsuitable for reinjection. There are also unique difficulties associated with transporting drilling wastes to shore for disposal. Based on these findings, the EPA determined that the zero discharge standard for produced water and drilling wastes was not economically achievable for Cook Inlet facilities because it would have disproportionate adverse economic impacts.⁵ **[**22]** The ELGs therefore treated Cook Inlet

⁵ For example, the EPA estimated that compliance with a zero discharge limit on drilling wastes would cost Cook Inlet

facilities differently from other coastal facilities, setting more liberal discharge limits.⁶ The EPA never formally designated Cook Inlet facilities as a separate subcategory of point sources under the CWA.

C.

The final ELGs took effect on January 15, 1997, at which time they were deemed issued for purposes of judicial review. Petitioners Texas Oil and Gas Association ("TOGA"), RRC, and State of Texas (collectively, "Texas Petitioners") filed two petitions seeking reversal or remand of the zero discharge limit on produced water contained in both the General Permit and the ELGs. Petitioners American Petroleum Institute, Union Oil Company of California, Marathon Oil Company, Phillips Petroleum, and Shell Oil Company (collectively, "Cook Inlet Petitioners") filed three petitions seeking reversal or remand of the zero discharge limit on produced sand contained in the ELGs. Petitioners **[**23]** Trustees for Alaska, Natural Resources Defense Council, Cook Inlet Keeper, National Wildlife Federation, Alaska Clean Water Alliance, Greenpeace, Alaska Center for the Environment, Alaska Marine Conservation Council, Kachemak Bay Conservation Society, and Alaska Waveriders (collectively, "Alaska Petitioners") filed one petition seeking reversal or remand of the ELGs to the extent that they treated Cook Inlet coastal facilities differently from other coastal facilities. The six petitions were consolidated into the present action.

The EPA filed a motion to dismiss Texas Petitioners' challenges to the General Permit for lack of subject matter jurisdiction, arguing that both petitions were filed after the expiration of the 120-day statutory period for seeking judicial review of the permit. The EPA does not question the timeliness of any **[*933]** of the challenges to the ELGs. We therefore evaluate the validity of the ELGs first.


III.

operators an additional \$ 8,200,000 annually, as compared to the zero cost increase for all other dischargers.

⁶Specifically, the EPA determined that "improved gas flotation" satisfied the BAT standard for produced water in Cook Inlet. Using this determination as a baseline, the ELGs limit produced water oil and grease concentrations from Cook Inlet facilities to 42 mg/l on any given day, and 29 mg/l for each monthly average. Discharge of most drilling wastes is likewise allowed so long as toxicity limits do not exceed 30,000 ppm.

Texas Petitioners argue that the EPA's decision to set a zero discharge limit on produced water was based on a flawed analysis of the economic achievability of the limit. First, they argue that the EPA excluded from its consideration wells drilled before **[**24]** 1980 and not recompleted since then ("pre-1980 wells"), thereby failing to consider the "age of equipment and facilities" factor mandated by Section 304(b)(2)(B) of the CWA. [33 U.S.C. § 1314\(b\)\(2\)\(B\)](#). Second, they argue that the EPA based its pollutant reduction estimates on a deficient study that egregiously overestimated the pollutant loading for produced water in the Gulf Coast.⁷ For reasons that follow, we are satisfied that the EPA adequately considered the age factor in promulgating the zero discharge limit, and that the EPA's use of the challenged study provides no basis to contest the produced water limit.

[25]** A.

Texas Petitioners challenge substantive conclusions that the EPA drew from the administrative record. [HN13](#)  Review of their petitions is therefore governed by the Administrative Procedure Act ("APA"), [5 U.S.C. §§ 551-59](#), 701-06, which establishes a deferential standard of review for agency action. To invalidate an agency action, the Court must determine that it was "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law"; "in excess of statutory jurisdiction, authority, or limitations, or short of statutory right"; or "without observance of procedure required by law." [5 U.S.C. § 706\(2\)\(A\),\(C\)-\(D\)](#).⁸

⁷Texas Petitioners also challenge the EPA's promulgation of a zero discharge limit on produced water in its new source performance standards ("NSPS"). It appears from Petitioner TOGA's Reply Brief that this challenge rests on the same grounds as the challenge to the ELGs. *See* TOGA Reply Brief at 13 ("TMOGA's point is that, because EPA's analysis in setting BAT was flawed, EPA's setting of NSPS on the basis of BAT is also flawed."). To the extent that any independent challenges to the NSPS limits were made, we hold that they were waived by Texas Petitioners' failure to raise the objections during the notice and comment period. *See United States v. L.A. Tucker Truck Lines, Inc.*, [344 U.S. 33, 35-37, 73 S. Ct. 67, 68-69, 97 L. Ed. 54 \(1952\)](#). Likewise, arguments raised by amicus parties challenging the accuracy of the EPA's shut-in estimates were not raised to the EPA during notice and comment, and therefore will not be considered here. *Id.*

⁸Petitioner TOGA argues that the EPA is not entitled to APA deference in this case because it "failed to consider clearly specified statutory factors in its analysis," "failed to rely on

[**26] [HN14](#)[↑]

An agency rule is arbitrary and capricious "if the agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise." [Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.](#), 463 U.S. 29, 43, 103 S. Ct. 2856, 2867, 77 L. Ed. 2d 443 (1983). The Court must make a "searching and careful review" to determine whether an agency action was arbitrary and capricious, but "the ultimate standard of review is a narrow one." [Citizens to Preserve Overton Park, Inc. v. Volpe](#), 401 U.S. 402, 416, 91 S. Ct. 814, 823, 28 L. Ed. 2d 136 (1971).

[HN15](#)[↑] Under this deferential standard, the Court may not substitute its own judgment [**934] for that of the agency. [Id. at 416, 91 S. Ct. at 823 \(1971\)](#). Rather, the Court must determine whether the agency action "bears a rational relationship to the statutory purposes" and whether "there is substantial evidence in the record to [**27] support it." [Mercy Hosp. of Laredo v. Heckler](#), 777 F.2d 1028, 1031 (5th Cir. 1985). If the agency's reasons and policy choices conform to minimal standards of rationality, then its actions are reasonable and must be upheld. [Small Refiner Lead Phase-Down Task Force v. EPA](#), 227 U.S. App. D.C. 201, 705 F.2d 506, 521 (D.C. Cir. 1983); [Chem. Mfrs. Ass'n, 870 F.2d at 199](#).

[HN16](#)[↑] In assessing the validity of the Coastal Subcategory ELGs, the EPA's decision "is entitled to a

valid reasoning," "failed to explain its radical change in policy," and "adopted an inflexible regulation." TOGA instead proposes a "no deference" standard, and cites several cases that purportedly favor such a standard. See [Chem. Mfrs. Ass'n v. Natural Resources Defense Council](#), 470 U.S. 116, 125, 105 S. Ct. 1102, 1107, 84 L. Ed. 2d 90 (1984) (citing [Chevron U.S.A., Inc. v. Natural Resources Defense Council, Inc.](#), 467 U.S. 837, 842-43, 81 L. Ed. 2d 694, 104 S. Ct. 2778, 2781-82 (1984); [Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto Ins. Co.](#), 463 U.S. 29, 42, 103 S. Ct. 2856, 2866, 77 L. Ed. 2d 443 (1983)). None of these cases provide any support for TOGA's argument. Indeed, [Motor Vehicle Mfrs. Ass'n](#) expressly adopted the "arbitrary and capricious" standard employed here. Adopting TOGA's line of reasoning would turn jurisprudence on its head by requiring us to determine the merits of the case prior to the standard of review, an impossibly circular task. We decline TOGA's invitation to do so.

presumption of regularity." [Chem. Mfrs. Ass'n, 870 F.2d at 198](#). This presumption places a "considerable burden" on the challenger to overcome the EPA's chosen course of action. [Am. Petroleum Inst., 787 F.2d at 983](#). This is particularly true where--as here--the agency's decision rests on an evaluation of complex scientific data within the agency's technical expertise. See [New York v. Reilly, 297 U.S. App. D.C. 147, 969 F.2d 1147, 1152 \(D.C. Cir. 1992\)](#) (stating that courts must be "extremely deferential" in such cases); [Avoyelles Sportsmen's League, Inc. v. Marsh, 715 F.2d 897, 910-11 \(5th Cir. 1983\)](#). [**28]

Texas Petitioners face an especially difficult challenge in this case, given the proportion of dischargers already practicing zero discharge at the time of rulemaking. The EPA found that 100 percent of coastal oil and gas facilities outside of Cook Inlet, Louisiana, and Texas, and at least 62 percent of facilities in Louisiana and Texas, were practicing zero discharge by 1992. This finding--not challenged by any party--lends significant additional weight to the EPA's "presumption of regularity," suggesting as it does that reinjection was not only economically achievable but was actually practiced by a large majority of coastal facilities at the time of the rulemaking.


Added to this is the EPA's further finding that only six coastal facilities would be able to discharge produced water after January 1997, meaning that the incremental economic impact of the zero discharge limit on coastal facilities would be limited to only those six facilities. Even under the alternative baseline analysis, the EPA still found that 80 percent of coastal facilities in Texas and Louisiana would be required to practice zero discharge by January 1997, meaning that only 20 percent of coastal facilities [**29] could suffer any incremental economic impact. These findings present a very significant barrier for Texas Petitioners to overcome in order to establish that the zero discharge limit is not economically achievable.

B.

Texas Petitioners first seek to meet their burden by arguing that the EPA failed to consider a statutory factor in making its BAT determination for produced water. [HN17](#)[↑] Although the EPA has significant discretion in deciding how much weight to accord each statutory factor under the CWA, see [Natural Resources Defense Council, 863 F.2d at 1426](#); [Weyerhaeuser Co. v. Costle, 191 U.S. App. D.C. 309, 590 F.2d 1011, 1045 \(D.C. Cir. 1978\)](#) (Congress left the EPA "discretion to decide how


to account for the [BAT] factors, and how much weight to give each factor."), it is not free to ignore any individual factor entirely. Both the CWA, [33 U.S.C. § 1314\(b\)\(2\)](#), and the EPA's own regulations, [40 C.F.R. § 125.3\(c\)-\(d\)](#), state that the EPA *shall* take into account (or apply) certain factors in making a BAT determination, including "the age of equipment and facilities involved." [33 U.S.C. § 1314\(b\)\(2\)\(B\)](#); **[**30]** [40 C.F.R. § 125.3\(d\)\(3\)\(I\)](#). Failure to consider the age factor is therefore, under the plain meaning of the Act and its implementing regulations, an abuse of discretion. See generally [Am. Iron & Steel Inst. v. EPA, 526 F.2d 1027, 1048 \(3d Cir. 1975\)](#), cert. denied, 435 U.S. 914, 55 L. Ed. 2d 505, 98 S. Ct. 1467 (1978) (remanding agency rule to EPA where EPA failed to consider a similar statutory age factor as it bore on the cost or feasibility of retrofitting certain older steel mills).

Texas Petitioners argue that, although the EPA paid "lip service" to the age factor, in reality the agency made its decisions without regard to the economic effects of a zero discharge standard on older wells. **[*935]** They argue that the EPA's error resulted from its exclusion of pre-1980 wells from the Section 308 Survey, on which the EPA relied heavily in making its economic impact analysis. Rather than actually surveying pre-1980 wells, the EPA extrapolated from information it received on other wells to estimate the results it would have obtained if it had included pre-1980 wells in the Survey. Texas Petitioners characterize this omission as "particularly **[**31]** egregious" because the volume of produced water generated by a well increases as the well ages, meaning that the expense of meeting a zero discharge limit rises as the well gets older. Thus, they say, the EPA's economic impact assessment methodology specifically excluded those wells that stood to suffer the greatest economic impact.

Although the exclusion of pre-1980 facilities may have had some effect on the precision of the EPA's analysis of the age factor, we cannot agree with Texas Petitioners that this exclusion rose to the level of an arbitrary and capricious agency action. [HN18](#)  An agency's choice to proceed on the basis of "imperfect" information is not arbitrary and capricious unless "there is simply no rational relationship" between the means used to account for any imperfections and the situation to which those means are applied. [Am. Iron & Steel Inst. v. EPA, 325 U.S. App. D.C. 76, 115 F.3d 979, 1004 \(D.C. Cir. 1997\)](#) (citation omitted). Here, the EPA found that the only relevant distinction between pre-1980 wells and post-1980 wells is that pre-1980 wells are primarily "marginal producers," producing ten barrels or less of oil

per day. Noting that post-1980 **[**32]** marginal producers were well-represented in the Section 308 Survey, and that pre-1980 marginal producers do not differ significantly from post-1980 marginal producers, the EPA extrapolated from the Section 308 Survey data to estimate the impact of the zero discharge limit on pre-1980 facilities. It then confirmed its findings through a facility-level analysis of economic impacts on the Texas individual permit applicants. These actions were more than sufficient to establish a rational relationship between the Section 308 Survey data and the pre-1980 wells. Thus, the EPA's decision to proceed without collecting data on pre-1980 wells was not arbitrary and capricious.

C.

Next, Texas Petitioners attempt to satisfy their burden by attacking one of the studies cited by the EPA in promulgating the produced water limit. [HN19](#)  A regulation cannot stand if it is based on a flawed, inaccurate, or misapplied study. "When an agency adopts a regulation based on a study [that is] not designed for the purpose and is limited or criticized by its authors on points essential to the use sought to be made of it the administrative action is arbitrary and capricious and a clear error in judgment. [Humana of Aurora, Inc. v. Heckler, 753 F.2d 1579, 1583 \[**33\]](#) (10th Cir.), cert. denied, 474 U.S. 863, 88 L. Ed. 2d 149, 106 S. Ct. 180 (1985).

Texas Petitioners argue that the EPA inaccurately derived its pollutant reduction estimates from a limited study ("10-Facility Study" or "Study") of ten unrepresentative coastal facilities in or near Louisiana, and then based the zero discharge limit on its results. The 10-Facility Study reports the results of an EPA sampling program in which an EPA consultant visited ten facilities for one day each to collect a limited number of samples from a broad array of processes and waste streams. Texas Petitioners' objections to the 10-Facility Study are as follows: 1) Only one of the facilities involved in the Study discharged produced water, while nine used reinjection technology; 2) Only four of the facilities studied were in Texas, and all of those were close to the Louisiana border; 3) In response to comments that the 10-Facility Study was unrepresentative, the EPA merely removed three facilities from the study, conceding that those facilities were unrepresentative based on excessive oil and grease concentrations but maintaining that the remaining seven facilities were representative; 4) **[**34]** Even though the revised Study never concluded that its results were representative of Gulf Coast

discharges, the EPA used the data from the Study to represent pollutant concentrations for the entire Gulf of Mexico; and 5) The EPA ignored the results of a superior study (the "Avanti Study") that **[*936]** evaluated actual Texas Gulf Coast data from 173 outfalls.

We need not address Texas Petitioners' individual criticisms of the 10-Facility Study to resolve this issue, because even if every one of the criticisms were accurate we still could not reverse or remand the produced water limit on that basis. The EPA only used the 10-Facility Study to estimate pollution reduction benefits that would result from the zero discharge limit. Whatever value such benefit estimates may have, they are not a required part of the BAT determination. [HN20](#)⁹ In applying the BAT standard, the EPA is not obligated to evaluate the reasonableness of the relationship between costs and benefits. See [EPA v. National Crushed Stone Ass'n, 449 U.S. at 71, 101 S. Ct. at 300](#) ("in assessing BAT total cost is [not] to be considered in comparison to effluent reduction benefits"). Indeed, the EPA may prescribe **[*35]** ELGs whose costs are significantly disproportionate to their benefits, just as long as the BAT determination remains economically feasible for the industry as a whole. See [Am. Petroleum Inst. v. EPA, 858 F.2d 261, 265 \(5th Cir. 1988\)](#) ("[A] direct cost/benefit correlation is not required [for BAT], so even minimal environmental impact can be regulated, so long as the prescribed alternative is 'technologically and economically achievable.'").⁹ The EPA included the Study's effluent reduction estimates only to satisfy the CWA's unrelated requirement that the EPA "identify" in its regulations the degree of effluent reduction attainable through the application of BAT. [33 U.S.C. § 1314\(b\)\(2\)\(A\)](#). They had nothing to do with either the BAT determination or the actual inclusion of a zero discharge limit on produced water in the ELGs. As such, even serious flaws in the effluent reduction estimates could not provide grounds for remanding the zero discharge limit.

[*36] Texas Petitioners attempt to tie the effluent reduction estimates to the BAT determination by arguing that the estimates are integral to the statutory BAT factor of "cost of achieving such effluent reduction," [33](#)

⁹ Texas Petitioners urge us to reverse years of precedent and to hold that the clear language of the CWA (specifically, [33 U.S.C. § 1314\(b\)\(2\)\(B\)](#)) requires the EPA to perform a cost-benefit analysis in determining BAT. We find nothing in the language or history of the CWA that compels such a result.

[U.S.C. § 1314\(b\)\(2\)\(B\)](#). They assert that the cost factor cannot be considered without reference to the amount of effluent reduction, and that the EPA cannot properly consider the cost of achieving a particular effluent reduction if the degree and quality of the effluent reduction itself is grossly mischaracterized. We disagree. [HN21](#)¹⁰ The benefit to be achieved from adopting a particular pollution control technology is not an element of that technology's cost. The cost of complying with a BAT-based regulation can be gauged by reference to the cost of the technology itself, even if the benefits of using that technology are unclear. Reinjection technology, for example, costs the same regardless of whether it reduces pollutant discharge by three million pounds per year or three pounds per year. Thus, the EPA was fully capable of assessing the "cost of achieving such effluent reduction" even if its reduction estimates were flawed.

IV.

Cook Inlet Petitioners **[*37]** argue that, in setting a zero discharge limit on produced sand in the ELGs, the EPA erroneously refused to consider a "no free oil" alternative limit based on sand washing technology. They claim that the EPA, relying exclusively on prevalent industry practice, closed its mind to any option that did not involve zero discharge, and thereby ignored a potentially superior option. We are satisfied that the EPA's decision to set a zero discharge limit on produced sand based on nearly uniform industry practice at the time of rulemaking was valid, and that the EPA gave adequate attention to the "no free oil" alternative.

A.

Cook Inlet Petitioners, like Texas Petitioners, challenge substantive conclusions that the EPA drew from the administrative record. Review of their petitions is therefore governed by the APA's deferential "arbitrary and capricious" standard. [5 U.S.C. \[*937\] § 706\(2\)\(A\)](#). [HN22](#)¹¹ If, following a "searching and careful review," [Overton Park, 401 U.S. at 416, 91 S. Ct. at 823](#), we find that the agency's reasons and policy choices conform to minimal standards of rationality, then its actions are reasonable and must be upheld, [Small Refiner, 705 F.2d at 521](#). **[*38]** The produced sand limit is entitled to the same "presumption of regularity" as the produced water limit, [Chem. Mfrs. Ass'n, 870 F.2d at 198](#), and petitioners carry the same "considerable burden" to overcome this presumption. [Am. Petroleum Inst., 787 F.2d at 983](#).

B.

Cook Inlet Petitioners contend that the EPA's selection of a zero discharge limit based on the widespread industry use of zero discharge technologies such as landfarming, underground injection, landfilling, and onsite storage was arbitrary and capricious. They argue that the EPA ignored the BAT factors of non-water quality environmental impacts and cost of achieving effluent reduction, and that had the EPA taken these factors into account it might have found that a "no free oil" limit based on sand washing technology better represented the BAT standard, despite the fact that it involves some discharge. Petitioners further suggest that the EPA gave inadequate consideration to new information showing that sand washing provides a viable alternative to zero discharge, meeting the requirements of the CWA while providing economic and non-water quality benefits.

These arguments are unpersuasive. **[**39]** Even if the EPA completely ignored sand washing as an alternative to zero discharge technologies, it still did not abuse its discretion. The EPA found--and no party disputes--that every coastal facility surveyed except one was practicing zero discharge at the time of rulemaking, and that even the one discharging facility was planning to switch to zero discharge. Given the near-perfect uniformity of industry practice in this area, it could hardly be said that the EPA's decision to set a zero discharge limit on produced sand did not at least conform to minimal standards of rationality.

Moreover, the record plainly shows that the EPA gave adequate consideration to the sand washing option. The EPA thoroughly explained why it rejected the "no free oil" limit, noting that such a limit would have been less stringent than the technology-based limitations in existing NPDES permits in Texas, Louisiana, and Arkansas, and that even when the limit is met, produced sand still contains "total suspended solids" and may still contain oil, grease, and other pollutants. The EPA did not ignore the sand washing option; it simply found that sand washing was not always effective in eliminating residual **[**40]** pollutants from produced sand. Accordingly, the EPA determined that sand washing did not meet the BAT standard. We can find no fault with this determination.

V.

Alaska Petitioners argue that the EPA violated the CWA when the agency opted to set different effluent limits for Cook Inlet without labeling Cook Inlet as a separate subcategory. They claim that the CWA requires the EPA to establish nationally uniform ELGs for each category

or subcategory of point sources, and that differentiated treatment of point sources within a category or subcategory violates the express terms of the statute. We are satisfied that the EPA's actions were based on a permissible construction of the CWA, and therefore must be upheld.

A.

[HN23](#)^[↑] Challenges to an agency interpretation of a statute that the agency administers are governed by the two-step standard of review set forth by the Supreme Court in *Chevron U.S.A. v. National Resources Defense Council*, 467 U.S. 837, 104 S. Ct. 2778, 81 L. Ed. 2d 694 (1984). First, the Court determines whether Congress "has directly spoken to the precise question at issue. If the intent of Congress is clear, that is the end of that matter; for the court, **[**41]** as well as the agency, must give effect to the unambiguously expressed intent of Congress." *Id.* at 842-43, 104 S. Ct. at 2781. Second, if Congress has not directly addressed the precise question at issue, the Court asks whether the agency's interpretation "is based on a permissible **[*938]** construction of the statute." *Id.* at 843, 104 S. Ct. at 2782. As long as the agency's construction of an ambiguous statute is permissible, it must be upheld. *Id.* See also *American Forest and Paper Ass'n v. EPA*, 137 F.3d 291, 297 (5th Cir. 1998) (applying the *Chevron* test to the EPA's interpretation of the CWA).

B.

The question at issue here is whether the EPA has the authority under the CWA to set different effluent limits for different point sources within a single category or subcategory. Alaska Petitioners contend that Congress has already directly answered this question in the negative. They point to the text, legislative history, and structure of the CWA in support of this argument. None of the support they provide, however, amounts to a direct statement by Congress on this issue.

We find nothing in the text of the CWA indicating **[**42]** that Congress intended to prohibit the promulgation of different effluent limits within a single category or subcategory of point sources. Alaska Petitioners point to two sections of the CWA, neither of which is availing on this question. [HN24](#)^[↑] Section 301(b)(2) requires that ELGs be established for "categories and classes" of point sources, 33 U.S.C. § 1311(b)(2), while Section 304(b)(2)(B) mandates that the BAT factors be applied "within such categories or classes," 33 U.S.C. § 1314(b)(2)(B). These sections do not express a clear congressional intent on the question at issue here.

[HN25](#)[↑]] The fact that the EPA must promulgate rules for classes of polluters rather than individual polluters does not mean that the EPA is required to treat all polluters within each class identically. The phrases "for categories and classes" and "within such categories or classes" simply do not, by their terms, exclude a rule allowing less than perfect uniformity within a category or subcategory.

The legislative history also falls short of expressing a clear congressional intent to prevent differentiated treatment of point sources within a category or subcategory. **[**43]** Alaska Petitioners cite numerous quotations from the legislative history emphasizing the importance of national uniformity and categorical rather than individual treatment of point sources within each category or class. See, e.g., A Legislative History of the Water Pollution Control Act Amendments of 1972 at 172, Cong. Research Service, Comm. Print No. 1, 93d Cong., 1st Sess. (1973) ("The Conferees intend that the factors described in section 304(b) be considered only within classes or categories of point sources and that such factors not be considered at the time of the application of an effluent limitation to an individual point source within such a category or class."). At best, however, these quotations simply reinforce the textual mandate of the CWA that ELGs be established for "categories and classes" rather than individual point sources. Nothing in the quoted excerpts, nor anywhere else in the legislative history or case law, suggests that Congress intended to deny the EPA discretion to set different limits for different point sources within the same category or subcategory when circumstances so warrant. As our sister court noted in Natural Resources Defense Council v. EPA, 859 F.2d 156 (D.C. Cir. 1988): **[**44]** "[HN26](#)[↑]] Nothing in all this specifies that the EPA *must* apply these uniform guidelines uniformly to *all* point sources within industry categories, no matter what. . . . Although exalting the value of uniformity, the statute simply does not *require* uniformity in all circumstances." Id. at 200-201.

Finally, [HN27](#)[↑]] nothing in the structure of the CWA suggests that Congress intended to prevent the EPA from promulgating different effluent limits for different point sources in a single category or subcategory. Alaska Petitioners argue that the CWA contains a number of carefully enumerated exceptions to the uniformity requirement, see 33 U.S.C. § 1311(c),(g)-(h),(m)-(n), and that these exceptions are the exclusive mechanism for avoiding that requirement. They cite the long-established canon of statutory construction that "where Congress specifically enumerates certain

exceptions to a general prohibition, additional exceptions are not to be implied, in the absence of evidence of a contrary legislative intent." Andrus v. Glover Const., Inc., 446 U.S. 608, 616-17, 100 S. Ct. **[*939]** 1905, 1910, 64 L. Ed. 2d 548 (1980). This argument **[**45]** misses the mark. The question here is not whether the EPA may create a new exception to the CWA, but rather whether its plenary rulemaking authority under the CWA includes the power to set different effluent limits for different point sources in the same category or subcategory. If the EPA has such authority, then no "general prohibition" exists, so the Andrus canon is never implicated. Thus, while the structure of the CWA may express a clear congressional intent to exclude unenumerated exceptions, it does not speak to the scope of the EPA's plenary rulemaking authority under the CWA.

C.

The remaining question, then, is whether the EPA's decision to set more lenient effluent limits for Cook Inlet facilities than for other members of the Coastal Subcategory reflects a permissible interpretation of the CWA. We conclude that it does.

As discussed above, nothing in the text, legislative history, or structure of the CWA suggests that Congress intended to deny the EPA discretion to set different effluent limits within a category or subcategory when circumstances so require. We agree that Congress intended to foreclose plant-by-plant evaluation of facilities within a subcategory. But **[**46]** this does not mean that Congress wished to hamstring the EPA by requiring it to go through formalistic subcategorization procedures every time it found genuine differences between groups of point sources within a long-established category or subcategory. In fact, precedent suggests that Congress sought to avoid just this sort of administrative headache.

The Supreme Court has repeatedly emphasized the importance of balancing the CWA's uniformity interest with the practical reality of differences within a category. These statements have most often arisen in the context of after-the-fact variances, beginning with E.I. du Pont de Nemours & Co. v. Train, 430 U.S. 112, 97 S. Ct. 965, 51 L. Ed. 2d 204 (1977). In du Pont, the Supreme Court was faced with the issue of whether the EPA was permitted to establish categorical effluent limitations, or whether it was required to establish effluent limitations for individual plants. The Court held that the EPA may establish categorical limitations "so long as some allowance is made for variations in individual plants, as

EPA has done by including a variance clause in its 1977 limitations." [Id. at 128, 97 S. Ct. at 975](#). **[**47]** Notably, the Court did not hold that the EPA is *required* to establish categorical effluent limitations, nor did it hold that variances are the *only* appropriate way to account for variations in individual plants. It merely stressed the importance of balancing uniformity and individual variation.

The Court elaborated on this statement in [Chem. Mfrs. Ass'n v. Natural Resources Defense Council, 470 U.S. 116, 105 S. Ct. 1102, 84 L. Ed. 2d 90 \(1984\)](#), where it approved the fundamentally-different-factor ("FDF") variance procedure "as a mechanism for insuring that [the EPA's] necessarily rough-hewn categories do not unfairly burden atypical plants." [Id. at 120, 105 S. Ct. at 1105](#). The Court again emphasized the importance of tempering uniformity with flexibility:


Acting under stringent timetables, EPA must collect and analyze large amounts of technical information concerning complex industrial categories. Understandably, EPA may not be apprised of and will fail to consider unique factors applicable to atypical plants during the categorical rulemaking process, and it is thus important that EPA's nationally binding categorical pretreatment **[**48]** standards for indirect dischargers be tempered with the flexibility that the FDF variance mechanism offers

[Id. at 132-33, 105 S. Ct. at 1111-12](#).

Although the [du Pont](#) and [Chem. Mfrs. Ass'n](#) opinions confined their analyses to the context of variances, the reasoning of those two cases is applicable in the present case. The EPA is authorized--indeed, is required--to account for substantial variations within an existing category or subcategory of point sources. Administrative procedures that avoid the costs and burdens associated with categorical rulemaking are a valuable **[*940]** tool in fulfilling that obligation. Where the variations are discovered after rulemaking is complete, the Supreme Court has endorsed FDF variances as the appropriate procedure. Where the variations are discovered before rulemaking is complete, however, FDF variances are inappropriate. In the absence of any clear congressional intent to the contrary, we are satisfied under the facts of this case that the promulgation of different effluent limits within a single category or subcategory of point sources provides an acceptable alternative to subcategorization.

Here, **[**49]** the EPA was faced with a situation in which one group of point sources within a long-established subcategory was dramatically different from all other point sources within that subcategory. The EPA found, based on the different geography and circumstances of Cook Inlet, that the cost of complying with a zero discharge standard on produced water or drilling wastes would be substantially higher for Cook Inlet facilities than for the rest of the Coastal Subcategory. Thus, the EPA was faced with a stark choice between conducting administratively burdensome and time-consuming subcategorization procedures that would have disrupted a well-established subcategorization scheme or exercising its plenary rulemaking authority to set different effluent limits within the Coastal Subcategory. Rather than disrupting its longstanding subcategorization scheme, creating needless confusion and unnecessary restructuring, the EPA chose the administratively efficient route. In doing so, the EPA did not in any way avoid its ordinary procedural obligations: The Cook Inlet ELGs were subject to the same notice and comment procedures as the other Coastal Subcategory ELGs. In light of [du Pont](#) and [Chem. Mfrs. Ass'n](#), **[**50]** we cannot say that the EPA's actions were unauthorized. As such, pursuant to the [Chevron](#) test and under the unique facts of this case, we uphold the EPA's actions with respect to Cook Inlet.

VI.

In light of our decision to uphold the ELGs' zero discharge limits, all issues pertaining to the General Permit are moot. [HN28](#)  A case is moot where "the issues presented are no longer live or the parties lack a legally cognizable interest in the outcome." [Powell v. McCormack, 395 U.S. 486, 496, 89 S. Ct. 1944, 1951, 23 L. Ed. 2d 491 \(1969\)](#). Here, even if we were to review and remand the General Permit, any subsequent NPDES permit determination would be governed by the ELGs, [33 U.S.C. § 1311\(b\)](#), so the final result would be unchanged. Because the zero discharge limit contained in the General Permit is thus not "susceptible to some judicial remedy," Texas Petitioners no longer have a "legally cognizable interest" in the outcome of the General Permit challenge. [Baccus v. Parrish, 45 F.3d 958, 961 \(5th Cir. 1995\)](#). Petitioners conceded as much at oral argument. ¹⁰ We therefore need not, and do not,

¹⁰ Attorney Liz Bills addressed this issue on behalf of the Texas Petitioners:

Q: What difference does it make if we decide this general permit limitation question?

decide whether we have subject **[**51]** matter jurisdiction to review Texas Petitioners' delayed challenge to the General Permit, nor whether Region 6 acted arbitrarily or capriciously or abused its discretion when it issued the General Permit.

VII. CONCLUSION

[52]** We hold that the EPA did not act arbitrarily or capriciously or abuse its discretion when it set zero discharge limits on produced water and produced sand in the ELGs, that the EPA did not act contrary to the intent of the CWA when it set separate discharge limits on produced water and drilling wastes for Cook Inlet without designating it a separate subcategory, and that Texas Petitioners' challenge to the General Permit is moot. **[*941]** For these reasons, all petitioners' Petitions for Review of Orders of the Environmental Protection Agency are

DENIED.

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A: Well, Your Honor we believe-- one of the concerns we have is an anti-backsliding provision that's found in the Clean Water Act that says that once somebody's been subject to a certain level of limitations in a permit, then any subsequent permits that are ever issued can never have a less stringent limitation, and you can't get less stringent than zero.

Q: Well, if we uphold the rules for the coastal category then our holding on [the General Permit] is moot--

A: Right. We have to overcome several obstacles, including the ELGs as well as the General Permit, to get to something less than zero discharge.