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Natural Resources Defense Council, Inc. v. U.S. Environmental Protection Agency

United States Court of Appeals for the Ninth Circuit

February 12, 1988, Argued and Submitted ; December 5, 1988, Filed

Nos. 86-7390, 86-7563, 86-7631, 86-7643

Reporter

863 F.2d 1420 *; 1988 U.S. App. LEXIS 16366 **; 104 Oil & Gas Rep. 160; 19 ELR 20225; 28 ERC (BNA) 1609

NATURAL RESOURCES DEFENSE COUNCIL, INC., and the SIERRA CLUB, Petitioners, v. U.S. ENVIRONMENTAL PROTECTION AGENCY, et al., Respondents, and AMERICAN PETROLEUM INSTITUTE, et al., Intervenors. CONOCO, INC., Petitioner, v. U.S. ENVIRONMENTAL PROTECTION AGENCY, et al., Respondents, and NATURAL RESOURCES DEFENSE COUNCIL, INC., Respondent-Intervenor. BOB MARTINEZ, GOVERNOR, * and ROBERT A. BUTTERWORTH, Attorney General, ** Petitioners, v. U.S. ENVIRONMENTAL PROTECTION AGENCY, et al., Respondents, and AMERICAN PETROLEUM INSTITUTE, et al., Respondents-Intervenors. AMERICAN PETROLEUM INSTITUTE, et al., Petitioners, v. U.S. ENVIRONMENTAL PROTECTION AGENCY, et al., Respondents, and NATURAL RESOURCES DEFENSE COUNCIL, INC., Respondent-Intervenor

Prior History: **[**1]** Petitions for Review from an Order of the Environmental Protection Agency.

Core Terms

pollutants, limitations, toxicity, technology, reinjection, drilling, pills, ppm, effluent limitation, oil, discharges, regulation, muds, diesel, cadmium, mercury, barite, waters, costs, retrofitting, territorial, guidelines, fluids, seas, conventional, stringent, contends, offshore, navigable waters, challenges

Case Summary

* Bob Martinez is substituted for his predecessor, former Governor Bob Graham. Fed. R. App. P. 43(c)(1).

** Robert A. Butterworth is substituted for his predecessor, former Attorney General Jim Smith. Fed. R. App. P. 43(c)(1).

Procedural Posture

Petitioner conservation groups, oil companies, and state government sought review of an order from the Environmental Protection Agency granting a general permit under the Clean Water Act authorizing the discharge of pollutants from oil and gas operations in the Gulf of Mexico.

Overview

The Environmental Protection Agency (EPA) issued a general permit under the Clean Water Act, which authorized the discharge of pollutants from oil and gas operations in the Gulf of Mexico. Petitioner conservation groups challenged the permit's limitations on the discharge of pollutants as too lenient, and petitioner oil companies challenged the limitations as too stringent. Petitioner state government sought review of the permit because it did not comply with the state's water quality standards. The court granted the petitions for review in part and denied them in part, and remanded the provisions pertaining to alternative toxicity limits and limits on cadmium and mercury. The court held that the EPA did not have unlimited discretion in establishing permit effluent limitations, that the EPA did not act arbitrarily or capriciously in waiting for further information to make an estimate of costs of retrofitting existing platforms with reinjection technology, or in declining to make an assessment of costs on the record, the EPA's failure to provide any regulation on mercury and cadmium discharges was invalid, and that the EPA was not required to obtain any state certifications.

Outcome

The court granted in part and denied in part the petitions for review. The court remanded the provisions pertaining to alternative toxicity limits and cadmium and mercury limits. The court found that the EPA did not have unlimited discretion in establishing permit effluent limitations, did not act arbitrarily or capriciously in

waiting for further information to make an estimate of costs, and was not required to obtain any state certifications.

LexisNexis® Headnotes

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

Environmental Law > Water Quality > General Overview

Environmental Law > Water Quality > Clean Water Act > General Overview

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

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

[HN1](#) [↓] **Discharge Permits, Effluent Limitations**

The Clean Water Act prohibits the discharge of any pollutant, [33 U.S.C.S. § 1311\(a\)](#), except in compliance with a National Pollutant Discharge Elimination System permit issued under the Clean Water Act.

Environmental Law > Water Quality > Clean Water Act > Water Quality Standards
Business & Corporate Compliance > ... > Water Quality > Clean Water Act > Water Quality Standards

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

Environmental Law > Water Quality > General Overview

[HN2](#) [↓] **Clean Water Act, Water Quality Standards**

Permits issued under NPDES are to establish specific limitations on the discharge of pollutants based on water quality standards, and on imposition of technology-based controls. The type of technology-based effluent limitation applicable to a discharge depends upon the type of pollutant. For existing sources, toxic pollutants

are subject to the best available technology economically achievable (BAT). Conventional pollutants are subject to the best conventional pollutant control technology (BCT). The Clean Water Act lists the factors that the Environmental Protection Agency must take into account in establishing BAT and BCT.

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

Environmental Law > Water Quality > General Overview

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

Permits for the discharge of pollutants from drilling are generally required to incorporate technology-based effluent limitations promulgated by the Environmental Protection Agency on a nationwide, industry-wide basis.

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

Environmental Law > Water Quality > General Overview

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

[HN4](#) [↓] **Discharge Permits, Effluent Limitations**

In the absence of national standards, the Clean Water Act authorizes the administrator to issue permits on such conditions as the administrator determines are necessary to carry out the provisions of the Clean Water Act. However, in issuing permits on a case-by-case basis using its best professional judgment, the Environmental Protection Agency does not have unlimited discretion in establishing permit effluent limitations.

Environmental Law > Water Quality > General Overview

[HN5](#) [↓] **Environmental Law, Water Quality**

Courts reviewing permits issued on a best professional judgment basis hold the Environmental Protection Agency to the same factors that must be considered in

establishing the national effluent limitations.

Environmental Law > Water Quality > General Overview

[HN6](#) **Environmental Law, Water Quality**

Technology-based limitations under best available technology economically achievable must be both technologically available and economically achievable. To be technologically available, it is sufficient that the best operating facilities can achieve the limitation. To demonstrate economic achievability, no formal balancing of costs and benefits is required. Best available technology economically achievable should represent a commitment of the maximum resources economically possible to the ultimate goal of eliminating all polluting discharges. The Environmental Protection Agency has considerable discretion in weighing the costs of best available technology economically achievable.

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

Environmental Law > Water Quality > General Overview

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

[HN7](#) **Discharge Permits, Effluent Limitations**

The recent anti-backsliding amendment to the Clean Water Act is designed to prevent backsliding from limitations in best professional judgment permits to less stringent limitations which may be established under the forthcoming national effluent limitation guidelines. It prohibits a permit containing effluent limitations issued under a best professional judgment determination from being renewed, reissued, or modified on the basis of effluent guidelines promulgated under the national rulemaking subsequent to the original issuance of such permit, if the permit would contain effluent limitations which are less stringent than the comparable limitations in the previous permit.

Administrative Law > Agency Rulemaking > Informal Rulemaking

Environmental Law > Air Quality > Enforcement > Administrative Proceedings

Environmental Law > Air Quality > General Overview

Environmental Law > Water Quality > General Overview

Environmental Law > ... > Enforcement > Discharge Permits > Public Participation

[HN8](#) **Agency Rulemaking, Informal Rulemaking**

The Environmental Protection Agency (EPA) is bound by [5 U.S.C.S. § 553](#) and must provide notice sufficient to fairly apprise interested persons of the subjects and issues before the EPA. The EPA must have authority to promulgate a final rule that differs in some particulars from its proposed rule. Otherwise the process might never end. If the final rule deviates too sharply from the proposal, however, affected parties will have been deprived of notice and an opportunity to respond to the rule. Accordingly, a final rule which departs from a proposed rule must be a logical outgrowth of the proposed rule. The essential inquiry focuses on whether interested parties reasonably could have anticipated the final rulemaking from the draft permit.

Environmental Law > Administrative Proceedings & Litigation > Judicial Review

[HN9](#) **Administrative Proceedings & Litigation, Judicial Review**

In assessing difficult issues of scientific method and laboratory procedure, the court must defer to a great extent to the expertise of the Environmental Protection Agency.

Environmental Law > Water Quality > General Overview

[HN10](#) **Environmental Law, Water Quality**

Environmental Protection Agency (EPA) regulations provide that EPA must use approved test procedures under 40 C.F.R. § 136 for the analyses of pollutants having approved methods under that part, and according to a test procedure specified in the permit for

pollutants with no approved methods. Because many pollutants do not have approved test methods, EPA may use a test procedure specified in the permit.

[Environmental Law > ... > Enforcement > Discharge Permits > Effluent Limitations](#)

[Environmental Law > Water Quality > General Overview](#)

[HN11](#) **Discharge Permits, Effluent Limitations**

The best available technology economically achievable standard must establish effluent limitations that utilize the latest technology, in order to reach the greatest attainable level of effluent reduction which could be achieved.

[Environmental Law > ... > Enforcement > Discharge Permits > Effluent Limitations](#)

[Real Property Law > Water Rights > Nonconsumptive Uses > General Overview](#)

[Environmental Law > Water Quality > General Overview](#)

[Environmental Law > ... > Enforcement > Discharge Permits > General Overview](#)

[HN12](#) **Discharge Permits, Effluent Limitations**

Section 403(c) of the Clean Water Act provides that in any event where insufficient information exists on any proposed discharge of pollutants to make a reasonable judgment on any of the guidelines concerning the degradation of waters, including the effect of disposal of pollutants on human health, marine life, esthetic, recreational, and economic values, as well as other considerations no permit shall be issued. Thus, the Clean Water Act requires ocean polluters who receive a permit to satisfy both the technological requirements of the effluent limitations and also the ocean degradation criteria of § 403 of the Clean Water Act.

[Energy & Utilities Law > Pipelines & Transportation > Pipelines > Offshore Gas & Oil Pipelines](#)

[Environmental Law > ... > Enforcement > Discharge Permits > General Permits](#)

[Environmental Law > Water Quality > General Overview](#)

[Environmental Law > ... > Clean Water Act > Coverage & Definitions > Navigable Waters](#)

[HN13](#) **Pipelines, Offshore Gas & Oil Pipelines**

The term "territorial seas" is defined as the belt of the seas extending three miles from the coast.

[Environmental Law > ... > Clean Water Act > Coverage & Definitions > Navigable Waters](#)

[Environmental Law > Water Quality > General Overview](#)

[Environmental Law > ... > Enforcement > Discharge Permits > State Water Quality Certifications](#)

[HN14](#) **Coverage & Definitions, Navigable Waters**

"Navigable waters" is defined as the waters of the United States, including the territorial seas, and includes only those waters landward from the outer boundary of the territorial seas.

[Environmental Law > Water Quality > General Overview](#)

[HN15](#) **Environmental Law, Water Quality**

Permits that cover only discharges in the waters beyond navigable waters do not require state certification.

[Governments > State & Territorial Governments > Boundaries](#)

[HN16](#) **State & Territorial Governments, Boundaries**

See [43 U.S.C.S. § 1301\(b\)](#).

[Contracts Law > Types of Contracts > Lease Agreements > General Overview](#)

Governments > State & Territorial
Governments > Boundaries

[HN17](#) [↓] **Types of Contracts, Lease Agreements**

The Submerged Lands Act, [43 U.S.C.S. §§ 1301-1315 \(SLA\)](#), yields to the states the title and ownership of the lands beneath navigable waters within the boundaries of the respective states, and the natural resources within such lands and waters. The SLA further grants to the states the right and power to manage, administer, lease, develop, and use said lands and natural resources all in accordance with applicable state law.

Admiralty & Maritime Law > Practice &
Procedure > Federal Preemption

Governments > State & Territorial
Governments > Boundaries

[HN18](#) [↓] **Practice & Procedure, Federal Preemption**

The Clean Water Act (Act) provides that, except as expressly provided, the Act should not be construed as impairing or in any manner affecting any right or jurisdiction of the states with respect to the waters, including boundary waters, of such States. [33 U.S.C.S. § 1370](#).

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Louis F. Hubener, Assistant Attorney General, Tallahassee, Florida, for the Petitioner Bob Martinez, Governor.

Judges: Mary M. Schroeder, Stephen Reinhardt and Edward Leavy, Circuit Judges.

Opinion by: SCHROEDER

Opinion

[*1423] SCHROEDER, Circuit Judge:

INTRODUCTION


[HN1](#) [↑] The Clean Water Act prohibits the discharge of any pollutant, [33 U.S.C. § 1311\(a\) \(1982\)](#), except in compliance with a National Pollutant Discharge Elimination System (NPDES) permit issued under the Act. [33 U.S.C.A. § 1342\(a\) \(West Supp. 1988\)](#). We here consider petitions for review of the Environmental Protection Agency's general permit under the Clean Water Act (the Act) [****2**] authorizing the discharge of pollutants from oil and gas operations in the Gulf of Mexico.

[*1424] In July of 1986, Regions IV and VI of the Environmental Protection Agency issued this NPDES permit establishing the compliance conditions for discharge of pollutants from oil and gas operations located in the Outer Continental Shelf of the Gulf of Mexico. See [51 Fed. Reg. 24897 \(1986\)](#). The Natural Resources Defense Council and the Sierra Club (referred to collectively as "NRDC") challenge certain limitations on the discharge of pollutants, essentially arguing that these limitations are too lenient. The American Petroleum Institute and Conoco, Inc. (referred to collectively as "API") also challenge terms of the permit, essentially arguing that some of the limitations are too stringent. In addition, the State of Florida seeks review of the permit on the ground that the permit does not comply with its state water quality standards. This court has jurisdiction pursuant to [33 U.S.C.A. § 1369\(b\)\(1\)\(F\) \(West Supp. 1988\)](#).¹

[**3] [HN2](#) [↑] Permits issued under NPDES are to establish specific limitations on the discharge of pollutants based on water quality standards, see [33 U.S.C. § 1313 \(1982\)](#), and on imposition of technology-based controls. See *id.* [§§ 1311\(b\)](#), [1314\(b\)](#). The type of

¹ The petitions for review were filed in the Fifth Circuit by API, in the Eleventh Circuit by Florida, and the Ninth Circuit by NRDC. All of the cases were transferred to the Ninth Circuit, the court of first filing. See [28 U.S.C. § 2112\(a\) \(1982\)](#). This court consolidated these cases and denied EPA's motion to transfer the cases to the Fifth Circuit. This court also denied API's motion to stay proceedings in these cases pending resolution of API's petition before EPA to modify the permit conditions. See Order (9th Cir. March 26, 1987).

technology-based effluent limitation applicable to a discharge depends upon the type of pollutant. For existing sources,² **[**4]** toxic pollutants³ are subject to the "best available technology economically achievable" (BAT). See [33 U.S.C.A. §§ 1311\(b\)\(2\), 1314\(b\)\(2\) \(West Supp. 1988\)](#); [33 U.S.C. § 1317\(a\)\(2\) \(1982\)](#). Conventional pollutants⁴ are subject to the "best conventional pollutant control technology" (BCT). See [33 U.S.C.A. § 1311\(b\)\(2\)\(E\) \(West Supp. 1988\)](#); [33 U.S.C. §§ 1314\(a\)\(4\), 1314\(b\)\(4\)\(1982\)](#). The Act lists the factors that EPA must take into account in establishing BAT and BCT. See [33 U.S.C. §§ 1314\(b\)\(2\)\(B\) \(1982\) \(BAT\)](#); [1314\(b\)\(4\)\(B\) \(1982\) \(BCT\)](#). See generally [Natural Resources Defense Council v. EPA, 261 U.S. App. D.C. 372, 822 F.2d 104, 110 \(D.C. Cir. 1987\)](#) ("NRDC"), [American Petroleum Institute v. EPA, 787 F.2d 965, 969-70 \(5th Cir. 1986\)](#) ("API").

HN3  Permits for the discharge of pollutants from drilling are generally required to incorporate technology-based effluent limitations promulgated by EPA on a nationwide, industry-wide basis. See [33 U.S.C. §§ 1311\(b\), 1314; 40 C.F.R. § 125.3\(c\)\(1\) \(1987\)](#). Such industry-wide guidelines have not yet been promulgated. The Act provides that in this situation, EPA may establish effluent limitations on a case-by-case basis according to its "Best Professional Judgment" (BPJ). See [33 U.S.C.A. § 1342\(a\)\(1\)\(B\) \(West Supp. 1988\)](#); [40 C.F.R. § 125.3\(c\)\(2\) \(1987\)](#). See also [NRDC, 822 F.2d at 111](#); [API, 787 F.2d at 971](#).



The Act originally required compliance with national, industry-wide effluent standards for toxic and conventional pollutants by 1983, but **[**5]** Congress later extended this deadline to 1984. Congress has further extended this deadline to no later than March 31, 1989, but has mandated that compliance with national limitations should be achieved "as expeditiously as practicable." See [33 U.S.C.A. § 1311\(b\)\(2\) \(West Supp.](#)

²The permit under review only authorizes discharges for existing sources. See [51 Fed. Reg. at 24897](#).

³The term "toxic pollutants" is defined at [33 U.S.C. § 1362\(13\) \(1982\)](#). Pursuant to [33 U.S.C. § 1317\(a\)\(1\) \(1982\)](#), EPA has listed toxic pollutants at [40 C.F.R. § 401.15 \(1987\)](#).

⁴Conventional pollutants include, but are not limited to, pollutants classified as biological oxygen demanding, suspended solids, fecal coliform, and pH. See [33 U.S.C. § 1314\(a\)\(4\) \(1982\)](#). Conventional pollutants are listed at [40 C.F.R. § 401.16 \(1987\)](#).

[1988](#)). EPA has indicated to this court that there may be need for further extensions. Although EPA has proposed guidelines for effluent limitations for the offshore oil industry, see [50 Fed. Reg. 34592 \[**1425\]](#) (to be codified at 40 C.F.R. § 435) (proposed August 26, 1985), these guidelines are not yet final.

HN4  In the absence of national standards, the Act authorizes the Administrator to issue permits on "such conditions as the Administrator determines are necessary to carry out the provisions of [the Act]." [33 U.S.C.A. § 1342\(a\)\(1\)\(B\)](#). However, in issuing permits on a case-by-case basis using its "Best Professional Judgment," EPA does not have unlimited discretion in establishing permit effluent limitations. EPA's own regulations implementing this section enumerate the statutory factors that must be considered in writing permits. See [40 C.F.R. § 125.3\(c\), \(d\) \(1987\)](#). See also [51 Fed. Reg. at 24915](#) ("In **[**6]** developing the BPJ permit conditions, [the EPA] Regions are required to consider a number of factors, enumerated in [[33 U.S.C. § 1314\(b\)](#)] . . ."). In addition, **HN5**  courts reviewing permits issued on a BPJ basis hold EPA to the same factors that must be considered in establishing the national effluent limitations. See, e.g., [Trustees for Alaska v. EPA, 749 F.2d 549, 553 \(9th Cir. 1984\)](#) (EPA must consider statutorily enumerated factors in its BPJ determination of effluent limitations); [API, 787 F.2d at 972, 976](#) (applying statutory factors in reviewing effluent limitations in a BPJ permit).

In this proceeding, the NRDC's principal challenge to the permit is to EPA's failure to require reinjection into subsurface rock of water produced during the drilling process. In addition, the NRDC challenges the permit's effluent limitations on toxic and conventional pollutants in drilling fluids, including drilling muds and drill cuttings.

API also mounts substantive challenges to the permit's regulation of drilling fluids. The API's principal substantive challenges are to the test methodology to be employed and to the permit's restrictions on the use of "diesel pills," which are diesel oil **[**7]** based substances used to dislodge stuck drilling pipe.

The State of Florida contends that EPA was required to secure certification from the state for discharges contemplated by the permit. Florida maintains that it has jurisdiction to enforce its own water quality standards in some of the water regulated under the EPA permit.

We are troubled by certain aspects of the permit, most importantly, by the permit provisions concerning produced water and the alternative toxicity limits.


However, because the national guidelines for the offshore oil industry are still being formulated, we uphold the permit in most respects; we remand the provisions pertaining to the alternative toxicity limits and the limits on cadmium and mercury.

I. REINJECTION OF PRODUCED WATER

Oil production brings to the surface water which was originally trapped with oil or natural gas in a geological formation, as well as water and other fluids that have been mixed with oil or gas during the production process. These fluids are known as produced water. Produced water is the highest volume waste source in offshore production discharges. J.A. 298; [51 Fed. Reg. at 24917](#). The record indicates that produced water contains **[**8]** various toxic pollutants. J.A. 58, 359-69. The permit, however, does not impose any BAT limitation on the discharge of toxics in produced water. NRDC contends that EPA erred by not determining that reinjection is BAT for produced water. Reinjection is a disposal technique in which the produced water is reinjected into a sub-surface geologic formation so that none of the pollutants it contains are released into the sea.

EPA's proposed national effluent limitation guidelines for produced water would require reinjection of this discharge for certain new sources. [50 Fed. Reg. at 34605](#). EPA stated, in announcing those proposals, however, that it required additional information on the technological feasibility and costs of retrofitting reinjection technology on existing offshore facilities before requiring reinjection for existing facilities. See [50 Fed. Reg. at 34603, 34610-11](#).

[*1426] Reinjection of produced water is not required under this permit. The EPA stated, in this context as well, that the agency required additional data on the technological feasibility and economic achievability of reinjection for existing sources. See [51 Fed. Reg. at 24910](#). NRDC asserts that EPA violated the **[**9]** Act by not requiring reinjection of produced water as BAT for toxic pollutants in produced water.

HNG  Technology-based limitations under BAT must be both technologically available and economically achievable. See [33 U.S.C. § 1314\(b\)\(2\)\(B\)](#). To be technologically available, it is sufficient that the best operating facilities can achieve the limitation. See [Association of Pac. Fisheries v. EPA, 615 F.2d 794, 816-17 \(9th Cir. 1980\)](#). To demonstrate economic achievability, no formal balancing of costs and benefits

is required, see [id. at 817-18](#); [Reynolds Metals Co. v. EPA, 760 F.2d 549, 565 \(4th Cir. 1985\)](#); BAT should represent "a commitment of the maximum resources economically possible to the ultimate goal of eliminating all polluting discharges." See [EPA v. National Crushed Stone Ass'n, 449 U.S. 64, 74, 66 L. Ed. 2d 268, 101 S. Ct. 295 \(1980\)](#). EPA has considerable discretion in weighing the costs of BAT. [American Iron and Steel Inst. v. EPA, 526 F.2d 1027, 1052 \(3d Cir. 1975\)](#), *amended in part on other grounds*, [560 F.2d 589 \(3d Cir. 1977\)](#).

There is no serious question that reinjection is technologically feasible at the present time. The record indicates that existing offshore operations in California **[**10]** and Alaska use reinjection technology. As we have seen, the proposed national guidelines would require it for new sources. The ostensible bar to reinjection becoming BAT for all existing sources is economic. The EPA maintains that it has insufficient information on the cost of retrofitting existing platforms in the Gulf with reinjection technology.

EPA's contention that it lacks substantial information on the economic feasibility of retrofitting existing sources with reinjection technology is not supported by the record. The record contains several studies detailing the technology required for retrofitting existing offshore facilities with reinjection capability. See J.A. 254-62 (study prepared by Off shore Operators Committee); J.A. 335-52 ("Development Document for Effluent Limitations Guidelines and Standards for the Offshore Segment of the Oil and Gas Point Source Category," prepared by EPA); Supp. J.A. 1-27; 28-85 (studies prepared for the EPA). The focus of these studies is on the cost of retrofitting existing platforms.

These studies do not agree about the precise costs of retrofitting. Their estimates vary. However, the Act does not require a precise calculation of BAT **[**11]** costs. It requires that, in addition to other factors, the EPA "take into account" the cost of BAT. [33 U.S.C. § 1314\(b\)\(2\)\(B\)](#). In [BASF Wyandotte Corp. v. Costle, 598 F.2d 637, 656-57 \(1st Cir. 1979\)](#), the court stated that, in determining "best practicable control technology" (BPT), a level of control in which cost is a more significant factor than in BAT, EPA is not required to perform a precise measurement of cost; instead, "EPA needed to develop no more than a rough idea of the costs the industry would incur." [Id. at 657](#). Congress made cost a more significant factor in establishing BPT than in establishing BAT, since in defining BPT it required a balancing of costs and benefits. It follows that EPA need


make only a reasonable cost estimate in setting BAT. Compare [33 U.S.C. § 1314\(b\)\(2\)\(B\)](#) (in establishing BAT, EPA should "take into account" the cost) with [§ 1314\(b\)\(1\)\(B\)](#) (in establishing BPT, EPA must consider "the total cost of application of technology in relation to the effluent reduction benefits to be achieved").

The legislative history of the Act supports our conclusion that EPA should not delay requiring technologically feasible limitations as BAT in order to wait **[**12]** for precise cost figures. Senator Muskie, during Senate consideration of the conference report, stated that although cost should be a factor in determining BAT, "no balancing test will be required," and that the Administrator should be bound by a test of "reasonableness." Committee on Public **[*1427]** Works, 93rd Cong., 1st Sess., Report on S. 2270, *reprinted in* A Legislative History of the Water Pollution Control Act Amendments of 1972, 161, 170 (hereinafter "Leg. Hist."). Senator Muskie continued that the reasonableness of what is economically achievable "should reflect an evaluation of what needs to be done to move toward the elimination of the discharge of pollutants and what is achievable through the application of available technology -- without regard for cost." *Id.* The House Public Works Committee stated that the consideration of cost in determining BAT requires only "economic viability at the level sufficient to reasonably justify the making of investments in such new facilities." H.R. Rep. No. 911, 92nd Cong., 2d Sess., 103 (1972), *reprinted in* Leg. Hist. 753, 789.

On the basis of this record, we are thus unable to agree with the EPA that it could not have made a reasonable **[**13]** estimate of the economic effect of requiring that reinjection is BAT. The studies contained in the record, which include both agency and industry studies, analyze in considerable detail the cost of retrofitting existing platforms with reinjection technology. These studies evaluate the costs of retrofitting model platforms of different sizes, in different water depths and geographic locations; the studies consider the capital and maintenance costs of this technology. Given this detailed and developed record, we find that EPA had sufficient information to make a reasonable estimate of the costs of retrofitting existing platforms with reinjection technology.

The issue, however, is whether the agency was required to make such an estimate from the record before it and conclude that reinjection is BAT for existing sources. Because of circumstances peculiar to this case, we do not hold that the agency acted arbitrarily or capriciously

in waiting for further information. This is because the question of whether EPA should make reinjection of produced water BAT for the sources covered by this permit is intertwined with the development of national effluent discharge limitations.

HN7  The recent "anti-backsliding" **[**14]** amendment to the Act is designed to prevent "backsliding" from limitations in BPJ permits to less stringent limitations which may be established under the forthcoming national effluent limitation guidelines. It prohibits a permit containing effluent limitations issued under a BPJ determination from being "renewed, reissued, or modified on the basis of effluent guidelines promulgated under [the national rulemaking] . . . subsequent to the original issuance of such permit," if the permit would contain effluent limitations which are "less stringent than the comparable limitations in the previous permit." [33 U.S.C.A. § 1342\(o\)\(1\)](#) (*West Supp. 1988*). See *id.* at [section 1342\(o\)\(2\)](#) (exceptions to the general "anti-backsliding" prohibition). If the EPA were to require as BAT the retrofitting of all drilling sources for reinjection of produced water in the Gulf of Mexico, and, the eventual national standards were less stringent in any respect, there would be an inconsistency between BAT for Gulf drilling and BAT for the rest of the nation's off-shore drilling. This inconsistency would lack any apparent scientific or equitable basis. If, on the other hand, the eventual national standards **[**15]** embody more stringent standards than this permit requires, this permit can be reopened and its standards made more stringent. See [51 Fed. Reg. at 24922](#), II(A)(3)(d). Given the large commitment of resources that would be necessary to begin retrofitting, the values of certainty and uniformity inherent in the congressional scheme take on added significance. There is a justification for some delay in this situation in order to ensure that the produced water limitation in the Gulf conforms with the national standard.

We are by no means announcing a general willingness to condone failures by the EPA to make estimates of the economic effect of establishing pollution limitations as BAT when these limitations are technologically available. Nor will we generally approve EPA delays in adopting or implementing limitations solely to obtain more economic data. Such devices frustrate congressional intent to stimulate the use of innovative technology to reduce water pollution. **[*1428]** We do, however, conclude in this unusual case that there is a justifiable concern on EPA's part to have this permit conform to national standards based upon a broader economic data base. Accordingly, we hold that the

EPA **[**16]** was not arbitrary or capricious in declining to make an assessment of the costs of requiring reinjection as BAT on this record.⁵

For the same reasons we decline to require EPA to adopt reinjection as BAT for toxic pollutants in produced water, we also reject at this time NRDC's argument that reinjection is BCT for conventional pollutants in produced water. Cost is a more significant factor **[**17]** in determining BCT than it is in establishing BAT. Compare [33 U.S.C. § 1314\(b\)\(2\)\(B\)](#) (in establishing BAT, EPA must "take into account" the cost) with [§ 1314\(b\)\(4\)\(B\)](#) (in determining BCT, EPA shall "include consideration of the reasonableness of the relationship between the costs of attaining a reduction in effluents and the effluent reduction benefits derived"). Accordingly, because we hold that EPA is not required at this time to estimate the cost of reinjection and determine that reinjection was BAT, we also conclude that EPA was not required to determine reinjection was BCT for the permit.

II. EFFLUENT LIMITATIONS

Both NRDC and the API mount a number of challenges to the permit's effluent limitations. These challenges go both to limitations on toxic pollutants and conventional pollutants. The challenges are both substantive and procedural.

A. Toxic Pollutants: Notice and Comment

The permit in this case sets BAT standards which establish a toxicity limit of 30,000 ppm (parts per million) based on the standard bioassay test for toxic pollutants in drilling muds and cuttings. [51 Fed. Reg. at 24899-902](#). In addition the permit provides for the agency to set alternative toxicity **[**18]** limits for operators who

⁵ NRDC urges EPA to adopt other alternatives to reinjection of produced water. NRDC first argues that a more stringent limit on oil and grease than presently contained in the permit should be imposed on produced water as a means of regulating toxics. This proposal fails. Oil and grease are conventional pollutants, see [40 C.F.R. § 401.16\(5\) \(1987\)](#), that are not subject to BAT-level controls until EPA follows the procedure set forth at [40 C.F.R. § 125.3\(h\)\(2\) \(1987\)](#). EPA has not done so. NRDC also contends that EPA failed to consider diffuser filtration technology as BAT for produced water. The permit record, however, shows that EPA considered this technology and explained its reasons for rejecting it. See J.A. 316-19; 321-34; [51 Fed. Reg. at 24909](#). See also [50 Fed. Reg. at 34602](#).

require use of drilling fluids that the operator anticipates will be unable to meet the toxicity limitation. See [51 Fed. Reg. at 24901, 24926](#).

Both NRDC and API maintain that EPA failed to follow rule making procedural requirements. They contend that the EPA unlawfully failed to expose the final toxicity limitations to public notice and comment. See [5 U.S.C. § 553\(b\), \(c\) \(1982\)](#); [33 U.S.C. § 1251\(e\) \(1982\)](#); 40 C.F.R. Part 124 (1987). Some background explanation is necessary.

The draft permit published for public comment proposed a single toxicity limit of 7,400 ppm. See [50 Fed. Reg. 30569-70, 30573 \(1985\)](#) (proposed July 26, 1985). This was a more lenient standard than the 30,000 ppm eventually promulgated.⁶ The draft permit also considered other alternatives. See [id. at 30569-70](#). EPA considered establishing two toxicity limitations: a less stringent limitation of 7,400 ppm for drilling muds containing lubricants, and a more stringent limitation of 30,000 ppm for muds without lubricants. See [id. at 30569](#). EPA rejected this option, however, because it was concerned that the **[*1429]** two-tiered approach might serve as an incentive for industry operators **[**19]** to use a lubricity agent in order to qualify for the less stringent limitation. *Id.* EPA also considered a single 30,000 ppm toxicity limit, which would allow the use of even the most toxic generic drilling mud without additives, but it stated that this limit would have to be coupled with an additives approval process for those situations in which generic drilling muds were insufficient and additives would have to be used. *Id.* In this context, EPA requested comments on whether the proposed 7,400 ppm toxicity limit was appropriate. *Id.* at 39570.

The final permit **[**20]** established a two-tiered toxicity limit, which includes a toxicity limitation of 30,000 ppm, and an alternative toxicity request procedure which authorized operators to request case-by-case

⁶ Under the standard bioassay test, the lower the numerical value of the toxicity limit, the higher the relative toxicity. See [API, 787 F.2d at 978](#). This is because the bioassay test consists of exposing animal species to different concentrations of the drilling mud for a designated time period, and observing mortality rates and calculating the concentration of mud required to Kill 50 percent of the test animals during the exposure time. *Id.* Accordingly, lower numerical values under the test are more toxic, because that means lower concentrations of the mud will kill 50 percent of the test organisms.

limitations. See [51 Fed. Reg. 24900-901](#). NRDC and API contend that the failure to ask for notice and comment on the alternative limitation violates the Administrative Procedure Act. API also claims that the EPA was required to ask for notice and comment on the 30,000 ppm limit.

[HN8](#) EPA is bound by [5 U.S.C. § 553](#) and must provide notice sufficient to "fairly apprise interested persons of the 'subjects and issues' before the Agency." [NRDC, 822 F.2d at 121](#) (quoting [American Iron and Steel Inst. v. EPA, 568 F.2d 284, 293 \(3d Cir. 1977\)](#), cert. denied, 435 U.S. 914, 55 L. Ed. 2d 505, 98 S. Ct. 1467 (1978)). The agency must have authority to promulgate a final rule that differs in some particulars from its proposed rule. See, e.g., [Small Refiner Lead Phase-Down Task Force v. EPA, 227 U.S. App. D.C. 201, 705 F.2d 506, 546-47 \(D.C. Cir. 1983\)](#). Otherwise the process might never end. If the final rule deviates too sharply from the proposal, however, affected parties will have been deprived of notice and an opportunity to respond to the rule. [Id. \[**21\] at 547](#). Accordingly, a final rule which departs from a proposed rule must be a "logical outgrowth" of the proposed rule. *Id.* (construing the Clean Air Act and the Administrative Procedure Act); [NRDC, 822 F.2d at 112 \(Clean Water Act\)](#). The essential inquiry focuses on whether interested parties reasonably could have anticipated the final rulemaking from the draft permit. See [Small Refiner Lead, 705 F.2d at 547-49](#).

In *NRDC*, the proposed rules contained a query requiring permit applicants to list every source that discharged toxics, and the final rule required applicants to list all toxic pollutants the applicant used or manufactured. [NRDC, 822 F.2d at 117, 121](#). The D.C. Circuit held that EPA adequately alerted interested parties of EPA's intent to ask applicants to provide information regarding toxics present in their facilities. [Id. at 121](#). Similarly, in [Kennecott v. EPA, 780 F.2d 445, 451 \(4th Cir. 1985\)](#), cert. denied, 479 U.S. 814, 107 S. Ct. 67, 93 L. Ed. 2d 25 (1986), after industry objected to one method of treating wastewater, EPA required an additional step in the treatment. The court held that there was adequate notice and opportunity for comment.

In this case, the EPA fairly [\[**22\]](#) apprised the interested public of the subjects and issues it was considering concerning toxic pollutants. Although EPA proposed a single limit of 7,400 ppm, interested parties were informed that other alternatives were being considered. Public comment made it evident that this

proposed limit was too lenient for most wells. EPA considered a more stringent limit of 30,000 ppm, but it stated that some additional provisions would have to be made for operators requiring the use of additives. See [50 Fed. Reg. at 30569-70](#). We find that the final dual toxicity limit, which establishes a limit of 30,000 ppm and a procedure for alternative toxicity limits, was a logical outgrowth of the proposed limit and the rulemaking surrounding this proposal.⁷

[\[**23\]](#) [\[*1430\]](#) B. *Toxic Pollutants: The Bioassay Test*

Having determined that notice and comment opportunity for the toxic effluent limitations was adequate, we turn to the substantive attacks on the toxic effluent limitations. We address first API's challenges to the validity of the test EPA has selected to establish the toxicity level of drilling fluids. That is a process known as the bioassay test. See *supra* note 6.

API makes three separate challenges to the test. API first contends that the toxicity test demonstrates too high a degree of variability of test results and that this test variability renders the toxicity limitation arbitrary and capricious. Here we deal with issues not of fact or law but of scientific measurement. [HN9](#) In assessing difficult issues of scientific method and laboratory procedure, we must defer to a great extent to the expertise of the EPA. See [Baltimore Gas & Elec. Co. v. Natural Resources Defense Council, 462 U.S. 87, 103, 76 L. Ed. 2d 437, 103 S. Ct. 2246 \(1983\)](#). There the Supreme Court recognized that a reviewing court should be at its most deferential in reviewing an agency's scientific determinations in an area within the agency's expertise.

In considering the bioassay test, we must observe [\[**24\]](#) that there is no test which has found more favorable acceptance. In the Alaska permit litigation, API challenged the test on other grounds, but

⁷ API also argues that EPA arbitrarily failed to consider in this permit proceeding comments it submitted to EPA pertaining to the national rulemaking. Although API brought these comments to EPA's attention after the close of the public comment period, API nonetheless contends that it was properly part of the record that EPA should have considered in drafting this permit. We disagree. As we have seen, the permit proceedings here are related to the national rulemaking in a complex manner. However, requiring each EPA Region to consider all the comments relating to the national rulemaking in each BPJ permit would impose an unreasonable burden on the agency. The Regions issuing this permit did not err by not considering API's untimely comments.

conceded that the test was "the most widely accepted benchmark for toxicity evaluations by EPA." [API, 787 F.2d at 978](#). Given the widespread acceptance of this test, we find no basis for substituting our judgment for that of the agency. The choice of the bioassay test was within the limits of agency discretion.

API next contends that while the EPA set overall toxicity limitations using the bioassay test, it should instead have set limitations for specific toxic pollutants. The regulations, however, do not require EPA to identify and regulate specific toxic pollutants in setting BAT effluent limitations. See [40 C.F.R. § 125.2\(d\)\(3\) \(1987\)](#). Previous limitations that regulated a characteristic of a waste stream without identifying specific pollutants have been upheld. See, e.g., [BASF Wyandotte, 598 F.2d at 651](#) (limiting Chemical Oxygen Demand (COD) in a waste stream). Recent amendments to the Act support the view that EPA may set limits on toxicity without regulating specific toxic pollutants. In developing information on methods for **[**25]** measuring water quality criteria for toxic pollutants, the Act specifically provides for establishing such measurements "on other bases than pollutant-by-pollutant criteria, including biological monitoring and assessment methods." [33 U.S.C.A. § 1314\(a\)\(8\) \(West Supp. 1988\)](#). Toxicity testing is a form of biological monitoring.

Additionally, the statutory definition of effluent limitations includes regulation of the "concentrations" of pollutants. [33 U.S.C. § 1362\(11\) \(1982\)](#). The toxicity test at issue here measures the lethal concentration of a toxic pollutant that will kill test organisms. See [API, 787 F.2d at 978](#). Accordingly, the toxicity test is an appropriate effluent limitation gauge.

API also contends that the toxicity test procedure is invalid because it has not been approved in accordance with EPA regulations pertaining either to approved or alternative test procedures for pollutants. See [40 C.F.R. §§ 136.3, 136.4, 136.5 \(1987\)](#). These regulations, however, do not apply. [HN10](#)^[↑] EPA regulations provide that EPA must use approved test procedures under 40 C.F.R. Part 136 "for the analyses of pollutants having approved methods under that part, and according to a test procedure **[**26]** specified in the permit for pollutants with no approved methods." [40 C.F.R. § 122.44\(i\)\(1\)\(iv\) \(1987\)](#). Because many of the pollutants covered by the permit do not have approved test methods, EPA may use "a test procedure specified in the permit." *Id.*

[*1431] *C. Toxic Pollutants: NRDC Challenges To The*

Overall Limitations

We now turn to the difficult issues raised by NRDC's challenge to the toxicity limitations. NRDC first claims that the toxicity limit of 30,000 ppm is not BAT. It stresses that the EPA based that standard upon use of the most toxic of the eight generic drilling muds used by the industry, a mud known as generic mud number one. NRDC argues that the EPA should have provided that drilling muds be barged to shore, or, in the alternative, that a standard of 100,000 ppm should have been adopted.

[HN11](#)^[↑] The BAT standard must establish effluent limitations that utilize the latest technology, see [Kennecott, 780 F.2d at 448](#), in order to reach "the greatest attainable level of effluent reduction which could be achieved." [NRDC, 822 F.2d at 115 n.12](#). See also [33 U.S.C. § 1311\(b\)\(2\)\(A\)\(i\)\(1982\)](#) (BAT should "result in reasonable further progress toward the national goal of eliminating **[**27]** the discharge of all pollutants").

The 30,000 ppm limitation in the permit appears to allow operators to use all generic muds except the most toxic drilling mud, see [51 Fed. Reg. at 24906](#), and seems readily achievable by average drilling procedures. It does not appear to push the industry to achieve greater levels of effluent control, as Congress intended BAT standards to do. See S. Rep. No. 414, 92nd Cong. 1st Sess., 42 (1971), *reprinted in* Leg. Hist. at 1460 (Administrator has mandate "to press technology and economics" to achieve attainable levels of effluent reduction); *id.* at 51-52, *reprinted in* Leg. Hist. at 1469-70 (effluent limitations may be based on technology not in actual or routine use, so long as such technology will be available at a reasonable time and cost); [Weyerhaeuser Co. v. Costle, 191 U.S. App. D.C. 309, 590 F.2d 1011, 1025 \(D.C. Cir. 1978\)](#) (Congress's intent was "to force each industry on its own to develop the technology necessary to achieve the Act's aspiring goal").

At the same time, however, the Act grants EPA some latitude in defining BAT. See [Kennecott, 780 F.2d at 448](#). The 30,000 ppm standard appears to be within the range upheld by the Fifth Circuit **[**28]** in the Alaska permit litigation. See [API 787 F.2d at 977-79](#).⁸ The

⁸ The toxicity limit here is numerically different from the limit upheld in the Alaska permit apparently because the test was differently administered. The parties appear to agree that the difference is not material.

30,000 ppm limitation does restrict the use of some of the most toxic muds and additives. Here, as we also observed in regard to BAT for produced water, some special latitude is in order because of the agency's interest in coordinating the standards in this permit with evolving national standards. In evaluating the 30,000 ppm limitation independent of the permit's concomitant alternative toxicity limits, we hold in the circumstances of this case that the 30,000 ppm standard is not arbitrary or capricious.⁹

[29]** We therefore turn to the alternative limit provisions. The alternative toxicity limit is a permit provision that allows operators to use mud systems more toxic than the 30,000 ppm toxicity limitation. The permit sets forth the procedure for requesting an alternative toxicity limit, in which the operator is required to submit certain information to the EPA prior to discharging the mud. See [51 Fed. Reg. at 24926](#) Section C.


NRDC argues, compellingly, that having established a 30,000 ppm BAT standard for the toxic pollutants, the agency cannot turn around and authorize discharges at variance from that standard. It points out that the Act expressly provides that "the Administrator may not modify any requirement [pertaining to BAT controls on the discharge of toxic pollutants.]" [33 U.S.C.A. § 1311 \(l\)\(West Supp. 1988\)](#).

[*1432] EPA's rejoinder is to the effect that each alternative limitation, in and of itself, amounts to BAT for the particular well involved. Yet BAT is to be established in accordance with technological standards and after consideration of congressionally enumerated factors. See [33 U.S.C. § 1314\(b\)\(2\)](#). Although the alternative toxicity test procedure requires operators to **[**30]** submit certain information, see [51 Fed. Reg. 24926](#), the alternative limit procedure is wholly silent as to what factors the agency is to consider in granting exceptions to the 30,000 ppm limit. Agency discretion is unfettered. We find no discernible standard that limits this discretion and defines when requests for alternative limits should be granted or denied. This is contrary both to the letter

⁹Because we uphold EPA's 30,000 ppm limitation at this time, we necessarily reject NRDC's argument that EPA was required to find that barging is BAT for toxic pollutants in drilling fluids. EPA has discretion to weigh costs among the various BAT factors. See [American Iron and Steel Inst., 526 F.2d at 1052](#). From the permit record, we cannot say that EPA acted arbitrarily in finding that barging was too expensive. See [50 Fed. Reg. at 34609-10](#).

and spirit of the Clean Water Act. [Section 1311\(l\)](#) prohibits the BAT standard from being modified as it applies to toxic pollutants, and the alternative limits appear to modify impermissibly the 30,000 ppm limit at the request of certain operators. In addition, the alternative limits conflict with the Act's goal of uniform standards within an industry. See [33 U.S.C. § 1314\(b\)\(2\)\(B\)](#); Committee on Public Works, 93rd Cong., 1st Sess., Report on S. 2270, *reprinted in* Leg. Hist. at 162, 172.

EPA here also suggests that it lacks sufficient information as to the ability of all wells to meet the 30,000 ppm standards and that this lack of knowledge justifies the exception. Yet EPA's alternative procedure creates a possibility of incalculable toxic discharges more toxic than the 30,000 **[**31]** ppm limit. It is an exception which threatens to swallow the rule.

There is similarly no way of ascertaining to what extent this alternative procedure may result in degradation of the ocean environment. [HN12](#)  Section 403(c) of the Act provides that "in any event where insufficient information exists on any proposed discharge [of pollutants] to make a reasonable judgment on any of the guidelines [concerning the degradation of waters, including the effect of disposal of pollutants on human health, marine life, esthetic, recreational, and economic values, as well as other considerations] no permit shall be issued." See [33 U.S.C. § 1343\(c\)\(2\)\(1982\)](#). Thus, the Act requires ocean polluters who receive a permit to satisfy both the technological requirements of the effluent limitations and also the ocean degradation criteria of section 403. See [Pacific Legal Found. v. Quarles, 440 F. Supp. 316, 326 \(C.D. Cal. 1977\)](#), *aff'd sub nom., Kilroy v. Quarles, 614 F.2d 225 (9th Cir. 1980)*, *cert. denied, 449 U.S. 825, 101 S. Ct. 88, 66 L. Ed. 2d 29 (1980)*. See also [33 U.S.C.A. § 1342\(a\)\(1\)](#) (permit may be issued only upon condition that the discharge of pollutants will meet all applicable requirements, including section **[**32]** 403(c) of the Act). EPA has issued regulations implementing section 403(c) of the Act. See 40 C.F.R. § 125 Subpart M (1987). These provisions prohibit the discharge of pollutants into the marine environment if EPA has insufficient information regarding ocean degradation, unless EPA makes certain detailed determinations. See *id.* The alternative "limitation" authorizing EPA to grant exceptions to the 30,000 ppm standard without apparent regard to the degradation of the marine environment does not comply with these statutes or regulations. For all of these reasons, we hold that the alternative "limitations" are arbitrary, capricious and contrary to law.

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D. Toxic Pollutants: Cadmium and Mercury

The NRDC's final challenge to the toxicity limitations is its contention that the EPA should have regulated discharges of cadmium and mercury. **[**33]** Trace amounts of cadmium and mercury are found in barite, which is a compound contained in drilling fluids. See [API, 787 F.2d at 971-72](#); [50 Fed. Reg. 23586 \(1985\)](#). Cadmium and mercury and their compounds are listed as toxic pollutants. See [40 C.F.R. §§ 401.15\(11\), \(45\)\(1987\)](#).

[*1433] Different types of barite deposits contain varying amounts of cadmium and mercury. Bedded deposits of barite (often referred to as "clean" barite) contain low metal levels, while vein deposits have much higher concentrations of cadmium and mercury. See [API, 787 F.2d at 973 n.13](#). Use of "clean barite" would reduce toxic discharges of cadmium and mercury.

EPA decided not to impose limits on the concentration of cadmium and mercury in discharged barite, because it said it did not know how much clean barite is available. It stated that "additional data is needed on the availability of barite which contains mercury and cadmium at the minimum concentrations prior to setting an effluent limitation on these metals." [51 Fed. Reg. at 24912](#). Although EPA has proposed national limitations on cadmium and mercury concentrations in discharged drill fluids that would require use of clean barite, see [50 Fed. Reg. \[*34\] at 34611](#), and the general permit for oil drilling in Alaska set such limits, see [API, 787 F.2d at 972-73](#), EPA concluded in this permit that "the large number of operations in the Gulf of Mexico prevent the [EPA] Regions from concluding that adequate supplies of clean barite currently are available for all Gulf operations." [51 Fed. Reg. at 24912](#).

We can accept the EPA's statement that it does not have complete information as to the size of the potential supply of clean barite and how long it will be available, but we perceive no justification for the agency's failure to provide in the Gulf of Mexico permit, as it did in the Alaska permit, that clean barite should be used as long

¹⁰ We note that in the Alaska permit case, the Fifth Circuit upheld a somewhat similar alternative limit for adding mineral oil to the drill mud. See [API, 787 F.2d at 979](#). The Alaska case, however, involved an industry challenge to the permit conditions, and therefore the court did not address the same issues or concerns raised here.

as it is available. Congress has demonstrated its intent to require industry to do as much as possible to control toxic discharges. See [33 U.S.C. § 1311\(b\)\(2\)\(A\)\(i\)](#) (BAT controls for toxic pollutants should "result in reasonable further progress toward the national goal of eliminating the discharge of all pollutants"). We hold that the agency's failure to provide any regulation at all on mercury and cadmium discharges is invalid.

E. Conventional Pollutants

The permit prohibits the discharge of drill **[**35]** cuttings generated during the use of oil-based muds because the oil within the cuttings are conventional pollutants. During the notice and comment proceedings, API, among others, submitted comments describing innovative technology which would incinerate or vaporize the oils within the cuttings, thus permitting the discharge of cuttings without oil pollution. API now contends that the agency failed to respond adequately to these comments. It is true that the agency did not expressly respond to the incineration technology comments. Since the technology is, as admitted by the industry, still innovative, the EPA has subsequently responded in an appropriate manner by issuing a demonstration permit to an oil company in order to provide EPA further information as it continues its development of national guidelines. See [52 Fed. Reg. 10262 \(1987\)](#). Accordingly, a remand in the context of this proceeding to require further comment would appear to serve no useful purpose.

NRDC also attacks the permit's regulation of drill cuttings. NRDC objects to the use of a visual sheen test as a method of monitoring compliance with the prohibition on the discharge of free oil. The visual sheen test **[**36]** amounts to "a visual observation of the receiving water" after drilling fluids are discharged, to determine if a sheen results on the surface of the water. [51 Fed. Reg. at 24899](#). As an alternative to this test, NRDC believes the permit should require the use of the static sheen test which was required by EPA Region 10 in the Alaska permit. See [API, 787 F.2d at 982-84](#).

The visual sheen test has been determined to be a "generally valid and useful standard" in other contexts. See *United States v. Chevron Oil Co.*, [583 F.2d 1357, 1363 \(5th Cir. 1978\)](#) (civil penalties under the Act for an oil spill). In addition, EPA has imposed certain modifications on the test to make it more reliable, see [51 Fed. Reg. at 24899](#), and there is no indication in the record that the conditions present in Alaska offshore operations, which led to the requirement of the static

sheen test, would similarly hamper use of [*1434] the visual sheen test under Gulf conditions. See [API, 787 F.2d at 983](#). Accordingly, because EPA has wide discretion and authority to determine monitoring requirements in NPDES permits, see [33 U.S.C.A. § 1318\(a\) \(West Supp. 1988\)](#); *United States Steel Corp. v. Train*, 556 F.2d [*37] 822, 850 (7th Cir. 1977), we find that EPA acted reasonably in deciding to require the visual sheen test as a method for monitoring compliance of the no discharge of oil limitation.

NRDC also contends that EPA erred by failing to require barging of conventional pollutants in drilling fluids as BCT for these pollutants. NRDC has failed to direct us to relevant portions of the permit record that suggest that EPA acted unreasonably in this regard. Accordingly, under these circumstances, we are unable to conclude that EPA's scientific determination regarding conventional pollutants was arbitrary and capricious.

III. The Diesel Pill

A "pill" is an operational method of dislodging stuck pipe. See generally [API, 787 F.2d at 974-75 n. 15](#). The final permit generally prohibits the discharge of drilling fluids containing diesel oil. See [51 Fed. Reg. at 24901, 24920-21](#). The permit, however, allows the discharge of diesel oil under certain circumstances, when diesel oil is added to a drilling "pill" as part of the Diesel Pill Monitoring Program (DPMP). See [id. at 24901, 24921](#). The DPMP was conceived in order to help EPA gather information in evaluating the effectiveness of recovery [*38] of diesel oil when a diesel pill is used. NRDC criticizes this program.

The DPMP was scheduled to be in effect for one year from the permit's effective date, see *id.*, unless EPA extended it for up to an additional year. *Id.* EPA extended the DPMP until September 30, 1987. [52 Fed. Reg. 25303-04 \(1987\)](#). EPA has not further extended this program. The challenge to the diesel pill monitoring program is therefore now moot.

The remaining issue is API's challenge to restrictions on the discharge of mud systems after the use of diesel pills. After the conclusion of the DPMP, the permit requires that operators using diesel pills follow DPMP requirements for pill removal, comply with the toxicity limitations prior to use of the pill, and meet the end of well toxicity limitation. See [51 Fed. Reg. at 24901](#). API argues that these restrictions on the use of diesel pills effectively amounts to a prohibition on their use.

Contrary to API's assertion, the permit does not ban the

use of diesel pills. Instead, it requires operators to dispose of the diesel pill itself, and in addition, to ensure that the remaining mud system meets the overall toxicity limitation before it is discharged. These [*39] conditions may require onshore disposal rather than discharge if the discharge would not meet the toxicity limitation. But these requirements do not amount to a ban on use of diesel pills.

As an alternative to diesel pills, the permit allows the use of mineral oil pills. Mineral oil pills may be used to free stuck pipes without the restrictions imposed on diesel pills. [Id. at 24900, 24921](#). API, however, contends that mineral pills are less successful in dislodging stuck pipe, and that EPA acted arbitrarily by concluding that mineral oil pills were more cost-effective than diesel oil pills. This contention lacks merit. EPA, in establishing BAT, set a permit limitation which prohibited the discharge of diesel pills. EPA took into account the added costs of barging and the higher success rate of diesel pills. The permit record affirmatively shows that the cost of maintaining and disposing of mineral pills -- including possible redrilling costs associated with its lower effectiveness compared with diesel pills in dislodging stuck pipe -- is less than the cost of maintaining and disposing of diesel pills. See, e.g., [51 Fed. Reg. at 24900](#); J.A. 383. Accordingly, EPA did not act [*40] arbitrarily or capriciously in concluding that mineral oil pills may be used as a cost-effective substitute for diesel oil pills.

IV. Jurisdiction of Florida to Regulate Water Standards More than Three Miles from the Coast

The NPDES general permit under consideration authorizes discharges from [*1435] offshore facilities located seaward of the outer boundary of the territorial seas of the states along the Gulf of Mexico. See [51 Fed. Reg. at 24897, 24898](#). Under the Act, [HN13](#) [↑] the term "territorial seas" is defined as the belt of the seas extending three miles from the coast. See [33 U.S.C. § 1362\(8\)\(1982\)](#). Accordingly, the permit involves only discharges from facilities located at a distance beyond three miles from the coast of any Gulf state.

The Act requires state certification of permits covering operations which may result in any discharge into "navigable waters." [33 U.S.C. § 1341\(a\)\(1\)\(1982\)](#). The Act defines [HN14](#) [↑] navigable waters as "the waters of the United States, including the territorial seas." [33 U.S.C. § 1362\(7\)\(1982\)](#). However, navigable waters includes only those waters *landward* from the outer boundary of the territorial seas. See [Pacific Legal](#)

Found. v. Costle, 586 F.2d 650, [****41**] 655-56 (9th Cir. 1978) (navigable waters do not include the "contiguous zone" or the "ocean," which both occupy areas beyond the territorial seas), *rev'd on other grounds*, 445 U.S. 198, 63 L. Ed. 2d 329, 100 S. Ct. 1095 (1980). Therefore, because this [HN15](#) [↑] permit covers only discharges in the waters beyond the "navigable waters" (i.e., the waters seaward beyond the three mile belt of the "territorial seas"), the permit does not require state certification. See [51 Fed. Reg. at 24903](#) ("State waters are not included within the area of coverage by the draft permit, therefore, state certification is not required.").

Florida contends that its maritime boundaries extend three marine *leagues* (approximately 10.3 miles) into the Gulf of Mexico. Therefore, Florida argues that the EPA must secure state certification that the discharges allowed under the EPA's general permit would comply with Florida's water quality standards.

Florida's argument is based upon its boundaries as defined in the Submerged Lands Act ("SLA") and subsequent Supreme Court interpretation. [HN16](#) [↑] The SLA, enacted in 1953 and codified at [43 U.S.C. §§ 1301-1315 \(1982 & Supp. II 1984\)](#), defines the boundaries of a state as:

The seaward boundaries of [****42**] a State or its boundaries in the Gulf of Mexico or any of the Great Lakes as they existed at the time such State became a member of the Union, or as heretofore approved by the Congress, or as extended or confirmed pursuant to section 1312 of this title but in no event shall the term "boundaries" or the term "lands beneath navigable waters" be interpreted as extending from the coast line more than three geographical miles into the Atlantic Ocean or the Pacific Ocean, or more than *three marine leagues into the Gulf of Mexico*.

[43 U.S.C.A. § 1301\(b\)\(West Supp. 1988\)](#)(emphasis added). [HN17](#) [↑] The SLA yields to the states the title and ownership "of the lands beneath navigable waters within the boundaries of the respective States, and the natural resources within such lands and waters." [43 U.S.C. § 1311\(a\)\(1982\)](#). The SLA further grants to the states "the right and power to manage, administer, lease, develop, and use said lands and natural resources all in accordance with applicable State law." *Id.*

Pursuant to the Submerged Lands Act, the Supreme Court decided [United States v. Louisiana](#), 363 U.S. 1, 4 L. Ed. 2d 1025, 80 S. Ct. 961 (1960); [United States v.](#)

[Florida](#), 363 U.S. 121, 4 L. Ed. 2d 1096, 80 S. Ct. 961 (1960). In these cases, Louisiana, [****43**] Texas, Mississippi, Alabama and Florida contested the United States' assertion that it was entitled to exclusive possession of "the lands, minerals, and other natural resources underlying the waters of the Gulf of Mexico more than *three geographical miles* seaward from the coast of each State." [Louisiana](#), 363 U.S. at 5 (emphasis in original). The Court noted that "all the claims arise and are decided under the Submerged Lands Act of 1953," [Florida](#), 363 U.S. at 121, and concluded that Texas and Florida were entitled to a maritime boundary of three leagues from their coasts under the Act. [Louisiana](#), 363 U.S. at 64; [Florida](#), 363 U.S. at 129. The specific language pertaining to Florida reads: "we hold that the Submerged Lands Act grants Florida a three-marine-league belt of land under the Gulf, [****1436**] seaward from its coastline, as described in Florida's 1868 Constitution." [Florida](#), 363 U.S. at 129. The Court also recognized that Florida's constitution has claimed a three-league boundary into the Gulf since 1868, and that in 1868 Florida submitted its constitution to the Congress, which approved Florida's claim to a boundary three leagues from its shores. [Id.](#) at 128. [****44**] [HN18](#) [↑]

The Clean Water Act provides that, except as expressly provided, the Act should not "be construed as impairing or in any manner affecting any right or jurisdiction of the States with respect to the waters (including boundary waters) of such States." [33 U.S.C. § 1370 \(1982\)](#). Thus, Florida contends that its three-league maritime boundary remains effective absent a clear indication from Congress that it intended to preempt state regulation. We conclude Congress did clearly indicate its intent to establish a uniform three-mile limit.

It is difficult to ignore the express language of the Clean Water Act's three-mile definition of territorial seas, a definition which differs from the SLA. If there were any doubt that Congress intended to create a uniform three-mile boundary in this act, despite older definitions in other acts, the doubt is resolved by the legislative history. The legislative history of the Clean Water Act indicates that Congress consciously defined the term "territorial seas" to make clear the jurisdictional limits of this particular legislation, and its relationship to other statutes. The Senate Report gives the reason for the definition:

The [Senate] Committee [on Public [****45**] Works] has added definitions of the terms territorial seas, contiguous zone, and ocean to describe clearly the

jurisdictional limits of the Act, and provide a basis for its relationship to other laws of the United States as well as to international law.

Leg. Hist. at 1495.

Moreover, there is no inconsistency between the SLA, which gives authority to Florida to regulate submerged lands to a distance of three leagues, and the provision in the Clean Water Act, which effectively limits exercise of state water pollution regulation to three miles. The SLA expressly provides that the United States retains all its "rights in and powers of regulation and control of . . . navigable waters for the constitutional purposes of commerce, navigation, national defense, and international affairs." [43 U.S.C. § 1314\(a\)\(1982\)](#). The Clean Water Act was enacted by Congress in the exercise of its constitutional power to regulate commerce. See [United States v. Ashland Oil and Transp. Co.](#), [504 F.2d 1317, 1325-29 \(6th Cir. 1974\)](#); [Leslie Salt Co. v. Froehilke](#), [403 F. Supp. 1292, 1296-97 \(N.D. Cal. 1974\)](#), *rev'd and modified on other grounds*, [578 F.2d 742 \(9th Cir. 1978\)](#).¹¹ Accordingly, because the **[**46]** Clean Water Act involves the regulation of commerce, the United States retains the power to regulate water quality in navigable waters, notwithstanding the SLA's grant of authority to Florida. See [Douglas v. Seacoast Products, Inc.](#), [431 U.S. 265, 283-84, 52 L. Ed. 2d 304, 97 S. Ct. 1740 \(1977\)](#) (state statute regulating commercial fishing in state territorial waters was preempted by federal statute, notwithstanding SLA's grant to the state of ownership and authority over the resources found in state territorial waters, because the federal statute involved commerce, and authority over commerce was retained by the federal government under the SLA).

The EPA is not required to obtain any certification from the State of Florida.

CONCLUSION

The petitions for review are granted in part and denied in part. The provisions of the NPDES permit pertaining to alternative toxicity limits and limits on cadmium and mercury are REMANDED. The permit **[**47]** in all other respects is upheld.

End of Document

¹¹ These cases involved the Federal Water Pollution Control Act, which is the predecessor to the Clean Water Act.