

UNITED STATES COURT OF APPEALS FOR THE FIFTH CIRCUIT

American Petroleum Institute v. Environmental Protection Agency

16 ERC 1694 (5th Cir. 1981) · No. Nos. 76-4497, 79-1829, and 79-2944 · Decided November 13, 1981

OPINION

American Petroleum Institute v. Environmental Protection Agency 661 F.2d 340

BROWN, J.

661 F.2d 340 16 ERC 1694, 12 Env'tl. L. Rep. 20,076 AMERICAN PETROLEUM INSTITUTE, et al., Petitioners, v. ENVIRONMENTAL PROTECTION AGENCY, Respondent. Nos. 76-4497, 79-1829 and 79-2944. United States Court of Appeals, Fifth Circuit. Unit A* Nov. 13, 1981. Liskow & Lewis, Gene W. Lafitte, J. Berry St. John, New Orleans, La., McCutchen, Black, Verleger & Shea, Robert K. Wrede, Philip K. Verleger, Sharon F. Rubalcava, Los Angeles, Cal., for petitioners. Jeffrey M. Gaba, E.P.A., Patrick Cafferty, Lloyd S. Guerci, Pollution-Control Section, Land & Nat. Resources, Washington, D. C., James W. Moorman, Asst. Atty. Gen., U. S. Dept. of Justice, Washington, D. C., for respondent. Petitions for Review of an Order of the Environmental Protection Agency. Before BROWN, THORNBERRY and WILLIAMS, Circuit Judges. JOHN R. BROWN, Circuit Judge: 1 In this Battle of Acronyms, the American Petroleum Institute (API) takes the field against the Environmental Protection Agency (EPA) to protest its actions with regard to National Pollutant Discharge Elimination System (NPDES) permits for oil and gas installations employing best practicable control technology currently available (BPT). At one end of the battleground stands the arm of the federal government charged with the protection of our environment, surrounded by a phalanx of regulations. Arrayed against it stands API, a trade organization that represents the Nation's petroleum industry, joined with its allies, some fifteen oil companies.¹ Both parties court our assistance, hoping with our intervention to rout the enemy and emerge victorious.² Declining the invitation, we judge the clash to be a draw. 2 API requests us to reverse or remand certain EPA Guidelines that limit the discharge of wastes generated by oil and gas production facilities. In the period since it filed these petitions, API has negotiated with EPA on many of the issues involved. Having resolved all the major problems, the couple has started down the aisle but pauses for a last question or two. Their differences boil down to four narrow points: upset, bypass, recategorization of certain wells, and "stripper" wells. As to those final questions, we affirm EPA's actions with regard to upset and bypass, but remand to the Agency for further consideration of the remaining two issues. Siamese Petitioners 3 In this case, yet another in the ongoing chronicles of the EPA and its efforts to defend the American environment, API seeks review of EPA's Final Effluent Guidelines for the oil and gas extraction "point source category".³ Under those Guidelines,⁴ EPA restricted the discharge of pollutants from oil and gas exploration and production facilities. API asserts that the Guidelines contravene both the Clean Water Act, 33

U.S.C. § 1251 et seq.,⁵ their statutory begetter, and the Administrative Procedure Act, 5 U.S.C. § 551 et seq. Jurisdiction exists under section 509(b)(1)(E) of the Clean Water Act, 33 U.S.C. § 1369(b)(1)(E).⁴ EPA originally issued separate, interim final regulations establishing Guidelines for the "onshore" and "offshore" segments of the industry.⁶ Petitioners sought review in this court and in the U.S. Court of Appeals for the Ninth Circuit of the onshore and offshore effluent Guidelines, respectively.⁷ After the filing of petitioners' opening briefs in both circuits, EPA promulgated one set of "final" regulations, combining the Guidelines and standards for both the onshore and offshore segments. The parties then sought to amend their petitions. As these regulations, unlike the interim ones, constituted an integrated whole, the Ninth Circuit transferred the offshore petitions to the Fifth Circuit. This Court on August 30, 1979 granted leave to amend and to consolidate the petitions for hearing in this Circuit. Accordingly, our decision will dispose of issues raised by the parties initially in both this and the Ninth Circuit.

Oil Wells That End Well 5 Americans have drilled for oil since 1859. Initially, oilmen conducted their operations exclusively on land. Offshore oil development began at the close of the century with the drilling of wells from wooden docks extending short distances from the coastline. As man's uses and need for oil and its by-products have increased, so have the industry's efforts to obtain it. Today, the oil industry operates in three different spheres. Exploration involves mapping, sub-surface surveys, and exploratory drilling to ascertain the existence of oil and gas deposits. Through drilling, which necessitates the boring of wells deep into the earth's crust, oil producers exploit reservoirs of oil, gas and water lying hundreds or thousands of feet inside the earth. Production involves bringing these elements to the surface and then processing them into the finished products for which our society has found so many uses.⁸

6 Today, in addition to a landscape of oil rigs throughout many parts of our Nation, offshore activities take place in the seas off both the Atlantic and Pacific coasts, in the Gulf of Mexico, and in the frigid waters around Alaska. Offshore drilling produces approximately 1.3 million barrels of oil per day, about 16% of the Nation's total. 7 Just as one finds a variety of architectural styles in the average suburb, so one finds different types of oil rigs in the offshore neighborhood. Mobile rigs drill from floating barges or hulls. Especially in coastal areas, oil companies drill wells from barges, with production facilities established adjacent to the well on platforms or artificial islands. Yet others are floated into place and then raised on telescoping legs. Stationary rigs, by contrast, sit astride steel platforms resting on the seabed which do justice to Rube Goldberg. 8 The oil companies operate in excess of one thousand offshore facilities, the majority of which are in the Gulf of Mexico. They drill in water ranging from less than 100 feet to over 1000 feet deep. Some wells are within swimming distance while others are located as far as 100 miles from shore. Despite these differences, all oil and gas production facilities share one common trait: EPA regulation of waste discharges. And it is primarily upon that issue that API finds fault with EPA's final regulations. 9 All oil wells generate wastes. To produce the oil that our energy-hungry nation demands, one must take the bitter with the sweet, the waste water with the black gold. Oil wells produce three basic

types of effluent. The first two, deck drainage⁹ and sanitary wastes from kitchens and toilets, are not in question here. ¹⁰ The third, and inevitable by-product of oil drilling, is "produced water". The underground reservoirs that contain oil also contain fossil seawater water that has been in the ground during the time of oil formation. This unsavory mineral water rises to the surface in large quantities with the oil during production. The mixture of oil and water is then processed and separated. The oil goes into a pipeline for further processing, but the water remains, an unwanted commodity. Onshore facilities customarily reinject this produced water underground. Offshore facilities cannot do so. The problem then arises, what to do with the produced water? In most cases, it is treated on the rig. Existing technology furnishes several methods for treating produced water.¹⁰ The goal of all methods is to cause oil that is dissolved in the water to rise to the surface, where it is skimmed off. Following treatment, the water is pumped overboard into the sea from which it came eons ago. ¹¹ In certain areas of Louisiana and Texas, adjacent to bodies of saline water, wells located on terra firma have for many years, with the approval of the relevant state authorities, emptied this produced water into bays, inlets, estuaries, and marshes rather than reinject it. Statutory Forest and Regulatory Trees ¹² In the Federal Water Pollution Control Act of 1972, predecessor to the Clean Water Act, Congress declared as its ambitious purpose "to restore and maintain the chemical, physical and biological integrity of the Nation's waters." Section 101(a). It proposed to eliminate the discharge of pollutants into the Nation's waterways by 1985 and, where possible, sufficiently to improve water quality by 1983 so as to protect marine life and provide clean water for recreational uses. To accomplish these goals, Congress set two types of limitations on the discharge of pollutants. Section 303 of the Act sets water quality limitations to insure that no source causes the amount of pollution in a body of water to exceed certain minimum standards. Section 301, in a radical departure from earlier Acts, goes further, to establish "technology-based" limitations. These limitations require industry, regardless of a discharge's effect on water quality, to employ defined levels of technology to meet effluent limitations. Analogous to a strict liability standard, this section mandated technological improvements and imposed stringent pollution restrictions even where the discharge caused no discernible harm to the environment.¹¹ By July 1, 1977, all sources had to employ the "best practicable control technology currently available" (BPT) to control pollution. 33 U.S.C. § 1311(b)(1)(A). By 1983, those sources must meet even more stringent standards, the "best available technology economically achievable" (BAT). ¹³ Section 301 of the Act also directed the Administrator of the EPA within one year to publish regulations providing "Guidelines" for use in establishing effluent limitations. These Guidelines, really a form of nationally applicable regulations for different categories of point sources, would identify the degree to which pollutants could be reduced by the application of BPT. See *E. I. duPont de Nemours & Co., Inc. v. Train*, 430 U.S. 112, 128, 97 S.Ct. 965, 975, 51 L.Ed.2d 204, 217 (1977). EPA would apply these standards uniformly to all sources unless they qualified for a variance under BPT regulations.¹² ¹⁴ Section 304(b)(1)(B) specifies a range of factors which the Administrator must take into account in establishing the

BPT limitations. They include: 15 (T)he total cost of application of technology in relation to the effluent reduction benefits to be achieved from such application, and (also) the age of equipment and facilities involved, the process employed, the engineering aspects of the application of various types of control techniques, process changes, non-water quality environmental impact (including energy requirements), and such other factors as the Administrator deems appropriate.... 16 Section 402 of the Act, 33 U.S.C. § 1342, created the National Pollutant Discharge Elimination System.¹³ Under NPDES, the EPA can issue a permit which magically renders legal a discharge that would otherwise be unlawful. A permit thus "transforms 'generally applicable effluent limitations ... into obligations (including a timetable for compliance) of the individual discharger.' " EPA v. California Ex Rel. State Water Resources Control Board, 426 U.S. 200, 205, 96 S.Ct. 2022, 2025, 48 L.Ed.2d 578, 583 (1976). Rounding out the statutory framework, §§ 301(a) and 309 provide stringent criminal and civil penalties for discharges in excess of those allowed by an NPDES permit.¹⁴ EPA by the Horns 17 Try as EPA might, the task of specifying Guidelines for innumerable point source categories proved, not surprisingly, impossible to complete within a year. The judiciary intervened, substituting its own timetable in place of the failed statutory deadline. National Resources Defense Council, Inc. v. Train, 510 F.2d 692 (D.C.Cir.1975). On September 15, 1975, EPA published what it euphemistically but contradictorily labelled "interim final" Guidelines for the offshore oil and gas industry. Approximately one year later, the Agency published regulations for the onshore segment of the oil and gas category. 18 EPA's efforts to comply with the congressional mandate actually began in 1974 with a study of oil and gas platforms operating in the estuarine, coastal and Outer Continental Shelf areas. The study led to a preliminary report entitled "Best Practicable Control Technology and Effluent Limitations for Offshore Oil and Gas Operations."¹⁵ The preliminary report identified the major sources of pollution from the platforms and analyzed the pollution control technology that offshore operators used. It took note of the distinction between treatment in offshore areas and on land-based platforms.¹⁶ In onshore areas, the discharge of produced water is forbidden because it is salt water while the receiving waters are fresh. Thus, operators must reinject the produced water underground. While the salt/fresh water dichotomy creates no problem for the offshore operators, the discharge of produced water there is equally impermissible. Yet reinjection of produced water on offshore platforms is virtually impossible because space restrictions limit the feasibility of installing the necessary equipment. 19 Relying upon the conclusions of the preliminary report, EPA in late 1974 published a "Draft Development Document for Effluent Limitations Guidelines and New Source Performance Standards for the Oil and Gas Extraction Point Source Category" (Draft Development Document). The Document selected the treatment systems that constituted BPT and then proposed appropriate effluent limitations. For onshore areas, BPT allowed for no discharge of produced water. Offshore, a platform could discharge produced water providing it installed treatment systems to remove oil and grease from the water before dumping it overboard.¹⁷

EPA OKs API BPT

20 EPA circulated this Draft Development Document to interested parties and, after reviewing their comments, published interim final regulations for the offshore segment. Onshore regulations followed in October 1976. Once again, EPA solicited and received comments. Representatives of the oil and gas industry expressed their concerns and made suggestions for improvements.¹⁸ The industry also filed these petitions for review of EPA's actions in this and the Ninth Circuit. ²¹ In the interim, the record grew as the parties composed their differences by parcel post.¹⁹ In an encouraging spirit of cooperation, industry representatives wrote to EPA offering criticisms, suggestions and commentary, and EPA responded in kind. Out of this exchange of information, much good has come. EPA took some changes to heart and entered into Stipulations of Final Settlement in the Ninth Circuit regarding the offshore regulations and in this Circuit for the onshore regulations. ²² EPA promulgated the final Guidelines on April 13, 1979. Effluent Guidelines and Standards, Oil and Gas Extraction Point Source Category, 44 Fed.Reg. 22069. They apply to the offshore, onshore, coastal, and wildlife use subcategories in the oil and gas extraction industry²⁰ and incorporate the Stipulations of Partial Settlement with the changes agreed upon by the parties. Combining both segments in one Guideline, this new set superceded the earlier, interim final Guidelines. ²³ The Guidelines combined the far offshore and near offshore subcategories into a single, offshore subcategory. They revised the description of the coastal subcategory, as a result of which the Texas and Louisiana wells located on land but which traditionally had discharged produced water into coastal waters could no longer do so. The Guidelines made some changes in the "stripper" subcategory definition, but once again deferred setting effluent limitations due to a lack of information. Perhaps most important, despite strenuous objection by petitioners API and the oil and gas producers, EPA declined to incorporate upset and bypass provisions in the Guidelines themselves. EPA explained that such provisions "should be included in NPDES permits" (Respondent's brief at 24), adding that the upset and bypass issue "should be dealt with in the context of permit issuance," 44 Fed.Reg. at 22075. ²⁴ As the Guidelines noted, "in the course of negotiations on these cases, stipulations were entered in which the Agency agreed to promulgate certain of the regulations contained in this Notice." 44 Fed.Reg. at 22069. The parties' commendable willingness to negotiate their differences should not, and does not, go unnoticed by this Court. Nor do we hesitate to say that, as a result of these stipulations, the issues before us today are four in number, but narrow in scope. Issues and Answers ²⁵ Upset and Bypass. This issue lies at the heart of the parties' continuing disagreement. "Upset" refers to the problem where, for reasons beyond the operator's control, waste treatment equipment fails to operate at the level required by EPA regulations. Examples of upsets include equipment malfunctions, changes in the nature and rate of flow of water through the treatment system, chemical changes or reactions, and routine platform operations that affect the treatment system. As both parties acknowledge, upsets are an inherent part of current technology. API and EPA diverge, however, on the question of the appropriate treatment of upsets within the Guidelines' format. ²⁶

"Bypass" refers to the necessity, from time to time, to route wastes around all or portions of treatment systems so that operators can perform maintenance. Even in our era of technological derring-do, equipment from time to time requires cleaning, overhauling or routine repair. Given the cost of treatment equipment and space limitations on platforms, operators cannot carry spares; when such maintenance becomes necessary, some pollutants must inevitably be discharged.²¹ On this issue, too, API and EPA have failed to reach an agreement. ²⁷ API insists that upset and bypass provisions be included within the Guidelines themselves. EPA, it points out, based BPT limitations upon surveys that expressly excluded upset and bypass discharge figures from the data base.²² As a result, BPT figures are skewed they reflect ideal operating conditions rather than reality. Moreover, BPT is based upon standards that the model wells could meet only 99% of the time.²³ In other words, not even the technologically superior wells upon which EPA based BPT limitations can meet the requirements of those limitations all the time. If EPA does not include upset and bypass provisions within the Guidelines, then, API asserts, all wells will of necessity be in violation of EPA's standards through no fault of their own at least 1% of the time.²⁴ ²⁸ Recategorization of Coastal Discharge. API also attacks EPA's recategorization from the coastal subcategory to the onshore subcategory of those onshore wells that historically have discharged produced water into coastal waterways. The coastal subcategory, as initially defined, described a fixed geographical area in Louisiana and Texas, where state law permitted the discharge of produced water into brackish or saline surface waters.²⁵ EPA has now concluded that coastal means coastal and onshore means onshore, and the twain, presumably, shall not meet. Accordingly, it requires those wells previously denominated coastal but which sit on dry land to adhere to the "no discharge of produced water" standard applicable to onshore wells that have always reinjected the water underground. API asserts that this change will prove "devastating", forcing well operators to the Hobson's choice of incurring tremendous costs of reinjecting the produced water or ceasing operation altogether. ²⁹ Stripper Wells. Stripper wells²⁶ are those wells that produce less than ten barrels per day of crude oil although operating at the maximum feasible rate of production. The EPA guidelines for strippers merely describe the subcategory, reserving the limitations for a later date.²⁷ They apply only to stripper oil wells and nowhere mention marginal wells producing natural gas. API asserts that the criteria upon which EPA relied to describe the stripper subcategory for oil wells apply equally to marginal gas wells, and that the Agency's exclusion of the gas wells from the subcategory was arbitrary and capricious. Thicket in Overton Park ³⁰ Before proceeding, we must specify the standard of review that we follow. That is no mean task. As the EPA's promulgation of regulations governing effluent limitations amounts to "rulemaking" for the purposes of the Administrative Procedure Act, we first turn for guidance to the appropriate section of that Act, 5 U.S.C. § 706: Scope of review ³¹ To the extent necessary to decision and when presented, the reviewing court shall decide all relevant questions of law, interpret constitutional and statutory provisions, and determine the meaning or applicability of the terms of an agency action. The reviewing court shall ³²

(1) compel agency action unlawfully withheld or unreasonably delayed; and

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(2) hold unlawful and set aside agency action, findings, and conclusions found to be

34 (A) arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law; 35

(B) contrary to constitutional right, power, privilege, or immunity; 36 (C) in excess of statutory

jurisdiction, authority, or limitations, or short of statutory right; 37 (D) without observance of

procedure required by law; 38 (E) unsupported by substantial evidence in a case subject to

sections 556 and 557 of this title or otherwise reviewed on the record of an agency hearing

provided by statute; or 39 (F) unwarranted by the facts to the extent that the facts are subject to

trial de novo by the reviewing court. 40 In making the foregoing determinations, the court shall

review the whole record or those parts of it cited by a party, and due account shall be taken of the

rule of prejudicial error. 41 These terms have meant different things to different courts. They are

"far from being entirely discrete as a matter of the ordinary meaning of language, and, indeed, are

in some respects cumulative rather than differential in their applicability." *Weyerhaeuser Co. v.*

Costle, 590 F.2d 1011, 1024 (D.C.Cir.1978). 42 Less than fully illumined by the statutory

language, we turn to the Supreme Court's authoritative pronouncement in *Citizens to Preserve*

Overton Park v. Volpe, 401 U.S. 402, 91 S.Ct. 814, 28 L.Ed.2d 136 (1971). *Overton Park* requires

a reviewing court "to engage in a substantial inquiry." An agency decision "is entitled to a

presumption of regularity. But that presumption is not to shield (the agency's) action from a

thorough, probing, in-depth review." 401 U.S. at 415, 91 S.Ct. at 823 (citations omitted). In

assessing the decision, a court must consider "whether the decision was based on a consideration

of the relevant factors and whether there has been a clear error of judgment." Although the review

of the facts "is to be searching and careful, the ultimate standard of review is a narrow one. The

court is not empowered to substitute its judgment for that of the agency." 401 U.S. at 416, 91 S.Ct.

at 823. 43 In attempting to understand and apply the *Overton Park* rule, the Courts of Appeals

have also struggled to define the scope of review. We are to determine whether the agency's

actions are "the result of reasoned decision-making." *Hooker Chemicals & Plastics Corp. v.*

Train, supra, citing *American Meat Institute v. EPA*, 526 F.2d 442, 452 (7th Cir. 1975). EPA's

interpretation of the governing statutes "is to be given considerable deference." *ASARCO, Inc. v.*

EPA, 578 F.2d 319, 325 (D.C. Cir. 1978). We must even "uphold a decision of less than ideal

clarity if the agency's path may reasonably be discerned." *American Meat Institute*, supra at 453,

citing *Bowman Transportation, Inc. v. Arkansas-Best Freight Systems, Inc.*, 419 U.S. 281, 286, 95

S.Ct. 438, 442, 42 L.Ed.2d 447, 456 (1974). Yet what the Courts have given, they can also take

away. Judicial review "must be based on something more than trust and faith in EPA's

experience." *Appalachian Power Co. v. Train*, 545 F.2d 1351, 1365 (4th Cir. 1976) (*Appalachian*

II). "This is not to say, however, that we must rubber-stamp the agency decision as correct. To do

so would render the appellate process a superfluous (although time-consuming) ritual." *Ethyl*

Corp. v. EPA, 541 F.2d 1, 34 (D.C. Cir. 1976) (en banc), cert. denied sub nom. *E. I. duPont de*

Nemours & Co., Inc. v. EPA, 426 U.S. 941, 96 S.Ct. 2662, 49 L.Ed.2d 394 (1976). Courts require that "administrative agencies 'articulate the criteria' employed in reaching their result and are no longer content with mere administrative ipse dixits based on supposed administrative expertise." Appalachian Power Co. v. EPA, 477 F.2d 495, 507 (4th Cir. 1973) (Appalachian I). 44 In summary, we must accord the agency considerable, but not too much deference; it is entitled to exercise its discretion, but only so far and no further; and its decision need not be ideal or even, perhaps, correct so long as not "arbitrary" or "capricious" and so long as the agency gave at least minimal consideration to the relevant facts as contained in the record. 45 Our first feat is to plunge into the record, which in this case hardly deserves that appellation. Bereft of testimony or factual findings,²⁸ it consists of 23,243 pages of charts, graphs, tables, computer printouts, and scientific studies helpful only in that many contradict one another. Moreover, since APA labored under a judicial order to produce regulations before it was prepared to do so, it in effect developed the record after it issued the regulations. We must, therefore, work backwards from EPA's final Guidelines to the mass of material in the record. Notwithstanding the possibility of judicial omniscience,²⁹ we of necessity heed Judge Griffin Bell's admonition. "While the Overton Park mandate does require that we base our review on the entire record before the agency, we do not interpret it to require that we plunge into the record unaided by the parties.... Lest we make of this case a career, we must generally restrict our consideration to the parties' specific citations." Texas v. EPA, 499 F.2d 289, 297 (5th Cir. 1974) (Bell, J.), cert. denied sub nom. Exxon Corp. v. EPA, 427 U.S. 905, 96 S.Ct. 3191, 49 L.Ed.2d 1199 (1976). And so in this case. 46 How do you spell relief? 47 That EPA's Final Effluent Regulations must adequately provide for upsets and bypasses, no one denies. The record proves that upsets and bypasses are as much a part of BPT as modern equipment and technological data. Despite best efforts at compliance, even a facility employing the best available equipment will occasionally exceed discharge limitations. Relying on the language of the Clean Water Act, 33 U.S.C. § 1314(b)(1)(A),³⁰ API argues persuasively that current BPT includes occasional upsets and bypasses.³¹ The statutory language specifically requires consideration of such factors as "the age of equipment and facilities involved", "engineering aspects" and "process changes". EPA cannot regulate by whim; it must take into account both the technological potential and existing limitations when it sets BPT standards. Without some absolution for the oil and gas producers from the harsh penalties that the Act imposes on "exceedances", EPA's final regulations would indeed suffer from serious infirmities. 48 We do not understand EPA to dispute this contention.³² Their answer, quite simply, is that the Regulations, not the Guidelines, take care of this problem. The final Regulations contain upset and bypass provisions which largely satisfy API's concerns. Not yet content, API desires they be expressly included in the Guidelines. It contends that to leave the matter in the hands of the permit issuer amounts to a grant of discretion, with no guarantee that a facility will receive upset and bypass relief when it needs it. API refers us to two cases to buttress its argument. Marathon Oil Company v. EPA, 564 F.2d 1253 (9th Cir. 1977), a case remarkably similar to the present action,

involved a challenge to EPA effluent limitations. The oil company insisted that the use of "confidence intervals" and BPT necessitated upset and bypass provisions. EPA refused, promising to exercise prosecutorial discretion. API argued that discretion did not satisfy the statute. The Court agreed. To confirm that we understand its decision, we must look carefully at what the Court did and did not say. 49 The issue raised by petitioners is whether a formal "upset provision" must be written into the permits. The EPA has refused to insert an "upset provision" into petitioners' permits, arguing that excursions can be adequately dealt with informally. Petitioners argue that this is not enough: that the permits must formally provide that upsets beyond the control of the permit holder are not violations of the permit standards. 50 We agree. The Federal Water Pollution Control Act requires point sources of pollution to utilize the "best practicable control technology currently available" prior to 1983. The EPA cannot impose a higher standard without violating the Control Act. And yet the permits as currently written do exactly that. The permits on their face require petitioners to meet the standards 100 percent of the time. But platforms using BPCTCA can only be expected to achieve the effluent standards 97.5 percent of the time in the case of deck drainage and 99 percent of the time in the case of produced water. We, therefore, remand to the EPA with instructions to insert upset provisions into the permits. 51 It is not an adequate response that the EPA will informally take BPCTCA into account in deciding whether or not to prosecute "violators." First, there is no guarantee that the EPA will choose to exercise this discretion. And once a prosecution is brought, the courts have no authority to dismiss the complaint on the grounds that the permit holder could not have avoided the violation. 52 The Ninth Circuit's holding is of no avail to API. The Court required EPA to furnish a more reliable and certain means of upset and bypass relief than its promise to be nice. It did not obligate EPA to insert the provisions in the applicable Guidelines. Marathon supports the proposition that EPA must afford the oil companies some means of upset and bypass forgiveness, but it does not require the Agency to insert those provisions in the Guidelines under review. 53 *FMC Corp. v. Train*, 539 F.2d 973 (4th Cir. 1976), is to the same effect. FMC sought to set aside effluent limitations guidelines for the plastics industry. The company argued that EPA's failure to provide for "excursions" was arbitrary, since the data upon which it based its decision demonstrated that even proper treatment facilities would occasionally violate the standards. Judge Rives of this Court, sitting by designation, agreed. "Plant owners should not be subject to sanctions when they are operating a proper treatment facility," he declared. "(T)his Court sees no reason why appropriate excursion provisions should not be incorporated in these water pollution regulations." 539 F.2d at 986. Although the Court did mention regulations, the clear tenor of the opinion is to the effect that EPA must somewhere provide for excursion. That opinion does not require EPA to place the upset and bypass language in the Guidelines if it chooses not to. 54 API further points out that the logical repository of provisions tailored to the needs and characteristics of the oil industry is in the oil and gas Guidelines rather than in generic regulations applicable to an assortment of unrelated industries. While we are inclined to agree, API has cited and, we suspect, could find no support for

the notion that under the Administrative Procedure Act an Agency must follow the most logical or sensible course of action open to it. The potential ramifications of such a requirement are beyond the judicial imagination. 55 EPA retorts that API has lost sight of the forest and the trees as well. It avers that upset and bypass provisions properly belong in the generic NPDES regulations and that such inclusion more than suffices to dispel the industry's fears. 56 The upset and bypass provisions are contained in 40 C.F.R. § 122.60, entitled "Additional Conditions Applicable to All Permits", which expressly states: 57 The following conditions, in addition to those set forth in § 122.7, apply to all NPDES permits: * * * 58 (g) bypass ... 59 (h) upset ... 60 (emphasis added). These provisions "are required to be included in all proposed permits issued by EPA." Respondent's brief at 34 (emphasis in original and added). All NPDES permits, whether issued by EPA or by a state, must incorporate these provisions. If, as EPA assures us, these provisions do apply to all gas and oil NPDES permits, whether issued by the EPA or the states, then our conclusion furnishes the assurance that in defense of enforcement proceedings, these provisions are as much included as though spelled out in the formal Guidelines. 61 EPA explains its preference for including the provisions within the NPDES permits as follows. This method allows the oil companies an affirmative defense to any prosecutions under the Clean Water Act without shifting the burden of proof to EPA. Such an approach seems proper: given Congress' intent to clean up the Nation's waters, certainly a polluter should bear the burden of justifying an "exceedance" rather than force EPA to prove that it was not permissible. 62 Courts have generally upheld EPA's discretion in issuing point source effluent limitations regulations. *Hooker Chemicals & Plastics Corp. v. Train*, supra, considered and rejected claims similar to those of API. There, a chemical manufacturer objected to EPA's promulgation of effluent limitations by regulations. The company wanted EPA to work on an industry-by-industry basis rather than deal with a variety of industries under one broad set of regulations. The Second Circuit upheld EPA's action as a reasonable interpretation of a statute "devoid of plain meaning", 537 F.2d at 627, citing *American Iron & Steel Institute v. EPA*, 526 F.2d 1027 (3rd Cir. 1975), modified, 560 F.2d 589 (1977), cert. denied 435 U.S. 914, 98 S.Ct. 1467, 55 L.Ed.2d 505 (1978), and *E. I. duPont de Nemours & Co., Inc. v. Train*, 528 F.2d 1136 (4th Cir. 1975) (duPont I), affirmed, 430 U.S. 112, 97 S.Ct. 965, 51 L.Ed.2d 204 (1977). 63 In *E. I. duPont de Nemours & Co., Inc. v. Train*, 541 F.2d 1018 (4th Cir. 1976) (duPont II), aff'd in part and rev'd in part, 430 U.S. 112, 97 S.Ct. 965, 51 L.Ed.2d 204 (1977), chemical producers challenged EPA's authority to issue effluent limitations by regulations under § 301 of the Clean Water Act. Criticizing the "vague, uncertain and inconsistent" Act as "unworkable", the Court, in effect, threw up its hands in despair and approved the Agency's action as "reasonable" and "within the performance of (its) functions." 541 F.2d at 1027. Accord, *Appalachian II*, supra. 64 In *American Petroleum Institute v. EPA*, 540 F.2d 1023 (10th Cir. 1976), cert. denied sub nom. *Exxon Corp. v. EPA*, 430 U.S. 922, 97 S.Ct. 1340, 51 L.Ed.2d 601 (1977), petitioners herein challenged EPA's authority to promulgate effluent limitations by regulations. The Tenth Circuit, citing duPont II, concluded, "the promulgation of the

limitations was a reasonable exercise of a congressionally delegated power. That action is reasonable and we accept it." 540 F.2d at 1030. 65 The conclusions that we draw from these cases tend to support EPA's actions. Although none dealt with exactly this issue the earlier cases involved EPA's right to issue regulations at all the Circuits deferred to EPA's presumed expertise. So do we. 66 While we confess to some puzzlement over EPA's obstinate refusal to include the upset and bypass provisions in the Guidelines in order to conserve a few paragraphs in the Federal Register, an alteration that counsel in oral argument conceded would make little or no difference to the Agency, we hesitate to declare the Agency's action arbitrary or capricious. EPA has categorically declared that the otherwise acceptable upset and bypass provisions contained in the generic regulations afford API and the oil companies the safe harbor they seek. Upon these assurances, while acknowledging API's concerns, we affirm with some misgivings EPA's use of discretion. Bypass: the Heart of the Matter 67 API also challenges the wording of the bypass provisions. It asserts that confusion in the description of those circumstances in which the oil companies may lawfully bypass results in their being left "adrift on a sea of uncertainty", Joint Reply Brief at 11, and requests the Court more precisely to chart a course between illegal and legal conduct. 68 When water treatment facilities must be repaired or replaced, oil producers may have to bypass all or part of the equipment. As a result, effluent discharge may temporarily exceed EPA limitations. Sometimes, the operators' only alternative to exceeding the limitations is to "shut in" the well.³³ Shutting in means ceasing production. Operators must shut in wells for safety reasons, e. g., during violent storms, but they avoid doing so except when absolutely necessary because of the substantial costs and uncertainty involved. Once a well is shut in, no one knows whether or not it will return to production. The risk that a well will cease to produce, or produce at a lower level, always exists. 69 The current regulations state that permit holders may bypass to avoid loss of life, personal injury or severe property damage.³⁴ They define severe property damage as follows: 70 substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. 71 40 C.F.R. § 122.60(g)(1) (ii). API characterizes the wording as unconstitutionally vague. Joint Reply Brief at 10. Looking to the plain meaning of the language, we disagree. If there is one universal concept in our jurisprudence, it is the notion of "reasonable expectations". The regulations here impose upon the oil companies the burden of showing that they entertained a reasonable belief that shutting in a well would result in a loss of natural resources. Such a showing seems almost *prima facie* any shut-in apparently creates such a risk. The oil company must then also demonstrate that it had no feasible alternative to shutting in, such as bypassing only part of the equipment. In other words, it bears the burden of presenting proof as to these two facets of a shut-in. This requirement, of course, accords fully with the congressional intent that polluters, not EPA, have the duty of justifying pollution, see *supra*. Once it makes such a reasonable showing, a permit for the bypass

must issue unless EPA can prove that the operator could have avoided the bypass through some feasible alternative. The burden thus shifts to EPA at that point to refute an oil company's proof that bypassing was necessary and the only feasible course. As the record shows that bypasses occur during a very small fraction of total operating hours, we believe that no problems will likely arise. 72 API cites the Marathon case to support its argument. Marathon, however, involved a different definition of "severe property damage". The Ninth Circuit found that that definition was possibly "vague" and "may be seen as ambiguous." 564 F.2d at 1274. Accordingly, it remanded to the Agency "to clarify that the shutting in of a well, under given circumstances, can constitute 'severe property damage' and, if the only alternative, that such shutting in can permit the bypassing of the pollution control system." Id. at 1274-1275. We believe that the current dispute is one largely of semantics; the current statutory language and the Marathon dictate will protect API's interests by defining the shutting in of a well as an instance of severe property damage which excuses bypassing. On that understanding, we affirm. The Coastal Subcategory Reclassification

73 As we have noted,³⁵ API challenges EPA's action in reclassifying certain wells from coastal to onshore as a violation of the Administrative Procedure Act and of the Clean Water Act, § 304(b)(1)(B). We will deal with those issues in order. 74 Uttering its battle cry "arbitrary and capricious", API attacks EPA's decision to reclassify as onshore those oil and gas wells that discharge into coastal (i. e., saline) waters. For support, API clings to the interim final Guidelines which had placed those wells in the coastal category. The primary reason for the coastal/onshore distinction was that onshore wells would discharge into fresh water if not required to reinject their produced water. The wells in question, however, discharge into salt water. Therefore, API triumphantly concludes, the reclassification, placing those wells in the category that EPA had created to prevent discharge into fresh water, is illogical, and thus arbitrary and capricious. 75 While on first blush API's complaint seems well-taken, a moment's reflection reveals the flaw. Granted that EPA originally placed the wells in question in the coastal category, the simple fact is, the Agency changed its mind. Nothing in the Administrative Procedure Act prohibits an agency from changing its mind, if that change aids it in its appointed task. Here, EPA concluded that water quality and the environment would benefit from a prohibition of produced water discharge. Such a decision falls squarely within EPA's discretion as well as the statutory purpose, and we are loathe to disturb it on appeal. 76 Having found that the EPA did not violate the Administrative Procedure Act, we now turn to API's challenge under the Clean Water Act. API contends that the Agency failed to take into account the cost of compliance when it made the recategorization.³⁶ § 304(b)(1)(B) of the Act requires the Agency to consider "the total cost of application of technology in relation to the effluent reduction benefits to be achieved from such application." Courts have viewed this requirement in different ways. "(W)hile it is clear that the Administrator must consider cost," the Third Circuit reasoned, "some amount of economic disruption was contemplated as a necessary price to pay in the effort to clean up the Nation's waters, and the Administrator was given considerable discretion in weighing costs." American Iron & Steel

Institute v. EPA, *supra* at 1052. The Fourth Circuit held: "While EPA must take seriously its statutory duty to consider cost, courts of review should be mindful of the many problems inherent in an undertaking of this nature and uphold a reasonable effort made by the Agency." *FMC Corp. v. Train*, *supra* at 979. The question, explains the Tenth Circuit, is whether "EPA made a serious, careful, and comprehensive study of the costs which compliance will impose on the industry." *American Petroleum Institute v. EPA*, *supra* at 1038. 77 The legislative history of the Clean Water Act³⁷ casts but pale light on our problem. A singularly unhelpful source of information, legislative history always contains self-serving statements that support either side of an argument and most points between. So it is here. Senator Muskie, one of the bill's chief sponsors, at one point called it a "limited cost-benefit analysis"; yet comparison of BPT regulations with BAT regulations indicates that Congress did intend a more substantial review of costs in the former case. 78 To calculate the economic impact of the EPA's revised regulations, EPA hired Arthur D. Little, Inc., a management consulting firm (ADL). The ADL study concluded that "the reinjection requirement is not expected to close any on-land, non-stripper wells in Louisiana and Texas" It estimated the investment required to install reinjection equipment at \$80 million and the amount of oil foregone as a result at 3 million barrels, approximately 1.8% of "the projected remaining lifetime production of the impacted (sic)³⁸ wells." The average increase in production costs as a result of the reinjection requirement would total \$.34 per barrel. 79 The ADL figures mask an important methodological flaw. At the time of the study, the wells in question were in the coastal subcategory. EPA based its conclusion that reinjection would have no dramatic effect on cost or energy production on the fact that most onshore wells already were reinjecting produced water. Yet EPA forgot to add the wells whose status it sought to revise to the onshore subcategory before making that determination. In other words, the ADL study ignored the very wells in question. Before estimating the number of affected wells and the cost figures, ADL should have grouped the coastal wells in question in the onshore category. The sizeable amount the wells would have to spend to comply, EPA, in effect, overlooked. 80 Believing that EPA had "grossly underestimated the economic impact" of the change, API employed H. J. Gruy & Associates, Inc., an engineering consultant firm (Gruy), to analyze the ADL study. Its results differed, to say the least. Gruy actually performed two surveys. In the first, it found 21 wells in Louisiana and 430 in Texas for which "neither (i) the injection facility capital costs and/or the additional injection operating cost nor (ii) the expense of hauling produced water for off-site disposal could be economically justified." R. at 1250. Gruy estimated the volume of production foregone at 9,771,000 barrels. While ADL had ignored gas wells, the Gruy study determined that 39,152 million cubic feet of natural gas would be lost. Moreover, the new reinjection equipment would consume approximately six million barrels of fuel annually. Gruy set the total cost of compliance at \$357.5 million. 81 At EPA's request, API commissioned Gruy to prepare an addendum to the study, excluding stripper wells from the data. Gruy concluded that, even with stripper wells excepted, 7.6 million barrels of oil and 32 billion cubic feet of gas would be lost, at a total cost of compliance of

\$307.3 million. 82 On a second front, API questions the Agency's finding that "deregulation of domestic oil and gas will drastically affect (the Gruy) predictions," that "it is unlikely that any significant loss of oil will actually occur." Respondent's Brief at 64 (emphasis in original). EPA offers no explanation and no support for these conclusions. It ignores the fact that only "high-cost natural gas", as the Natural Gas Policy Act, 15 U.S.C. § 3301 et seq., defines the term,³⁹ is deregulated. The price of all other natural gas remains subject to regulation at least until January 1, 1985. 83 The natural gas described in those categories was deregulated on November 1, 1979. The earliest that any other categories of natural gas could be deregulated is January 1, 1985. 15 U.S.C. § 3331(a). The Gruy reports were prepared prior to the enactment of the NGPA and thus do not state which, if any, wells would qualify for the high-cost category. Nothing in the record indicates that EPA made any effort to determine which wells would be affected by the Act. 84 We have no way of knowing whose study is more correct, nor do we regard that as an appropriate matter for judicial inquiry. What is clear is that the parties' figures differ radically. Although EPA has made an effort to calculate the total cost, as required by the Act, the discrepancy between the ADL and Gruy studies, a discrepancy unexplained by EPA, leads us to conclude that EPA has not satisfactorily fulfilled its obligation of cost analysis. Its failure necessitates a remand for the purpose of comparing and explaining the differences. Stripper Wells 85 API aims the last bow in its quiver at EPA's failure to include stripper gas wells within the regulations applicable to stripper oil wells. Although it seems ironic that API would contest EPA's failure to regulate, in fact that failure has serious repercussions. The deregulation of the price of natural gas, as EPA has pointed out,⁴⁰ created substantial incentives for the producers to crank up their wells. Yet without EPA guidelines, operators of stripper gas wells presumably are subject to the full panoply of Clean Water Act restrictions and penalties a harsh load indeed, one that might well deter gas production. 86 Relying on the Gruy studies, EPA explains that "marginal wells were not a large problem" and that "there was not sufficient data to justify including marginal gas wells in the stripper subcategory." Respondent's Brief at 71. It also points out that "the marginal gas well issue was not raised by Petitioners until early 1978 and was apparently an afterthought." *Id.* at 69. Afterthought or no, early 1978 was three years ago, and EPA has yet to speak to the issue. API now regards the problem as worthy of our consideration. It cites Federal Energy Regulatory Commission data that lists 12,429 stripper gas wells with an estimated annual production of about 103 billion cubic feet.⁴¹ Such figures belie EPA's contention that there exists nothing to regulate. The number of wells to which API has drawn our attention indicates that EPA should examine once again the problem of stripper gas wells and consider adding them to the final Guidelines for stripper oil wells. While we of course express no opinion as to whether or not EPA must include stripper gas wells in the stripper subcategory regulations, we agree with API that EPA should at least consider the problem again in the light of this new information. Should the Agency conclude as before that stripper gas wells do not belong in the Guidelines, then API and EPA may climb into the ring yet again. 87 Accordingly, we remand this issue to the EPA for further proceedings.

Recapitulation and Grand Finale 88 Aware that the length of this opinion may have caused the drowsy reader to lose track of our conclusions, we repeat them here. The EPA upset and bypass provisions are affirmed. As to the recategorization of coastal wells and the failure to regulate stripper gas wells, we reverse and remand to EPA for further consideration. 89 AFFIRMED IN PART, REVERSED IN PART AND REMANDED.

ANNEX A

ENVIRONMENTAL PROTECTION

AGENCY

40 CFR Part 435 90 Effluent Guidelines and Standards, Oil and Gas Extraction Point Source Category 91 AGENCY: Environmental Protection Agency. 92 ACTION: Final and Interim Final Rules. 93 SUMMARY: Final effluent limitations guidelines establishing "best practicable control technology currently available" (BPT) are hereby promulgated for the offshore, onshore, coastal and agricultural and wildlife water use subcategories in the oil and gas extraction industry. These final regulations combine the near and far offshore subcategories of the offshore segment of the industry into a single offshore subcategory. The beneficial use subcategory is renamed the agricultural and wildlife water use subcategory. Finally, the definition of the stripper subcategory is clarified. However, the Agency does not yet have sufficient technical data to promulgate effluent limitations for this subcategory, and, thus, those sections remain reserved. Additionally, this regulation promulgates, as interim final, changes in the descriptions and applicability of the coastal and agricultural and wildlife water use subcategories. Comments on these interim final changes are solicited. The limitations are based upon the application of BPT as defined in section 304(b) of the Clean Water Act of 1977, (PL 95-217, 33 U.S.C. 1251 et seq.) (The Act). 94 DATES: The effective date of these regulations is April 13, 1979. Comments on the interim final regulations must be received on or before June 12, 1979. 95 ADDRESS: Comments should be directed to: John M. Cunningham, Effluent Guidelines Division (WH-552), Environmental Protection Agency, 401 M Street, S.W., Washington, D.C. 20460, (202) 426-7770. 96 FOR FURTHER INFORMATION CONTACT: John M. Cunningham, (202) 426-7770. SUPPLEMENTARY INFORMATION: Background 97 On September 15, 1975 (40 Fed.Reg. 42543) and October 13, 1976 (41 Fed.Reg. 44942), EPA promulgated interim final effluent limitations based on the application of "best practicable control technology currently available" (BPT) for the offshore and onshore segments of the Oil and Gas Extraction point source category. Concurrently, the Agency also proposed effluent limitations based on the application of "best available technology economically achievable" (BAT), pretreatment standards and standards of performance for new sources. After promulgation of these interim final regulations, members of the oil and gas industry filed Petitions for Review of the interim limitations for both the onshore segment, American Petroleum Institute, et al., v. EPA (No. 76-4497, 5th Cir.) and offshore segment; American Petroleum Institute, et al. v. EPA (No. 75-3588, 9th Cir.). In the course of negotiations on these cases, stipulations were entered in which the Agency agreed to promulgate

certain of the regulations contained in this notice. These include, among others, the limitations on deck drainage in the offshore subcategory, changes to the Agricultural and Wildlife Water Use subcategory, and with certain reservations, the description of the coastal subcategory. 98 The regulations set forth below incorporate comments received after publication of the interim final regulations and the Agency's stipulated agreements based on those comments. These regulations deal only with BPT limitations. No changes in the proposed BAT, new source, or pretreatment regulations issued on those same dates are made by the regulations set forth below. Based on comments received to date, the Agency believes that further technical and economic study is required prior to promulgation of those regulations. Legal Authority 99 These regulations are promulgated pursuant to sections 301(b) and 304(b) of the Act. Section 301(b)(1) requires the attainment of effluent limitations based upon the application of "best practicable control technology currently available" by July 1, 1977. Section 304(b) provides for the promulgation of regulations defining a technology as "best practicable control technology currently available" and specifies the factors to be taken into account in defining BPT. Summary and Basis of Regulations 100 Effluent limitations for oil and grease are established for all subcategories with the exception of the stripper subcategory. The major source of waste waters generated by facilities in this industrial category is produced waters. These produced waters vary from 0 to 99 percent of the total volume of fluids produced. This extreme fluctuation of flow volumes of produced waters depend on natural phenomena and is not subject to process controls. Consequently, the effluent limitations for produced water are concentration based rather than based upon mass per unit of production. 101 No limitations have been established for several other waste water pollutants identified in field surveys. These decisions were made either because technology is not presently available to control the pollutant discharge or available data indicate they are normally reduced incidently with the removal or reduction of another pollutant parameter. 102 Additionally, facilities subject to these regulations may be required to prepare and implement spill prevention control and countermeasure (SPCC) plans under section 311(j) of the Clean Water Act. These requirements are set forth at 40 CFR Part 112. 103 A report entitled "Development Document for Interim Final Effluent Limitations Guidelines and Proposed New Source Performance Standards for the Oil and Gas Extraction Point Source Category" was prepared in support of the initial interim final BPT limitations. This document discussed the oil and gas industry, available waste treatment technology and the results of the technical study which resulted in the limitations contained in these regulations. Additionally, a supplementary report on the possible economic impacts of the regulations was issued at that time. 104 Since publication of interim final regulations, interested parties have submitted comments and new data for consideration by the Agency. The changes made in this notice are based on an analysis of those comments and data. In largest part, these revisions merely clarify the interim final regulations. However, in some cases these regulations do alter the anticipated impact of the original regulations. This notice contains a discussion of those revisions and evaluation of those impacts. 105 Copies of the development

document, supplementing economic analysis and public comments are available for inspection and copying at the EPA Public Information Reference Unit, Room 2922 (EPA Library), Waterside Mall, 401 M Street, S.W., Washington, D.C. Copies of the interim final documents were sent to numerous persons or institutions affected by the regulation or who have placed themselves on a mailing list for this purpose (See EPA's Advance Notice of Public Review Procedures, 38 Fed.Reg. 21202, August 6, 1973). An additional limited number of copies of the Development Document are available from the Distribution Officer (WH-552), Effluent Guidelines Division, Environmental Protection Agency, Washington, D.C. 20460.

Summary of Public Participation 106 As a result of comments received following publication of the interim final regulations, the limitations originally established have been reevaluated. A summary of public participation in this rulemaking, public comments, and the Agency's consideration and response is contained in Appendix B of this preamble.

Summary of Changes 107 A number of changes are being made to the interim final regulations. A detailed discussion of those changes and their technical basis can be found at Appendix A to this preamble.

108 Offshore Subcategory Applicability and Description 109 Because the BPT limitations for the old near offshore subcategory (subcategory A) and the far offshore subcategory (subcategory B) were identical, and because some confusion existed into which subcategory some facilities should be placed, the two subcategories are combined into a single offshore subcategory.

110 Coastal Subcategory Applicability and Description 111 The coastal subcategory is redefined on a descriptive rather than geographic basis. This subcategory will include facilities operating over water or wetlands located landward of the inner boundary of the territorial sea. This area encompasses certain coastal bays and all inland lakes and wetlands.

112 Agricultural and Wildlife Water Use Subcategory Applicability and Description 113 The beneficial use subcategory is renamed to avoid confusion with the term in western water rights law. Additionally it is redefined to include facilities operating west of the 98th meridian which have produced water that is used for agricultural or wildlife watering purposes.

114 Deck Drainage Limitations Offshore and Coastal Subcategories 115 The oil and grease limitations for deck drainage in the offshore and coastal subcategories were originally established based on data derived from the treatment of deck drainage and produced water in combination. Although the Agency presently has only limited information concerning the technological capability for treating deck drainage separately, there is substantial data that sources in these subcategories are able to achieve the limitation established under the oil discharge regulations promulgated pursuant to section 311 of the Clean Water Act. Consequently, pending further acquisition of data, a limitation of "no discharge of free oil," comparable to that established under section 311, is being promulgated for this parameter.

116 Agricultural and Wildlife Water Use Subcategory Effluent Limitations 117 It has come to the Agency's attention that some of the data used to establish the oil and grease limitation for this subcategory could not be verified as having been analyzed by an EPA approved method. Consequently, those data had to be removed from the data base. Removing those data points resulted in the maximum daily oil and grease concentration being reduced from

45 mg/1 to 35 mg/1. Economic Analysis 118 The Agency has made a study of the economic and inflationary impacts of these regulations. Since changes made by these final regulations should not increase costs beyond those projected for interim final regulations, the impacts are estimated to be the same as those of complying with the interim final regulations. It is estimated that the capital cost of complying with the limitations, based on the best practicable control technology currently available, will be between \$112.4 and \$206.7 million, and the total annual operating costs, including amortization, operating and maintenance expense, to be between \$14.1 and \$23.6 million. The costs and impacts associated with the regulations are detailed in the economic analysis documents. 119 Additionally, data has been received which suggests that the interim final revision of the description of the coastal subcategory could result in a reduction of the production from certain affected wells of up to 7.6 million barrels of oil and 32 billion cubic feet of gas at current economic conditions. Estimated continued production of those wells would be 270 million barrels of oil and 1,109 billion cubic feet of gas. The associated capital and operating costs of the wells affected by this revision would be approximately \$10 million per year over the average life of the affected wells. Expected deregulation of interstate natural gas prices could significantly reduce the predicted number of well closures since the data upon which closures were estimated assumed that all gas would be sold at regulated interstate prices. 120 The economic and inflationary effects of these regulations were evaluated in accordance with Executive Orders 11821 and 12044. Small Business Administration Loans 121 Section VIII of the Act authorizes the Small Business Administration, through its economic disaster loan program, to make loans to assist any small business concerns in effecting additions to or alterations in their equipment facilities, or methods of operation so as to meet water pollution control requirements under the Act, if the business is likely to suffer a substantial economic injury without such assistance. 122 For further details concerning this Federal loan program write to EPA, Office of Analysis and Evaluation, WH-586, 401 M Street, S.W., Washington, D.C. 20460. Solicitation of Comments 123 Comments are solicited with respect to the revised statement of description and applicability of the Coastal and Agricultural and Wildlife Water Use Subcategories. Comments must be received on or before June 12, 1979. 124 Dated: April 4, 1979. 125 Douglas M. Costle, 126 Administrator. Appendix A Discussion of revisions 127 Offshore Subcategory Applicability and Description 128 The interim final regulations for the oil and gas extraction industry defined two separate subcategories, near and far offshore, for the offshore segment of the industry. While this classification was appropriate at a time when the Agency planned to impose different effluent limitations in these subcategories, the establishment of identical limitations based upon "best practicable technology currently available" and the similarity of factors influencing the regulation of offshore facilities have led the Agency to conclude that different subcategories for offshore facilities are unnecessary. Consequently, EPA is now combining the near and far offshore subcategories into a single offshore subcategory. 129 Additionally, certain ambiguities with respect to the applicability and description of the offshore subcategories were raised as issues in a

Petition for Review of the interim final regulations brought by members of the offshore industry in the Court of Appeals for the Ninth Circuit. First, there was confusion as to the proper classification of facilities which were located in one subcategory of the offshore segment but which discharged into the other subcategory. Further, industry litigants expressed concern that platforms which piped effluent to land-based treatment facilities and then discharged the treated effluent offshore would be classified in the onshore subcategory. 130 At the time when the offshore segment consisted of two subcategories, the Agency agreed with litigants challenging the interim final offshore regulations to include a preamble provision explaining that, for the offshore subcategory only, classification in a subcategory was to be based on point of discharge. This provision stated: "For the purpose of the effluent limitations guidelines for the offshore segment of the oil and gas extraction category, the locations of the discharge of a point source into the receiving waters shall determine the subcategory into which the point source will be placed." 131 However, in the exercise of its responsibility to promulgate appropriate regulations, the Agency has combined the two offshore subcategories and defined the classification of offshore sources based upon their location of operation. This action satisfies all objections raised by the industry and effectively implements the objectives of the parties. Not only does combining the subcategories eliminate confusion about the classification of facilities within the offshore segment, but by classifying facilities based on their location of operations, facilities located offshore but treating onshore will be placed in the offshore subcategory. The Agency believes that this is a proper response to this problem. Facilities piping effluent to onshore treatment facilities could, in most cases, use less effective on-site treatment. To classify those facilities as onshore, with a concomitant zero discharge requirement, would discourage the use of land-based treatment and might, in the long run, produce greater levels of pollutant discharge. Thus, classification based on location of operation was considered proper. 132 In litigation challenging the interim final regulations for the onshore segment of the industry, litigants argue that their operations should be classified based upon point of discharge. The Agency stipulation in the offshore litigation was in no way intended to affect this issue. For the reasons stated above, EPA has not adopted the industry's recommended approach. 133 Coastal Subcategory Applicability and Description 134 The coastal subcategory was originally established when the interim final regulations for the onshore segment of the industry were promulgated on October 13, 1976. (41 FR 44943). This subcategory was established in recognition of the fact that oil drilling and production operations existed on platforms inside the territorial seas which would not qualify for inclusion in either the far offshore or near offshore subcategories. The coastal subcategory was defined in the interim final regulation on a geographic basis which contained specific boundaries for the subcategory identified in terms of latitude and longitude. These boundaries were set to include all platforms of which the Agency was aware which were both inside the territorial seas and which were located in the waters of states that permitted the discharge of produced water. 135 After analyzing comments and data received during the comment period, and after further consideration by the Agency, a

number of problems were evident with respect to this approach. First, industry identified a significant number of facilities located in coastal areas which were not included within the definition of the subcategory because they are located in areas in which state laws do not permit the discharge of produced water. However, since more stringent state requirements are enforceable regardless of the subcategory to which a platform belongs, the Agency believes that their exclusion on this basis is unnecessary. Second, it was pointed out that certain platforms in upper Cook Inlet, Alaska were not included in the subcategory although subject to the same conditions as other platforms in the coastal subcategory. 136 An overall problem identified by these comments is that defining the subcategory on a geographic basis requires the Agency to reassess the existing boundaries of the subcategory whenever industry explores new areas that might be considered coastal. Since this process would be administratively cumbersome and could lead to unnecessary delays in exploration activities, the Agency has concluded that the coastal subcategory should not be geographically defined. Instead, the Agency proposed to change the definition to include all facilities located over waters landward of the boundary of the territorial seas, including wetlands adjacent to such waters. 137 An additional problem with the previous geographic definition was that it classified in the coastal subcategory an estimated 1700 wells which operated on land but which discharged into coastal waters. Under this revised definition these facilities would be reclassified as either onshore or stripper depending upon their rate of production. 138 Industry has submitted data indicating that approximately 1200 wells, previously classed as coastal, would now be classified as onshore. This will require the achievement of a limitation of zero discharge and industry data indicate that 112 of these wells would cease production in such case. Additionally, the data projects a loss of up to 7.6 million barrels of oil and 32 billion cubic feet of natural gas over the entire operating lives of the affected wells. The continuing production from this class of wells is estimated to be 270 million barrels of oil and 1,109 billion cubic feet of natural gas. These figures are based on the current regulated interstate price.¹ 139 These figures do not, of course, indicate that a presently indeterminate number of wells which would before have been classified as onshore will now be classed as coastal. This would include facilities operating over lakes, including the Great Lakes, and certain West Coast bays, including Cook Inlet, Alaska. 140 The Agency believes that this reclassification is warranted under the criteria for technology-based limitations contained in section 304(b)(1). No evidence has been presented which suggests that the technological capacity of these facilities to meet a limitation of zero discharge is in any way different from other onshore wells. While space constraints or reinjection difficulties may operate with respect to coastal and offshore platforms, no such conditions apply to these wells operating on land. 141 Additionally, evaluation of other relevant statutory criteria support this modification. The Agency gave serious consideration to the cost of this regulation in relation to its effluent reduction benefits and associated non-water quality environmental impacts. In its assessment of effluent reduction benefits, the Agency determined the composition of existing discharges and identified a range of significant pollutants including,

among others, such toxic pollutants as phenols. Determination of the total level of reduction of these pollutants is difficult for oil and gas facilities since the flows and concentrations of pollutants vary among wells and over the life of an individual well. However, available data indicate that the reclassification of certain wells into the onshore subcategory would result in the reduction of up to 227,000 pounds per year of phenols alone. These are reductions of discharges into environmentally sensitive and productive wetlands. While technology may not exist which would enable platform operators to reduce the concentrations of these pollutants, land based facilities have the technological capacity to eliminate their discharge altogether. This is an obligation which other onshore facilities are presently meeting. 142 The only non-water quality environmental impacts resulting from this modification stem from the operation of reinjection equipment in those wells reclassified as onshore. These impacts which have been reviewed by the appropriate EPA divisions as part of the decision making process, include the energy required to operate such equipment and associated air emissions. Depending upon whether natural gas or diesel fuel is used, emissions are projected to range from 1,387 to 52,500 pounds per year of hydrocarbons, 1,150 to 1,183 pounds per year of sulfur oxides, 59,995 to 283,167 pounds per year of particulates and 69,986 to 1,436,000 pounds per year of nitrogen oxides. 143 The definition promulgated in this notice is consistent with the definition recommended by the industry in its comments on the interim final regulations. The Offshore Operators Committee recommended that the definition be modified to read "... the waters of bays, sounds, inlets, and other water bodies landward of the territorial seas and affected by the ebb and flow of the tides where State Water Quality Criteria permit the discharge of produced water." The American Petroleum Institute recommended that the subcategory "should extend to all inland bays, inlets, estuaries, and coastal lakes which lie landward where discharges are allowed or certified by the States." Similar comments were received from many individual oil companies. The definition which has been adopted includes all areas covered by the recommendations of the industry and expands that definition to include water bodies not affected by the ebb and flow of the tide as well as wetland areas. As stated above, the Agency does not believe it necessary to limit the definition to those areas where water quality criteria permit discharge since water quality criteria requiring more stringent limitations (including no discharge) than those found in effluent guidelines must be enforced in any case. 144 Facilities constructed on man-made islands which are comparable to oil and gas platforms and located in areas defined as coastal will be classified in the coastal subcategory. However, such classification will be made on a permit-by-permit basis. 145

Agricultural and Wildlife Water Use Subcategory Applicability and Description 146 The Agency is changing the name of subcategory E from the "Beneficial Use" subcategory to the "Agricultural and Wildlife Water Use" subcategory. This change in name is prompted by the confusion resulting from the initial labeling of the subcategory. The term "beneficial use" has a long history of use in Western United States water law which is unconnected with its meaning in these regulations, and the Agency believes that confusion stemming from this prior usage can be avoided by simply

renaming the subcategory. 147 Additionally, the Agency is clarifying the scope of this subcategory by specifying that only facilities located west of the 98th meridian may qualify for inclusion. Subcategory E was initially established in response to comments from certain western states asking that the Agency allow the use of produced water for agricultural or wildlife purposes. Investigation showed that in arid portions of the western United States low salinity produced waters were often the only, or at least a significant, source of water used for those purposes. Although not required by the Clean Water Act, the Agency chose to accommodate this situation by the creation of Subpart E. It is intended as a relatively restrictive subcategorization based on the unique factors of prior usage in the region, arid conditions and the existence of low salinity, potable water. Thus, all sources subject to regulation under §§ 301 and 304 of the Act which use produced water for agricultural or wildlife watering purposes at all times during their operations may be included in the subcategory. 148 The 98th meridian was chosen for use in the definition of the subcategory because it approximates the boundary of relevant geographic and arid or semiarid climatic conditions which warrant the creation of this subcategory. Because of the unique combination of factors, and in contrast to the situation existing in the coastal subcategory, the Agency does not foresee the geographical makeup of subcategory E being subject to frequent changes, and, therefore, believes that a geographical limit is not only justified, but is also in harmony with the intent of the Act. 149

Deck Drainage Limitations Offshore and Coastal Subcategories

150 Deck drainage from coastal and offshore platforms generally consists of a composite of substances which collect on platform decks from a variety of sources including production and drilling equipment, deck washings and rain. Although specific numerical effluent limitations on the discharge of oil and grease were established for this parameter in the interim final regulations, inadequacies in the original data base require that those limitations be withdrawn. An effluent limitation of "no discharge of free oil" is being established for the discharge of deck drainage. 151 The interim final effluent limitations were based on data collected from facilities treating either produced water or a combination of produced water and deck drainage. Since many platforms treat deck drainage separately from produced water, and since exploratory rigs do not treat produced water at all, these limitations did not necessarily reflect the degree of reduction achievable by these sources. However, most sources in the coastal and offshore subcategories have been subject to, and have complied with, limitations established pursuant to the oil discharge provisions of section 311 of the Clean Water Act and its implementing regulations at 40 CFR Part 110. This limitation prohibits any discharge which would cause a film or sheen on the surface of the water or cause a sludge or emulsion to be deposited beneath the surface of the water or on the adjoining shore. The history achievement of this restriction by sources in these subcategories indicates that it is both technologically and economically achievable. Consequently, the limitation on deck drainage will be no "discharge of free oil" which corresponds to the restriction under section 311. Of course, facilities may still be subject to spill prevention regulations at 40 CFR Part 112. 152 EPA has stipulated to inclusion of

this limitation in litigation challenging the interim final limitations in the offshore segment of the industry. 153 However, Region II of EPA has collected data from exploratory drilling rigs which suggest that concentration limitations on deck drainage are both technologically and economically achievable by sources in these subcategories. This data is being reviewed, and additional data may be obtained. Upon completion of this review, specific concentration limits representing BPT may be promulgated. 154 Agricultural and Wildlife Water Use Subcategory Effluent Limitations 155 Effluent limitations applicable to this subcategory are being revised. The State of Wyoming and the EPA Region VIII office have provided evidence that the analytical procedures applied to some of the samples used to calculate the oil and grease limitation for this subcategory were not documented. As a result we have no way of knowing whether the EPA approved procedure was used. Because of this, the points were removed from the data base, and the revised limitation of 35 mg/1 reflects this change. Stripper Subcategory 156 This regulation clarifies the definition of the stripper subcategory to indicate that it is the average production per producing oil well on a field which is relevant in classifying a source in this subcategory. The interim final regulations defined stripper wells, as in part, as those wells "which produce less than 10 barrels per calendar day." That definition left some uncertainty as to whether some wells on a particular lease would be classed in the stripper subcategory while others might be placed in the onshore subcategory. This definition has been revised to reflect the Agency's intention that it is the average production per oil wells at a field which serves as the basis for categorization. In keeping with this intention, the regulations specifically exclude water injection and gas wells from those wells used to compute the average production. Although no specific effluent limitations are being promulgated at this time for the stripper subcategory, proper classification of a source is still significant since it may exclude that source from other subcategories and authorize the permit writer to establish applicable effluent limitations under section 402(a)(1) of the Clean Water Act. Monitoring Frequency 157 In the offshore and coastal subcategories the monthly average limitations on oil and grease from produced water are specified under a column headed "Average of daily values for thirty consecutive days," and concern has been expressed that the appearance of these limitations implied a minimum monitoring schedule. To avoid this confusion the Agency is deleting the word "daily" from the column specifying monthly average limitations. 158 The sampling frequencies reflected in the effluent limitations guidelines established for the offshore and coastal subcategories are not intended to establish sampling frequencies for purposes of compliance monitoring. Compliance monitoring requirements should be established in a case-by-case basis in consideration of such factors as facility accessibility, the volume and nature of the discharge involved, and the cost of monitoring. Since the effluent limitations guidelines contained in these regulations were established by statistical analysis of data directly related to sampling frequency, it is essential that permit limitations other than the daily maximum for oil and grease of 72 mg/1, which is based upon four samples in any twenty-four hour period, be consistent with the sampling frequency used. 159 To illustrate the effect of sampling frequencies (other than weekly) on the

monthly average limitation, the following graph from the Development Document is reproduced. (Attached as Appendix C). Thus, if sampling is required only on a monthly basis the monthly average limitations would be the same as the daily maximum (72 mg/1), if twice monthly sampling is required the monthly average limitation would be 57 mg/1, and if weekly sampling is required the monthly average limitation would be 48 mg/1 as appears in the regulation. Section IX of the Development Document should be consulted for further clarification of the graph and the effect of monitoring frequency on monthly average limitations. It should be reemphasized that monitoring frequency does not affect the daily maximum limitation.

Appendix B Summary of Public Participation

160 Following promulgation of both interim final regulations (Offshore Segment and Onshore Segment) the public was invited to comment on the regulations and the data used in support of the limitations contained in the regulations. 161 The following parties responded with comments: State of Colorado, Department of Natural Resources; David K. McGowan; Gulf Oil Company; The State of Louisiana; Gulf Energy and Minerals Co. U.S.; Phillips Petroleum Company; Alaska Oil and Gas Association; Offshore Operators Committee; Atlantic Richfield Company; Marathon Oil Company, Getty Oil Company; Shell Oil Company; Texaco, Inc.; Mid-Continent Oil and Gas Association Louisiana Division; Exxon Company U.S.A.; Colorado Department of Health; Office of the Governor, State of Texas; American Petroleum Institute; Petroleum Association of Wyoming; Rocky Mountain Oil and Gas Association; Henry Walter; American Society of Mechanical Engineers; Continental Oil Company; Shell Oil Company; Texas Mid-Continent Oil and Gas Association; Mobil Oil Corporation; Columbia Gas System Service Company; Pennzoil Company; Sun Oil Company; Union Oil Company; U.S. Department of Health, Education, and Welfare; Chevron Oil Company; State of Alaska; Engineers Council of Houston; U.S. Department of the Interior; Erie County Department of Health. 162 A copy of all public comments are available for inspection and copying at the EPA Public Information Reference Unit, Room 2922 (EPA Library), Waterside Mall, 401 M Street, S.W., Washington, D.C. A copy of the Development Document, preliminary draft contractors reports, the economic impact study, and certain supplementary materials supporting the study of the industry are also maintained at this location for public review and copying. The EPA information regulation, 40 CFR Part 2, provides that a reasonable fee may be charged for copying. 163 The more significant issues raised during the public comment periods and the treatment of those issues in the development of this final regulation are as follows: 164

(1) Many commentators argued that the guidelines should be modified to authorize noncompliance with effluent limitations during periods of "upset" or "bypass". An upset is unintentional noncompliance occurring for reasons beyond the reasonable control of the permittee. An upset provision is necessary, it was argued, because such upsets will inevitably occur due to limitations in control technology. The Agency agrees that some form of upset provision should be provided in the NPDES permits and has recently proposed a generic upset provision for inclusion in all permits. 42 Fed.Reg. 37094 (August 21, 1978).

165 A bypass is an act of intentional noncompliance with permit limitations when pollution control equipment is circumvented to prevent loss of life, injury or severe property damage. It was argued that a bypass provision should also authorize noncompliance during periods of corrective and preventive maintenance. In many cases, however, "shutting-in" of well may constitute both a technologically and economically feasible alternative to noncompliance during periods of such maintenance. Where shutting-in of wells would produce a permanent and substantial loss of natural resources, a bypass would be warranted and proposed regulations expand the definitions of "severe property damage" to include this situation. 43 Fed.Reg. 37093-94 (August 21, 1978). Industry has also argued that shutting-in of wells does not constitute a feasible alternative to bypassing in a far broader class of cases. The Agency is currently reviewing data which has been submitted on this matter. 166 However, the Agency does not believe that issues of upset or bypass are appropriately addressed in national effluent limitations. These are permit matters which should be dealt with in the context of permit issuance. Consequently, upset and bypass provisions were included in the proposed regulations dealing with NPDES permits, 43 Fed.Reg. 37078 (August 12, 1978). These regulations will be issued shortly in final form. 167

(2) Many commentors stated that the coastal subcategory (Subcategory D) should not be defined geographically as was done in the interim final regulation. After considering the comments and arguments made during the comment period, the Agency agrees and the definition of the coastal subcategory. A further discussion of this change can be found in Appendix A, "Discussion of Revisions."

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(3) Most commentors argued that the interim final limitations for deck drainage in the offshore and coastal subcategories should either be eliminated entirely or should be modified to require no numerical limitations. The reasons given for suggesting such a change included the difficulty of monitoring such discharges, the assumption that they were already controlled by regulations issued under section 311 of the Act, the assumption that such discharges are not harmful, and the charge that EPA's analysis in support of the limitations did not meet the requirements of sections 301 and 304 of the Act. While EPA does not agree with all of the arguments made in support of the position that deck drainage limitations should be eliminated, inadequacies in the data base supporting interim final limitations require that they be withdrawn at this time. A discussion of the changes and the Agency's reasons for making them are discussed in Appendix A, "Discussion of Revisions."

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(4) Several commentors believed that the definition of the old beneficial use subcategory was too restrictive and was contrary to the water rights laws of many Western States. The Agency is renaming and modifying the definition of this subcategory and a discussion of these proposed changes can be found in Appendix A, "Discussion of Revisions."

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(5) Many comments were received which stated that the definition of a "facility" which would be eligible for inclusion in the stripper subcategory (Subcategory F) was not clear. The definition has been clarified in a fashion consistent with most of the comments. A discussion of the Agency's response to this comment is contained in Appendix A, "Discussion of Revisions."

171 Additionally, commentors suggested that the definition of the stripper subcategory be modified to include marginal gas wells. However, no data were presented which indicate that the economic impact of exclusion of gas wells from this subcategory warrants remedial action. All data indicate that marginal gas wells are few in number and that they produce limited amounts of effluent. Treatment of this effluent is neither technologically infeasible nor economically unreasonable. No basis exists under the relevant criteria of the Act for separate treatment of these wells. Should additional data become available relevant to classification of these gas wells, the Agency will reevaluate its position. 172

(6) Oil and grease limitations for produced water in the offshore and coastal subcategories are expressed as two limitations a daily maximum concentration and a monthly average limitation. Many commentors argued that the monthly average limitation is not necessary since it is based upon the same statistical analysis as is the daily maximum.

173 However, statistical analysis of data for individual facilities shows that many facilities are able to meet the daily maximum limitations while operating at a higher long term average concentration of oil and grease than that achieved by best practicable control technology currently available. The addition of a longer term average than a daily average decreases the chance that a facility can operate above a long term average achievable at BPT and still consistently remain below the effluent limitations. For this reason, the Agency believes that, where practicable, the inclusion of a longer term average, such as a monthly average, will insure better compliance with the effluent discharges which the Agency believes can be met with best practicable control technology currently available. If monitoring frequencies are established in individual permits which are different than the weekly sampling assumed for the monthly average limitation contained in the offshore and coastal subcategories, the monthly limitation would also have to be adjusted to be consistent with the sampling frequency specified in the permit. In general, if sampling were required more frequently than weekly the monthly average limitation should be lower; while if less frequent sampling were required than weekly sampling, the monthly average limitation would have to be higher. A fuller discussion of this point is contained in Appendix A, "Discussion of Revisions." 174 Additionally, many commentors were concerned that the heading of the column specifying the monthly average limitation implied on minimum monitoring schedule. This has been dealt with by deleting the word "daily" from that heading. This change is discussed in Appendix A, "Discussion of Revisions." 175

ANNEX B

November 1, FOSTER REPORT 1979 NO.1233-p12

NOTICES OF WELL DETERMINATIONS ISSUED BY THE FERC THROUGH 10/5/79

(MMcf at 14.73 Psia) New Onshore New Gas Production High Cost Gas Stripper Wells Wells
(Section 102) (Section 103) (Section 107) (Section 108) State Number MMef Number MMef
Number MMef Number MMef Alabama 35 19,483- 22 2,681.9 2 3,200- -- -- .3 .0 Arkansas 11
1,851.3 65 6,254.9 -- -- 2 15.1 California 18 2,427.3 30 8,337.2 -- -- 16 86.0 Colorado 83 5,480.5
322 30,063- -- -- 209 2,283- .5 .2 Florida -- -- -- -- 12 21,40- -- -- 4.0 Illinois -- -- 8 159.0 -- -- --
Indiana 33 NA -- -- -- -- -- -- Kansas 45 7,063.3 334 35,429- -- -- 174 2,542- .6 .3 Kentucky -- -- --
-- -- -- 70 547.4 Louisiana North 45 16,796- 406 39,166- 2 4,450- 1,404 20,09- .5 .7 .0 0.6 South
159 110,84- 358 179,17- 43 72,10- 9 97.1 (onshore) 1.2 0.1 3.8 South 418 613,35- -- -- 3 12,23- --
-- (offshore) 2.6 9.0 Total 622 740,99- 764 218,33- 48 88,79- 1,413 20,18- 0.3 6.8 2.3 7.7
Michigan 101 23,360- 9 737.9 -- -- -- -- .5 Mississippi 56 41,755- 43 20,098- 25 27,40- 16 172.9
.8 .3 6.0 Montana 136 16,018- 57 8,722.8 -- -- 117 1,238- .3 .1 Nebraska 24 2,020.2 42 4,246.0 --
-- 5 42.8 New Mexico Permian 80 37,999- 564 105,11- 1 2,500- 477 2,762- Basin .8 4.8 .0 .6 San
Juan -- -- 935 148,05- -- -- 2,775 25,71- Basin 2.7 7.1 Total 80 37,999- 1,499 253,16- 1 2,500-
3,252 28,47- .8 7.5 .0 9.7 New York 18 558.5 55 2,592.5 -- -- 9 57.7 North Dakota 122 10,221- 46
6,476.2 -- -- -- -- .8 Ohio 94 4,402.9 3,014 83,317- 13 101.1 2,577 13,93- .1 9.2 Oklahoma 19
4,753.8 165 42,908- 15 20,00- 138 1,299- .4 6.0 .3 South Dakota 1 182.6 5 619.0 -- -- -- --
Tennessee 80 2,012.6 4 136.0 -- -- 25 372.1 Texas Permian 19 4,329.1 1,043 66,364- 9 10,25- 130
1,260- Basin .2 3.5 .9 Texas 4 831.5 6 406.0 -- -- 37 521.3 District 1 Texas 30 4,841.3 39 8,462.3 -
- -- 15 99.7 District 2 Texas 13 3,081.9 44 32,721- 1 183.0 2 144.8 District 3 .0 Texas 35 11,129-
81 13,944- -- -- 29 1,777- District 4 .5 .4 .2 Texas -- -- 2 89.0 -- -- 1 2.6 District 5 Texas 7 3,763.0
85 14,482- -- -- 17 154.4 District 6 .4 Texas 7 1,297.0 32 2,191.6 -- -- 7 58.9 District 9 Texas 23
18,627- 232 41,884- 4 3,143- 206 1,724- Distric 10 .2 .1 .0 .6 Texas 85 360,46- -- -- -- -- --
(offshore) 1.4 Total 222 408,36- 1,564 180,54- 14 13,57- 444 5,744- 3.9 5.0 9.5 .4 Utah 28
7,641.0 114 12,224- 1 5.0 16 143.5 .0 Virginia -- -- 22 1,824.3 -- -- 59 704.4 West Virginia 6 957.5
675 18,559- -- -- 3,791 23,96- .5 6.1 Wyoming 171 74,876- 325 54,139- 11 23,19- 96 986.4 .8 .6
5.0 Total 2,055 1,412,- 9,184 991,57- 142 200,1- 12,429 102,7- 422.5 7.0 89.4 38.3 Total Number
23,810 Total Estimated Volume 2,706,927.2 176 Source: FERC notices of well determinations
received from jurisdictional 177 agencies through 10/5/79. Volumes are estimated 178 annual
volumes as reported in the filings. * Former Fifth Circuit case, Section 9(1) of Public Law 96-452
October 14, 1980 1 The companies are: Shell Oil Company, Mobil Oil Corporation, Union Oil of
California, Continental Oil Company, Atlantic Richfield Company, Exxon Corporation, Chevron
Oil Company, Texaco Inc., Cities Service Company, The Standard Oil Company (Ohio), Phillips
Petroleum Company, and Amoco Production Company. For obvious reasons, we shall refer to the
Petitioners as API 2 This confrontation calls to mind the story of David and Goliath. David, the
young Israelite shepherd, challenged the great Goliath, champion of the Philistines, whose name
has become synonymous with great strength and awesome proportions. David, whose challenge
evoked only scorn and derision, calmly proceeded to vanquish his opponent and thereby to win
the freedom of his people. Aware that perceptions may vary, we note that either party could as

easily be cast in the role of the fearless underdog as in that of the mighty opponent 33 U.S.C. § 1362(14) defines a point source category as:

(14) ... Any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged.

Here, the category includes such conveyances in the following areas: (1) crude petroleum and natural gas, (2) drilling oil and gas wells, (3) oil and gas field exploration services, and (4) oil and gas field services not classified elsewhere. 4 The Guidelines, published at 44 Fed.Reg. 22069 (April 13, 1979), appear as Annex A 5 Congress passed Federal Water Pollution Control Act in 1972. In 1977, it amended that Act and changed its name to the Clean Water Act. For present purposes, the change is immaterial. References are to the Clean Water Act except as noted 6 40 Fed.Reg. 42543 (September 15, 1975). For purposes of the Guidelines, EPA divided the oil and gas extraction industry into two "segments", the "onshore" (which applies to facilities engaged in field exploration, drilling and production in areas landward of the inner boundary of the territorial seas) and the "offshore" (which applies to similar facilities on the territorial seas). It further split the onshore segment into "subcategories": "onshore", "coastal", "beneficial use", and "stripper". 40 C.F.R. §§ 435.30-32, 435.40-42, 435.50-52, and 435.60-62 7 Nos. 76-4497, 79-1829, 79-2944 (Fifth Circuit) and 75-3588 (Ninth Circuit). Although the parties are the same in both actions, they have filed different briefs drafted by different counsel in the two actions. To distinguish among them, we shall on occasion refer to the petitioners and their briefs by these docket numbers and dates 8 See EPA's "Development Document for Interim Final Effluent Limitations Guidelines and New Source Performance Standards for the Offshore Oil and Gas Extraction Point Source Category" (Offshore Development Document) at 8-24 9 Deck drainage is simply water containing tiny amounts of oil or dirt which results from rain or from washdown of the platform itself. As part of the stipulation between the parties, see *infra*, new regulations covering deck drainage have been put forth by EPA 10 The simplest form involves holding the water in "ponds" for a sufficient time to allow the oil to float to the top. Other methods include: gas flotation, where bubbles of gas are injected and, as they rise, attach themselves to oil droplets; parallel plate coalescers, a pack of tilted parallel plates which guide rising oil droplets to the surface; and media and fibrous media coalescers. EPA Development Document at 74-80 11 See generally *Hooker Chemicals & Plastics Corp. v. Train*, 537 F.2d 620, 622 (2d Cir. 1976) 12 33 U.S.C. § 1311(g)(1): Waiver for certain pollutants The Administrator, with the concurrence of the State, shall modify the requirements ... with respect to the discharge of any pollutant ... from any point source upon a showing by the owner or operator of such point source satisfactory to the Administrator that (A) such modified requirements will result at a minimum in compliance with the requirements of subsection (b)(1)(A) or (C) of this section, whichever is applicable; (B) such modified requirements will not result in any additional requirements on any

other point or nonpoint source; and (C) such modification will not interfere with the attainment or maintenance of that water quality which shall assure protection of public water supplies, and the protection and propagation of a balanced population of shellfish, fish, and wildlife, and allow recreational activities, in and on the water and such modification will not result in the discharge of pollutants in quantities which may reasonably be anticipated to pose an unacceptable risk to human health or the environment because of bioaccumulation, persistency in the environment, acute toxicity, chronic toxicity (including carcinogenicity, mutagenicity or teratogenicity), or synergistic propensities. 13 We shall hereinafter employ the singularly unpleasant acronym "NPDES" 14 "Any owner, operator, or person in charge of any onshore facility or offshore facility from which oil ... is discharged in violation of paragraph (3) of this subsection shall be assessed a civil penalty ... of not more than \$5000 for each offense No penalty shall be assessed unless the owner or operator charged shall have been given notice and opportunity for a hearing on such charge. Each violation is a separate offense.... In determining the amount of the penalty, or the amount agreed upon in compromise, the appropriateness of such penalty to the size of the business of the owner or operator charged, the effect on the owner or operator's ability to continue in business, and the gravity of the violation, shall be considered by such Secretary." 33 U.S.C. § 1321(b)(6) 15 Contained in the record at pages 0463-0561 16 See note 6, supra 17 In many instances, platform operators apparently already possessed such treatment systems on board. Separation of oil and gas from produced water, as Petitioners point out, is in their best interest 18 See Letter dated June 2, 1977 from Gene Lafitte to EPA 19 The record consists in large part of detailed and lengthy responses by industry representatives to EPA regulations and solicitation of information. Both the API and many of its member companies seem to have gotten into the act, supplying EPA with data on which to base its regulations 20 The agricultural and wildlife subcategories are not relevant to this action; they apply to those parts of the Nation where produced water from oil and gas drilling, lacking substantial salt content, may safely be used for the irrigation of crops or watering of livestock 21 Although the parties argue as though bypasses were a daily event of critical proportions, the amount and frequency of such discharges, in fact, are low. An API survey concluded that bypasses occur during eight-tenths of one percent (0.8%) of overall operating time and discharge on average 22.2 gallons of oil and grease out of 73,836 gallons of produced water. As petitioners noted, "the objective of offshore activity is to produce and sell oil not to dump it into the ocean." Ninth Circuit brief at 17. The equipment which separates oil and gas from produced water, functioning alone, removes all but trace elements of oil and grease from the water before it enters the treatment facilities. Even when the treatment facilities shut down which rarely happens, as the operators can usually bypass portions of the equipment rather than the entire system the discharge is not great 22 EPA excluded high readings from the data upon which it based its effluent limitations. Those high readings generally occurred during upsets and bypasses. No one contests that upsets and bypasses occur, despite the use of suitable equipment and all normal precautions, during normal, routine operations. As a result, the

BPT figures tend to reflect an ideal rather than likely day-to-day measurements. Offshore Development Document at 121-122 23 EPA based its effluent limitations upon a so-called "confidence interval", i. e., a figure that, given the data, oil well waste water discharges during routine operations would be expected to equal or surpass 99% of the time. See Offshore Development Document at 124 24 See J. Heller, *Catch 22* (1961) 25 When EPA amended the definitions, it moved these wells to the onshore category but redefined coastal to include any body of water landward of the inner boundary of the territorial seas as well as wetlands adjacent to such water. 40 C.F.R. § 435.41(e)-(f) 26 Nowhere in the briefs do the petitioners or respondent explain the origins of this term; perhaps such things are better left unsaid 27 EPA explains that it "does not yet have sufficient technical data to promulgate effluent limitations for this subcategory." 44 Fed.Reg. at 22069 28 Since this case came to us on direct review of the Agency's actions, there were not proceedings below to generate a testimonial record or otherwise to tidy up the mass of data accumulated by the parties 29 See *Ethyl Corp. v. EPA*, supra at 68-69 (Leventhal, J., concurring): Our present system of review assumes judges will acquire whatever technical knowledge is necessary as background for decision of the legal questions. It may be that some judges are not initially equipped for this role, just as they may not be technically equipped initially to decide issues of obviousness and infringement in patent cases. If technical difficulties loom large, Congress may push to establish specialized courts. Thus far, it has proceeded on the assumption that we can both have the important values secured by generalist judges and rely on them to acquire whatever technical background is necessary. The aim of the judges is not to exercise expertise or decide technical questions, but simply to gain sufficient background orientation. Our obligation is not to be jettisoned because our initial technical understanding may be meager when compared to our initial grasp of FCC or freedom of speech questions. When called upon to make de novo decisions, individual judges have had to acquire the learning pertinent to complex technical questions in such fields as economics, science, technology and psychology. Our role is not as demanding when we are engaged in review of agency decisions, where we exercise restraint, and affirm even if we would have decided otherwise so long as the agency's decisionmaking is not irrational or discriminatory. The substantive review of administrative action is modest, but it cannot be carried out in a vacuum of understanding. Better no judicial review at all than a charade that gives the imprimatur without the substance of judicial confirmation that the agency is not acting unreasonably. Once the presumption of regularity in agency action is challenged with a factual submission, and even to determine whether such a challenge has been made, the agency's record and reasoning has to be looked at. If there is some factual support for the challenge, there must be either evidence or judicial notice available explicating the agency's result, or a remand to supply the gap.... On issues of substantive review, on conformance to statutory standards and requirements of rationality, the judges must act with restraint. Restraint, yes, abdication, no. 30 Effluent limitation guidelines (b) * * * (T)he Administrator shall ... publish within one year of October 18, 1972, regulations, providing

guidelines for effluent limitations, and, at least annually thereafter, revise, if appropriate, such regulations. Such regulations shall

(1)(A) identify, in terms of amounts of constituents and chemical, physical, and biological characteristics of pollutants, the degree of effluent reduction attainable through the application of the best practicable control technology currently available for classes and categories of point sources (other than publicly-owned treatment works).... (emphasis added)

31 "The fact is that without the upset and bypass provisions Petitioners seek, EPA's limitations simply do not accurately reflect the performance capabilities of the technology expressly identified by EPA during its rule-making as the best practicable for the offshore and coastal subcategories." Joint Reply Brief at 15 32 By including upset and bypass provisions, EPA acknowledged their necessity. The regulations read as follows: (g) Bypass (1) Definitions. (i) "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. (ii) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

(2) Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs (g)(3) and (g)(4) of this section.

(3) Notice. (i) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.

(ii) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in paragraph (f) of this section (24-hour notice).

(4) Prohibition of bypass. (i) Bypass is prohibited, and the Director may take enforcement action against a permittee for bypass, unless:

(A) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(B) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if the permittee could have installed adequate backup equipment. (h) Upset. (1) Definition. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

(2) Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of paragraph (h)(3) of this section are met. No determination made during administrative review of

claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

(3) Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

(i) An upset occurred and that the permittee can identify the specific cause(s) of the upset; (ii) The permitted facility was at the time being properly operated; and (iii) The permittee submitted notice of the upset as required in paragraph (f) of this section (24-hour notice). (iv) The permittee complied with any remedial measures required under § 122.7(d).

(4) Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

40 C.F.R. § 122.60(g), (h) 33 EPA in its 1975 Offshore Development Document acknowledged the necessity of bypasses and conceded that "on offshore platforms there is usually no alternate unit to use." In the 1976 Development Document, it reiterated these findings. Yet elsewhere, EPA has mentioned several possible alternatives: (1) storage on the platform, (2) storage on shore and (3) storage on a barge. 40 Fed.Reg. 42549, September 15, 1975. API challenges these alternatives, which apparently came from out of the blue and for which, significantly, EPA did no cost studies. API notes that storage on the platform is not feasible because of space limitations; the cost of adding storage capacity for just a one day shutdown would be approximately \$1 million. Storage on shore is equally impossible. Pipeline construction is prohibitively expensive and could disrupt the environment in coastal marshes, beaches and wetlands. Moreover, the risk of water corrosion to the pipeline's internal surfaces is too great. Indeed, most pipeline contracts specifically prohibit diversion of produced water in oil or gas pipelines. Finally, safety factors as well as high costs rule out the use of storage barges. Nowhere in its brief does EPA mention these proposed alternatives. It seems likely that it has considered and accepted API's objections, and that we shall hear no more. Should EPA once again raise these alternatives as grounds for denying a bypass permit, API can at that point seek judicial review. 34 API makes much of the fact that EPA has at different times used different language to express the notion of severe property damage. At different times, EPA has required that a shut in "would have caused" or "might have caused" or could "reasonably have been expected to cause" a permanent loss of natural resources. That EPA has used different wording in the past is of no concern to us now. Under the current regulations, the requirement is one of reasonable expectation that a loss of natural resources would have taken place. We do not believe that such a standard is either vague or unconstitutional. 35 See supra 36 We note that the statutory framework for cost analysis under the Clean Water Act differs fundamentally from that under other congressional enactments. The Occupational Safety and Health Act of 1970, 29 U.S.C. § 651 et seq., for example, assumes a much more limited cost determination, with little balancing. *American Textile Manufacturers Institute, Inc. v. Donovan* (1981), --- U.S. ---, 101 S.Ct. 2478, 69 L.Ed.2d 185, rejected any

implication of cost-benefit analysis under that Act. "Thus, cost-benefit analysis by OSHA is not required by the statute because feasibility analysis is." Id. 101 S.Ct. at 2490. The Court's rather broad holding does not affect the present case because the statutory language varies so greatly from the OSHA standards 37 A Legislative History of the Water Pollution Control Act Amendments of 1972, Congressional Research Service of the Library of Congress (January 1973) 38 The technical reports no less than the briefs are littered with references to this, that or the other problem that "impacts" the system. See, V Oxford English Dictionary I-72 (1961): "impact; v. To press closely into or on something; to fix firmly in; to pack in." Accord, Webster's Third New International Dictionary 1130 (1976); Webster's Seventh New Collegiate Dictionary 417 (1965); The Random House Dictionary of the English Language 713 (1967) 39 The NGPA defines "high-cost natural gas" as natural gas produced from (a) wells the surface drilling of which began after February 19, 1977, from a depth of more than 15,000 feet, (b) geopressurized brine, (c) occluded natural gas produced from coal seams, (d) Devonian shale, or (e) such other wells requiring extraordinary risks or costs. 15 U.S.C. § 3317(c) 40 See supra, note 39 41 Petitioners take their data from the Foster Natural Gas Report, No. 1233 at 10-12 (November 1, 1979). The data indicates that stripper wells are located in 19 separate states. A table from the Foster Report, reproduced as Annex B, shows the number of stripper wells per state and estimated production per state. The table confirms API's assertion that stripper gas wells are, indeed, a noticeable and important category of energy production 1 Since the signature of these regulations by the Administrator, the President has initiated a phased deregulation of the price of domestic oil. This deregulation should drastically reduce the impact of this modification on oil production at affected wells. Although the impact of this regulation should now be minimal, it is not possible to predict that effect until Congress has acted on a proposal to tax portions of the increased revenues generated by the deregulation