Evolving Judicial Standards under the National Environmental Policy Act and the Challenge of the Alaska Pipeline
In response to growing national concern about the state of the environment, 1 Congress passed the National Environmental Policy Act (NEPA) of 1969. 2 This landmark legislation contained both a general statement of environmental policy goals and a series of rather vague operational directives 3 to federal agencies in regard to environmental planning. The lack of specificity in NEPA's environmental mandate has cast upon courts the responsibility for formulating more precise definitions of NEPA's requirements and for determining the legislation's effect on administrative authority and conduct. In fulfilling this responsibility, courts face two primary and inter-related questions concerning NEPA's purposes. First, what kind of judicial review of administrative action does NEPA require and what standards must be employed to effect such review? Second, have judicial doctrines establishing NEPA standards produced remedies for enforcement of these standards which can deal effectively with the broad range of federal programs now subject to NEPA?

This Note will trace the development of judicial doctrine elaborating NEPA's environmental mandate and will argue that NEPA imposes only procedural duties 4 on administrative agencies. A standard for judging the sufficiency of such procedures will be suggested. Then, as an illustration of NEPA's effect on many major governmental programs.

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2. 42 U.S.C. §§ 4321 et seq. (1970). The uncodified sections of Title I of the Act correspond to the United States Code sections of the Act in the following manner:

<table>
<thead>
<tr>
<th>NEPA Section</th>
<th>corresponding Code Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>§ 2</td>
<td>§ 4321</td>
</tr>
<tr>
<td>§ 101</td>
<td>§ 4331</td>
</tr>
<tr>
<td>§ 102</td>
<td>§ 4332</td>
</tr>
<tr>
<td>§ 103</td>
<td>§ 4333</td>
</tr>
<tr>
<td>§ 104</td>
<td>§ 4334</td>
</tr>
<tr>
<td>§ 105</td>
<td>§ 4335</td>
</tr>
</tbody>
</table>

Hereinafter only the uncodified section designations of Title I will be cited in the text and notes.


3. See NEPA § 102; note 20 infra.

4. The term procedural duties is used herein to denote required formal bureaucratic modes, as contrasted with the laws or regulations which establish the substantive standards to be achieved by such proceedings. NEPA, it is argued, requires only that administrative agencies adopt certain procedures to ensure that environmental factors are considered in decision-making. No substantive standards for protection of the environment have been established by NEPA. See p. 1606 and note 70 infra.
Evolving Judicial Standards under the NEPA

project actions—and of the need for further development of NEPA doctrine in the courts—the Department of the Interior's handling of the Trans-Alaska pipeline project will be reviewed. Alternative judicial dispositions of the present litigation involving the pipeline project will be considered in terms of the continued development of an efficient environmental policy and an acceptable method of judicial intervention to enforce that policy. From this perspective it will then be argued that, in addition to previously developed judicial remedies for enforcement of NEPA standards, the courts should consider a "remand to Congress" in disposing of litigation involving proposed administrative actions which cannot in good faith effectively comply with NEPA's directives.

I. NEPA in Congress

The overall purpose of the National Environmental Policy Act was, as stated by its principal sponsor, Senator Jackson, "the establishment of a national strategy for the management of the human environment." To implement the strategy, the Act sought to assure


7. That Senator Jackson was primarily responsible for the language and basic strategy of NEPA can be seen by comparing S. 1075 as amended, Senator Jackson's bill, reprinted in Hearings, supra note 1, at 205, with the Conference Report on NEPA printed at 115 Cong. Rec. 40426 (1969).

8. Hearings, supra note 1, at 24. Senator Jackson, upon introducing S. 1075, spoke directly to the problem the legislation was designed to eliminate: [W]e are only reacting to crisis situations in the environmental field. What we should be doing is setting up institutions and procedures designed to anticipate environmental problems . . . .

Hearings, supra note 1, at 27.
that decision-making processes within federal agencies involved adequate inputs of information regarding the environmental consequences of their proposed actions. While the Act established certain national environmental goals with an apparent intent to reduce environmental degradation, the operative section of the legislation was primarily limited to controlling the conduct of federal agencies charged with approving or administering projects which would significantly affect the environment. Integration of environmental planning into normal agency procedures was to be achieved by establishing new "institutions and procedures" to "anticipate environmental problems."

In accordance with these purposes, Senator Jackson's bill, as it emerged from the House-Senate Conference, had two titles: The first established national environmental goals for federal activity to be enforced by certain planning procedures and the second established a Council of Environmental Quality to co-ordinate the development of knowledge about the environment. The most precise congressional command embodied in the Act was the requirement that every federal agency must, before approving a project which might "significantly affect" the environment, file a "detailed statement" analyzing the environmental impact of and alternatives to a

9. See discussion in Hearings, supra note 1, at 24-34; Caldwell, supra note 1, in id., at 33-42; Hearings on the 1st Annual Council on Environmental Quality Report Before the U.S. Senate Comm. on Interior and Insular Affairs, 91st Cong., 2d Sess. (1970). See also note 17 infra.
10. See NEPA § 101.
11. See NEPA § 102(2). NEPA §§ 101, 103, 104, 105 are general declarations regarding goals of the Act, the effect of the Act on the authority of federal agencies and a disclaimer of intent to establish standards pre-empting goals set in other environmental legislation.
12. Hearings, supra note 1, at 27.
13. Two significant compromises were made in the House-Senate Conference on NEPA. First, language in NEPA § 101(b) (§ 1075) that every citizen had "a fundamental and inalienable right to a healthful environment" was deleted and a mild admonishment was added in its place: Every citizen "should enjoy" a healthful environment. Second, the provision in NEPA § 102(2)(C) (§ 1075) that each agency must file "findings of fact" with regard to the possible environmental consequences of proposed projects was amended to require instead that each agency file a "detailed statement" of environmental consequences of a planned project. This change apparently shifted the emphasis of NEPA § 102(2)(C) from providing written justification of an agency's decision for judicial review to facilitating an agency's own review of environmental factors by forcing certain information-gathering procedures. See Lathan v. Volpe, 455 F.2d 1111 (9th Cir. 1971). Although perhaps unintended this change probably tends to expand judicial review under NEPA § 102(2)(C) because now courts must as a "matter of law" determine the sufficiency of an impact statement, whereas under the pre-Conference version, courts would have been limited by the "substantive evidence" rule to evaluating the adequacy of agency findings of fact. See Note, A Panoramic View of NEPA, 16 How. L.J. 116, 140 (1970).
14. See NEPA, Title I.
15. See NEPA, Title II.
Evolving Judicial Standards under the NEPA

The first problem for judicial resolution was whether federal projects already underway should be re-evaluated with reference to NEPA's new environmental mandate.\(^8\) At the same time, the courts were confronted with the more basic question of whether the duties created by NEPA were judicially enforceable.\(^9\) After some initial

16. See NEPA § 102(2)(C).
Dr. Caldwell, who worked with Senator Jackson in formulating the policy of environmental protection embodied in NEPA, emphasized hopes for the anticipated results of the "action-forcing" procedures:
A national policy for the environment could provide the conceptual basis and legal sanction for applying to environmental management the methods of systems-analysis and cost-accounting expressed not only in economic terms but also reflecting life-sustaining and amenity values . . . .
Hearings, supra note 1, at 35. See Hearings, supra note 1, at 41-42, and dialogue between Senator Jackson and Dr. Caldwell in Hearings, supra note 1, at 111-24.
20. The vagueness of NEPA's terms has led at least one court to hold that the Act creates no judicially enforceable duties. See note 21 infra.
The Act does present difficult problems of interpretation. NEPA § 102(2)(A) requires that an agency insure that "presently unquantified environmental amenities" are
equivocation the courts have held that it does apply to projects initiated prior to passage of the legislation, and does create judicially enforceable duties. But, because of the early primacy of these two
given “appropriate consideration” in decision-making. What is “appropriate consideration”? How does a court review the sufficiency of agency procedures to insure that the requirements of NEPA § 102(2)(A) are met? The requirements of NEPA §§ 102(2)(B), (D), and (E) present similar problems for judicial review. The judicial function which must be exercised in expounding and clarifying the meaning of these ambiguous phrases will undoubtedly be similar to that exercised in interpreting previous general congressional mandates such as those contained in the Sherman Act, 15 U.S.C. §§ 1 et seq. (1970) (see, e.g., Standard Oil Co. of New Jersey v. United States, 221 U.S. 1 (1911)) and Title II of the Civil Rights Act of 1964, 42 U.S.C. §§ 2000a et seq. (1970) (see, e.g., Newman v. Piggie Park Enterprises, 377 F.2d 433 (5th Cir. 1967), aff’d, 390 U.S. 400 (1968); United States v. Beach Assoc., 286 F. Supp. 801 (D. Md. 1968)). Congress has legislated in conclusory terms; the court in developing judicial standards for compliance with such terms must interpret with a view to the evil Congress meant to rectify and the remedy it chose for that purpose. See Heydon’s Case, 30 Co. 7a, 76 Eng. Rep. 637 (Ex. 1584); H. Hart & A. Sacks, THE LEGAL PROCESS 1144 et seq. (Tent. Ed. 1956).


22. See cases cited note 19 supra. The standard for NEPA’s retroactive application which emerges from these decisions is that compliance with NEPA will be required to “the fullest extent possible” if there is a significant amount of work left to be done on the project or if re-evaluation of at least part of the project is possible. See generally Note, Retroactive Application of the National Environmental Policy Act of 1969, 69 Mich. L. Rev. 732 (1971).


Courts are, however, reluctant to enjoin projects involving "national security," McQueary v. Laird, 449 F.2d 608 (10th Cir. 1971), held that although the Department of
questions, most NEPA cases to date turn on whether NEPA can be enforced with respect to particular kinds of federal projects and not on the issue of what full compliance with NEPA requires.

In those cases which do confront the problems of defining the full scope of NEPA's directives, the central question faced by the courts has been determining exactly what duties the loose terms of the Act impose on federal agencies. To make that determination, courts have tended to focus on the sufficiency of the "detailed statement" required by Section 102(2)(C)—frequently called an impact statement—and the sufficiency of the bureaucratic procedures followed in considering that statement. Presumably the reason for this focus is that these are the most concrete incidents of agency environmental consideration, and hence most easily subjected to judicial evaluation. Furthermore, challenges to agency action under NEPA tend to focus on the sufficiency

Defense must comply with NEPA's provisions, NEPA confers no standing to challenge projects with "national security" implications and therefore no injunction may issue. In Committee for Nuclear Responsibility v. Seaborg, 1 ELR 20532 (D.C. Cir. Nov. 3, 1971), an injunction against the atomic test on Amchitka Island was refused. The court admitted its serious doubts as to whether the Atomic Energy Comm'n had complied with NEPA but argued that the AEC's assertions that the test was essential for "national security" foreclosed judicial interference. This "national security" exception to NEPA's scope will probably be limited to weaponry projects. Cf. Cole v. Young, 351 U.S. 536, 543 (1956).

24. A preliminary question concerning NEPA's application to particular federal projects is whether an agency action is "major" and "significantly affects" the environment. If the project does not meet these two criteria the agency in question need not file an impact statement. NEPA § 102(2)(C). Courts have faced the problem of determining whether an agency decision that a particular project is not "major" or does not "significantly affect" the environment is reviewable as a question of law or a question of fact. Most courts have held that it is a question of law. Hanley v. Mitchell, 460 F.2d 640 (2d Cir. 1972). Scherr v. Volpe, 356 F. Supp. 882 (W.D. Wis. 1971), aff'd, 4 ERC 1435 (7th Cir. Aug. 4, 1972); Davis v. Morton, 335 F. Supp. 1258 (D.N.M. 1971); Goose Hollow Foothills League v. Romney, 334 F. Supp. 877 (D. Ore. 1971). However, in Citizens for Reid State Park v. Laird, 336 F. Supp. 783 (D. Me. 1972) the Navy's determination that a mock amphibious landing on the beaches of Reid Park would not "significantly affect" the environment was held to be reviewable only as to whether that determination had a "reasonable basis in law." Id. at 789. This apparent retreat from previous judicial claims to determine which projects were subject to NEPA standards may be explained by the "national security" aspects of the case. See note 23 supra. See Echo Park Residents Comm. v. Romney, 2 ELR 20337 (C.D. Cal. May 11, 1972); Save Our Ten Acres v. Kreger, 2 ELR 20305 (S.D. Ala. Apr. 10, 1972).


26. See note 20 supra.

27. See cases cited note 25 supra. NEPA § 102(2)(C) requires that an agency include in the "detailed statement," estimates of the "adverse environmental impacts" of the project and the probable "irretrievable commitment of resources." An additional requirement is that federal agencies must use the detailed statement within their decision-making processes to facilitate consideration of environmental values.
of the impact statement and agency procedures for its consideration.\textsuperscript{28} If courts had based their review on whether an agency had complied with the environmental goals of Section 101, they would have faced the difficult task of determining to what extent an agency was required to pursue those goals and which agency actions would be subject to judicial review.\textsuperscript{29}

Judicial evaluation of the sufficiency of an impact statement, however, presents difficult problems not explicitly answered by the Act itself. In particular the Act does not specify the depth or degree to which a study must go.\textsuperscript{30} \textit{Environmental Defense Fund v. Corps of Engineers},\textsuperscript{31} a case involving construction of the Gillham Dam across the Cossatot River in Arkansas, was one of the first decisions to consider the sufficiency of environmental impact statements filed pursuant to Section 102(2)(C) of NEPA. In the first hearing of the case, the court held, after reviewing additional evidence not considered in the impact statement filed by the Corps of Engineers, that the statement was deficient by NEPA standards because it had omitted consideration of certain environmental problems presented by the project and had discussed others only superficially.\textsuperscript{32} The Corps' abbreviated impact statement was not the required "detailed study and examination of the important environmental factors involved."\textsuperscript{33} Further construction of the dam was enjoined pending completion of a more thorough environmental study. On rehearing after completion of a revised study, the court found that the new expanded impact statement was a sufficient "record upon which a decision-maker could arrive at an informed decision . . . ."\textsuperscript{34} and dissolved the injunction.

28. This conclusion is not based upon a methodical, empirical study of plaintiff tactics. Generally a NEPA complaint will allege violations of each section of the Act. However, in attempting to prove violations of NEPA, complainants appear as chary of NEPA's general ambiguity as courts. Therefore, complainants tend to focus on the more concrete sections of the Act when filing affidavits or making formal offerings of proof of agency non-compliance with NEPA standards.

29. See note 70 infra. This would be a difficult task since NEPA § 101 provides no substantive standards on which to base such determinations.

30. NEPA § 102(2)(C) requires only that the statement be "detailed."


32. Five environmental issues not considered or not considered fully by the Corps were the recreational losses involved in building the dam, the likely changes in the water quality of the Cossatot, the effect of the dam on fisheries resources, the effect of the dam on certain marine and plant resources, and the economic benefits the Corps claimed would result from construction of the dam. 325 F. Supp. at 752. Since the Corps had no authority to not proceed with construction of the dam, it is not clear why the court required this discussion of benefits. It would appear that the discussion of benefits was required for "disclosure" purposes. \textit{See} note 43 infra.

33. 325 F. Supp. at 752.

34. 342 F. Supp. 1217.
Evolving Judicial Standards under the NEPA

Because it was not clear that the court required anything more than mere identification or description of the environmental problems involved in the project, the question left partially unanswered in the two *Gillham Dam* decisions was: What constitutes full compliance with Section 102(2)(C)? Moreover, since the Gillham Dam project previously had received explicit congressional approval, there could be no exercise of administrative discretion as to whether or not it should be built. The only issue before the court was whether the Corps of Engineers had sufficient information to minimize environmental damage during construction. The *Gillham* opinions thus do not set full-scale limitations on the exercise of agency discretion as to whether or not a project should be approved *ab initio*. However, they do imply that mere mechanical compliance with Section 102 (2) (C) is insufficient.

A later decision, *Environmental Defense Fund v. TVA* involving the Tellico Dam in Tennessee, directly confronted the problem of the required sufficiency of impact statements for administrative action involving the exercise of agency discretion. In that case, a federal district court ruled that the Tellico Dam impact statement was insufficient because its “cost-benefit analysis consist[ed] almost en-

35. In its first opinion in *Gillham Dam* the court declared that “NEPA at the very least is an environmental full disclosure law . . . .”, 325 F. Supp. at 759, thus suggesting that mere identification and description of the environmental hazards the project presented were required in impact statements. A similar view of NEPA was suggested in Committee for Nuclear Responsibility v. Seaborg, 1 ELR 20332 (D.C. Cir. Nov. 3, 1971); Sierra Club v. Froehlke, 2 ELR 20307 (W.D. Wis. June 2, 1972); Pizitz v. Volpe, 4 ERC 1195 (M.D. Ala. May 1, 1972), aff'd per curiam, 4 ERC 1401 (5th Cir. July 11, 1972); North Carolina Conservation Council v. Froehlke, 3 ERC 1687 (M.D.N.C. Feb. 14, 1972), aff'd mem., 4 ERC 1044 (4th Cir. May 2, 1972) (failure to issue preliminary injunction not abuse of discretion).

In the second *Gillham Dam* opinion, the court observed that the new impact statement “meets the full disclosure requirements of National Environmental Policy Act and is a record upon which a decision-maker could arrive at an informed decision . . . .” 342 F. Supp. 1217 (emphasis added).


36. Mechanical compliance with § 102(2)(C) was implicitly held insufficient when the court refused to accept the Corps’ initial 12-page impact statement. See 325 F. Supp. at 752.

The Yale Law Journal

Vol. 81: 1592, 1972

tirely of unsupported conclusions." The holding made it clear that impact statements must do more than merely identify and describe environmental hazards created by a particular federal project. They must contain sufficient environmental data to support conclusions regarding "adverse environmental effects" and "irretrievable commitment[s]" of resources involved in projects such that "those removed from the decision-making process can evaluate and balance the [environmental] factors on their own." In other words, estimates of environmental damage must be sufficiently precise to permit realistic cost-benefit comparisons among alternative courses of action.

If NEPA's purpose is to ensure that federal bureaucracies "take into account environmental management and environmental quality considerations," then surely the Tellico Dam court was correct to insist that impact statements present a sufficient quantity and quality of environmental information to enable that purpose to be fulfilled. But a more justiciable standard of "data sufficiency"—covering both quantity and quality—must be required if impact statements are to provide a basis for realistic cost-benefit comparisons of projects' effects. Three general categories of data could be required in impact statements. The first would be simple identification and description of probable environmental effects in terms of their likely nature (description). The second category would require estimates of the magnitude of environmental effects as well as of their likely nature (quantification). The third category would incorporate estimates of the nature and magnitude of environmental effects and then place a monetary value on such effects (monetization). Thus, in a hypothetical situation involving construction of a dam which would kill some members of a rare species of non-edible frog, an impact state-

38. 3 ERC at 1555. Since the court concluded that the TVA impact statement for the Tellico Dam was "comprehensive in scope," 3 ERC at 1554, the only explanation for the court's holding that the impact statement was deficient can be that the statement provided insufficiently precise data to allow the purpose of NEPA § 102(2)(C) to be fulfilled. This purpose, the court declared, is to promote bureaucratic consideration of environmental factors:

The requirement [of filing an impact statement] seeks to insure that each agency decision-maker has before him and takes into proper account all environmental impacts of a particular project . . . [T]he detailed statement provides evidence that these [environmental] factors have been taken into account. More importantly it allows those removed from the decision-making process to evaluate and balance the factors on their own.

3 ERC at 1556 (emphasis added).


Evolving Judicial Standards under the NEPA

ment with descriptive data would merely report that some frogs would be eliminated by a particular, precisely described environmental hazard posed by the dam; a quantified data standard would require estimates of the number of frogs so affected, while monetization would require the placing of a dollar value on the loss.

Both Tellico Dam and NEPA itself suggest that quantification is the required type of data sufficiency. Mere identification and description of environmental hazards would not permit realistic cost-benefit comparisons of alternatives because decision-makers could not judge what the magnitude of such consequences would be—for example, whether 100 or 100 million frogs would be affected ultimately. Data providing quantification estimates would allow the necessary comparisons, although monetization of environmental damage would be even more desirable to facilitate full cost-benefit analysis. Requiring monetization, however, is clearly unrealistic in most cases where no commercial value is involved (e.g., non-edible frogs) or where the environmental values of a resource are thought to transcend commercial values (e.g., redwoods). Thus quantification of environmental effect should be regarded as the required category of data sufficiency for NEPA impact statements.

A further question concerning the sufficiency of impact statement data centers on the problem of “certainty.” If estimates of environmental effect must be quantified, what degree of uncertainty of probable magnitude of environmental effect is allowable in such estimates? Again, Tellico Dam provides a general guideline: estimates must be sufficiently certain or probable to permit realistic cost-benefit comparisons. A more specific conceptualization of required certainty of estimation within impact statements is impossible to state in general terms and, like the judicial standard of “reasonableness,” must be determined on a case-by-case basis. Thus, following Tellico Dam, impact statements should be required to include reasonably certain quantified estimates of environmental effect.

41. See p. 1600 supra.

42. Thus in the hypothetical case involving the loss of several thousand frogs, the required degree of certainty of estimation would vary, at a minimum, depending on the total number of frogs of that species which would remain, the comparative rarity of this species of frogs and the effects on the local ecological system occasioned by the removal of the frogs. In short as the importance and severity of a particular environmental risk increases, the required degree of certainty of estimation increases as well, since the need for a decision-maker to fully comprehend and evaluate the particular environmental risk becomes more acute.

43. See cases cited note 39 supra. For some examples of how this evidentiary standard is applied, see Natural Resources Defense Council v. Morton, 428 F.2d 827 (D.C. Cir. 1970); Environmental Defense Fund v. Corps of Engineers, 4 ERC 1408 (N.D. Miss. Aug. 4, 1972); Daly v. Volpe, 4 ERC 1481, 1483-85 (W.D. Wash. March 3, 1972), aff'd on re-
Although the Tellico Dam decision thus suggests a realistic and justiciable standard for the sufficiency of environmental data to be included in a project's impact statement, requiring federal agencies to prepare impact statements meeting such a standard might still have little effect on their project planning decisions if the concerned agency did not actually consider the information and analysis so adduced. This problem was raised in Calvert Cliff's Coordinating Committee v. Atomic Energy Commission, a case involving the adequacy of AEC regulations implementing NEPA. The AEC rule in dispute forbade the AEC hearing board to consider non-radiological environmental factors in reviewing applications for nuclear power plants unless such factors were "affirmatively raised" by intervenors or

hearings, 4 ERC 1486 (W.D. Wash. Aug. 4, 1972); Latham v. Volpe, 4 ERC 1487, 1490 (W.D. Wash. Aug. 4, 1972); compare cases cited note 44 infra.

This standard of reasonably certain quantified estimates of environmental damage would appear to vary with the extent of discretion that a decision-maker possesses in regard to a given project. If a decision-maker has no discretion as to whether or not to proceed with a project (i.e., has only the discretion to administer the project so as to minimize environmental disruption), it would appear to serve no purpose to require the decision-maker to have before him information sufficient to make a decision on whether to proceed. Thus the decision-maker would not need a reasonable estimation of the total environmental cost of the project. However, since NEPA serves a "disclosure" function as well as providing an environmentally sound basis for the exercise of administrative discretion, that decision-maker would be required to provide sufficient data within the impact statement to put the public, Congress and the President on notice as to the environmental hazards the project creates. Natural Resources Defense Council v. Morton, supra, at 833, 835. Such information need only be identification and description of the threat.

44. Other cases considering the sufficiency of impact statements issued pursuant to NEPA § 102(2)(C) are Scenic Hudson Preservation Conference v. Federal Power Comm'n (II), 453 F.2d 463 (2d Cir. 1971), cert. denied, 40 U.S.L.W. 3390 (June 19, 1972) (minimal consideration of power plant environmental effects held sufficient compliance with NEPA § 102(2)(C) in case heavily tinged with the retroactivity problem); Environmental Defense Fund v. Hardin, 325 F. Supp. 1401 (D.D.C. 1971) (full evaluation of the environmental risks of Mirex, a crop spray, held sufficient compliance with NEPA § 102(2)(C)); Students Challenging Regulatory Agency Procedures v. United States, 4 ERC 1312 (D.D.C. July 10, 1972) (impact statement held insufficient compliance with NEPA § 102(2)(C) because statement failed to discuss in any detail the environmental effects of higher freight rates for recyclable material); Harrisburg Coalition Against Ruining the Environment v. Volpe, 1 E.L.R. 20237 (M.D. Pa. May 12, 1971) (determination that there existed no feasible and prudent alternative to routing a highway through a state park held insufficient compliance with NEPA § 102(2)(C)); Environmental Defense Fund v. Corps of Engineers, 331 F. Supp. 935 (D.D.C. 1971) (environmental statement which did not discuss environmental impact of the Tennessee Tombigbee Waterway held insufficient compliance with NEPA § 102(2)(C)).

45. 449 F.2d 1109 (D.C. Cir. 1971). The case involved the licensing of a nuclear power plant.


Two issues in the case other than the issue of the sufficiency of the AEC procedures for evaluating its impact statements were also decided against the AEC. One involved certain questions of retroactivity; the other involved the question of whether the AEC was required to make a NEPA study and evaluation of the effect of a nuclear power plant on water quality once the AEC had determined that the plant would not violate federal water quality standards.
Evolving Judicial Standards under the NEPA

AEC regulatory staff. Judge Wright held that such passive AEC hearing procedures violated NEPA. Calvert Cliff's thus advanced the proposition that NEPA requires not only active consideration of environmental factors in agency planning but also changes in internal organization and procedures to ensure such consideration. Ad hoc reliance on interested third parties to raise environmental issues is insufficient. Similarly, reliance by a regulatory agency on an impact statement filed for construction of a power plant, prepared by the applicant seeking construction of that plant, has been declared insufficient compliance with NEPA because of the probability that such an impact statement would be based on “self-serving assumptions.”

Thus, judicial enforcement of NEPA standards also requires a determination of whether federal agencies have reconstructed their decision-making apparatus and procedures in a way that ensures review of environmental considerations disclosed in impact statements.

47. If non-radiological environmental factors were affirmatively raised by intervenors in the proceeding or by AEC regulatory staff, then the impact statement prepared by the AEC regulatory staff was to be introduced into evidence and the hearing board would “resolve” the issue raised by the parties. The question for the court, as stated by Judge Wright, was “whether it is enough [to comply with NEPA] that environmental data and evaluation merely ‘accompany’ an application through the review process, but receive no consideration whatever from the hearing board.” 449 F.2d at 1117.

48. [I]f the decision [to grant a nuclear power plant license] was reached procedurally without individualized consideration and balancing of environmental factors—conducted fully and in good faith—it is the responsibility of the courts to reverse.


50. Greene County Planning Bd. v. Federal Power Comm'n, 455 F.2d 412, 420 (2d Cir. 1972) [hereinafter referred to as Greene County]. FPC regulations, 18 C.F.R. § 2.80-82 (1972), allowed power plant applicants to prepare their own impact statements which the FPC staff would then circulate to other federal agencies for comment. The FPC, however, would file its own impact statement only after its affirmative decision to license the plant. Such a procedure did not appear particularly neutral to the court:

The danger of this [the FPC] procedure, and one obvious shortcoming, is the potential, if not likelihood, that the applicant's statement will be based upon self-serving assumptions.


[T]he legislative history indicates that one of the strong motivating forces behind NEPA, and § 102 in particular, was to make exploration and consideration of environmental factors an integral part of the administrative decision-making process.

337 F. Supp. at 160 (emphasis added).

Other cases in which bureaucratic procedures for evaluation of environmental factors were held to be insufficient compliance with NEPA include: Lathan v. Volpe, 455 F.2d
The fact that judicial review under NEPA has been heretofore limited to consideration of the data sufficiency of impact statements\textsuperscript{52} and the sufficiency of agency procedures for impact statement review does not mean that courts have completely ignored other NEPA provisions. It would appear, however, that courts have tended to combine review for compliance with other NEPA sections with their review of impact statements.\textsuperscript{53} For example, measuring administrative compliance with such NEPA directives as “insuring that presently unquantified environmental amenities . . . be given appropriate consideration in decision-making . . .,”\textsuperscript{54} reviewing environmental data within an “interdisciplinary approach,”\textsuperscript{55} “recognizing the world wide and long-range character of environmental problems”\textsuperscript{56} and “studying, developing and describing appropriate alternatives to recommend courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources”\textsuperscript{57} have generally been accomplished by review of the impact statements.\textsuperscript{58} This incorporation process was quite evident in National Resources Defense Council v. Morton,\textsuperscript{59} a case involving Secretary Morton’s decision to grant leases for off-shore oil drilling along the Louisiana coast.\textsuperscript{60} The court held that the Department of Interior must evaluate in its impact statement the possibilities of reducing or eliminating the

\textsuperscript{52} See pp. 1600-01 supra.
\textsuperscript{54} NEPA § 102(2)(A).
\textsuperscript{55} NEPA § 102(2)(B).
\textsuperscript{56} NEPA § 102(2)(E).
\textsuperscript{57} NEPA § 102(2)(D).
\textsuperscript{58} Such a development is not surprising in view of the difficulties involved in direct review for compliance with these vague sections. See note 53 supra.
\textsuperscript{59} 458 F.2d 827 (D.C. Cir. 1972).
\textsuperscript{60} The impact statement predicted that extensive damage to the Louisiana coast and beaches and to a large estuarine complex would result from the off-shore drilling.
Evolving Judicial Standards under the NEPA

oil import quota\textsuperscript{61} instead of granting the leases, although the Secretary of Interior had no authority to implement the alternative.\textsuperscript{62} Although Section 102(2)(C)(iii) of NEPA requires that alternatives to a proposed action be included in impact statements, the requirement that the alternative of eliminating the oil import quota be evaluated could only derive from the language of Section 102(2)(D).\textsuperscript{63} Moreover, the court's observation that,

\begin{quote}
[w]hen the proposed action is an integral part of a co-ordinated plan to deal with a broad problem, the range of alternatives that must be evaluated is broadened . . . \textsuperscript{64}
\end{quote}

appears to be based on Section 102(2)(E) as well as Section 102(2)(D).\textsuperscript{65} Finally the court seemed concerned that Interior had not sought inter-agency cooperation as directed by Section 102(2)(C).\textsuperscript{66} All of these

\textsuperscript{61} 458 F.2d 834-36. The Interior impact statement discussion of alternatives is printed at 458 F.2d 838-39.

\textsuperscript{62} The alternative in question was elimination or loosening of the Mandatory Oil Import Quota System authorized by 19 U.S.C. \textsuperscript{6} 1862 (1970) which grants the President authority to restrict the import of certain goods if he determines that national security requires the maintenance of domestic production capabilities for such goods. In 1959 a proclamation was issued restricting the percentage of domestic demand for crude oil which could be met by imports so that domestic crude oil production would be protected. Presidential Proc. No. 3279, March 10, 1959, as amended, 3 C.F.R. 233 (1972). See Baldwin, Public Policy on Oil—An Ecological Perspective, \textit{1 Ecology L.Q.} 245, 250 (1971).

\textsuperscript{63} NEPA \textsuperscript{6} § 102(2)(C)(iii) requires only that the agency present a detailed statement of the alternatives to the proposed action; NEPA \textsuperscript{6} § 102(2)(D), however, requires that an agency "study, develop and describe" alternatives to a proposed action which involves "unresolved conflicts concerning alternative uses of available resources." Since the planned leasing presented such conflicts, the court in effect held that Interior was required to develop an alternative with cooperation from other agencies. See 458 F.2d at 834-37; note 66 infra.

\textsuperscript{64} NEPA \textsuperscript{6} § 102(2)(D) by requiring an agency to develop alternatives to a given course of action and requiring study of those alternatives suggests that an agency must discuss and evaluate the benefits of each alternative. For example, if Interior is required to consider the alternative of eliminating or loosening the oil import quota, it must necessarily evaluate the present "national security" benefits that are claimed to flow from protecting domestic production of crude oil. The court in National Resources Defense Council v. Morton, 458 F.2d 827 (D.C. Cir. 1972) stated:

\begin{quote}
The impact statement provides a basis for (a) evaluation of the benefits of the proposed project in light of its environmental risks, and (b) comparison of the net balance for the proposed project with the environmental risks presented by alternative courses of action.
\end{quote}

458 F.2d at 833 (footnote omitted). Accord, Tellico Dam, \textit{3 ERC} at 1555.

\textsuperscript{65} The court seemed concerned with the "long-range character" of the economic and environmental problems involved in meeting U.S. oil and energy needs, consideration of which is mandated by NEPA \textsuperscript{6} § 102(2)(E). Thus the court based its holding that Interior must consider elimination of loosening of the oil import quota at least in part on the fact that elimination of the oil import quota and the development of other sources of energy to replace oil was necessary to view the problem of environmental losses due to oil exploitation in the "long range." 458 F.2d at 835.

\textsuperscript{66} \textit{See} NEPA \textsuperscript{6} § 102(2)(C). The Office of Emergency Preparedness is officially charged with review of the need for maintain domestic crude oil production capabilities. \textit{See} 19 U.S.C. \textsuperscript{6} § 1862 (1970). In order for Interior to consider the oil import quota it must obtain
concerns, however, were expressed as the court reviewed the sufficiency of the impact statement under Section 102(2)(C). 07

The NEPA cases discussed herein thus suggest three principal requirements imposed by Section 102(2)(C) and the other more general provisions of the Act: (1) reasonably certain quantified estimates of the environmental costs of a proposed project, the benefits the project is designed to realize, and all available alternatives; (2) actual consideration of the resultant cost-benefit balance; and (3) organization and procedures that institutionalize balanced environmental planning in federal agencies. These requirements may be summed up as “full good faith consideration.” 08

“Full good faith consideration” incorporates only “procedural” review of agency actions affecting the environment. That is, the courts under NEPA have reviewed only the manner in which agencies make environmental decisions and the informational base or record compiled during the decision-making process; they have not reviewed the substantive wisdom of the agency decisions, nor have they established particular levels of environmental degradation limiting federal agencies in designing particular projects. Section 101 of the Act has been viewed as establishing general goals to be realized indirectly by the “action-forcing” provisions of Section 102 and not as creating independent justiciable standards of administrative conduct. 09

...
Evolving Judicial Standards under the NEPA

This form of "procedural" review is similar to that applied generally under the Administrative Procedure Act,\(^7\) which authorizes courts to set aside administrative actions if they are "arbitrary, capricious or an abuse of discretion."\(^7\) Such a standard of review, as it has developed in the courts, focuses on two main aspects of the bureaucratic process. First, a court under this standard will review administrative decisions for failure to take into account all "relevant factors" or values\(^7\) or for misuse of authority in basing decisions on irrelevant factors or values.\(^7\) Second, a court will review to see that no single factor or value had been given too much or too little weight in the decision.\(^7\) Thus, under the APA courts may review "substantively"

I share Judge Timbers' (sic) doubts that under § 101 the balance struck by an agency unskilled in environmental matters should be reviewed only through the lens of the "substantial evidence" test.

40 U.S.L.W. at 3600. If this statement means that courts may substantively review agency environmental decisions, it is a questionable interpretation of NEPA § 101 because that section promulgates no standards to guide such a review. See Calvert Cliffs, 449 F.2d at 1112. However, if Justice Douglas' statement is taken to mean that an agency's lack of expertise in environmental matters raises a presumption that decisions which appear environmentally "unreasonable" were made without genuine consideration of environmental matters, he has suggested one useful index for bureaucratic procedural compliance with NEPA.

74. See L. JAFFEE, JUDICIAL CONTROL OF ADMINISTRATIVE ACTION 181-82 (1965):
Discretion is the power usually given by statute to make a choice among competing considerations . . . . Once a court decides . . . . that the [administrative] action has been and can [be based on] valid factors of choice, it will normally not interfere with an administrative choice.

Judge Bazelon suggests a similar test:

Courts occasionally asserted, but less often exercised the power to set aside agency action on the ground that an impermissible factor had entered into the decision, or a crucial factor had not been considered. Gradually, however, that power has come into more frequent use, and with it, the requirement that administrators articulate the factors on which they base their decision.


In D.C. Fed'n of Civic Ass'n v. Volpe, 459 F.2d 1231 (D.C. Cir. 1971), cert. denied, 405 U.S. 1030 (1972), Judge Bazelon gave a striking illustration of the "relevant factor" approach. Holding that Secretary Volpe had abused his discretion by approving the construction of the Three Sisters Bridge under pressure from Congressman Natcher, Judge Bazelon noted:

The District Court clearly and unambiguously found as a fact that the pressure exerted by Representative Natcher and others did have an impact on Secretary Volpe's decision . . . . [T]he controlling principle of law [is] . . . . that the decision would be invalid if based in whole or in part on the pressures emanating from Representative Natcher.

459 F.2d at 1246.

75. See L. JAFFEE, JUDICIAL CONTROL OF ADMINISTRATIVE ACTION 586 (1965):
Broadly stated, an abuse of discretion is an exercise of discretion in which a relevant consideration has been given an exaggerated, an "unreasonable" weight at the expense of others.

As defined by Judge Magruder an abuse of discretion is "a clear error of judgment in the
to the extent necessary to determine that the agency in question has not made a patently unreasonable decision.\(^6\) A court could probably perform such a review under NEPA as well.\(^7\) The NEPA standard of "full good faith consideration," however, requires a more complete review, since courts must also review the sufficiency of bureaucratic procedures for ensuring the consideration of environmental factors\(^7\) — how an agency considers a relevant factor. In short, NEPA mandates "a particular sort of careful and informed decision-making"\(^7\) while the APA requires only consideration of all relevant factors.\(^8\)

Despite the development of the realistic and generally justiciable standards discussed above for judging the sufficiency of agency procedural compliance with NEPA, difficult questions remain concerning enforcement of NEPA standards. Are there projects which are so uncertain of environmental cost or social benefit because of the limits of technological and environmental knowledge that good faith compliance with the procedures of Section 102(2)(C) and NEPA generally is effectively impossible? If so, what does NEPA mandate concerning such projects and what role should courts play to effect this mandate? These are questions raised by the Department of Interior's approval of the Trans-Alaska pipeline project, a project which in sheer size


\(^27\) Judge Wright in Calvert Cliffs argued:

\textit{We conclude then that Section 102 of NEPA mandates a particular sort of careful and informed decision-making process and creates judicially enforceable duties. The reviewing court probably cannot reverse a substantive decision on the merits under Section 101 unless it can be shown that the actual balance of costs and benefits struck was arbitrary and capricious or clearly gave insufficient weight to environmental values.} 449 F.2d at 1115 (emphasis added).

\(^28\) For a discussion of the standard of "full good faith consideration," see p. 1606 supra.

\(^29\) Calvert Cliffs, 449 F.2d at 1115; See Greene County, 455 F.2d at 922; pp. 1598-1601 supra.

\(^30\) NEPA expands judicial review of agency decision-making within the conceptual framework of the APA. For example, under the APA the FPC must "consider" environmental factors. Udall v. Federal Power Comm'n, 387 U.S. 428 (1967). However, under NEPA the FPC must "do more than merely consider environmental factors," Greene County, 455 F.2d at 420, but must also collect sufficient quantified environmental data to meet the certainty standard of NEPA § 102(2)(c), see notes 40-43 supra, and institutionalize procedures to promote effective and complete agency review of environmental factors. Greene County, 455 F.2d at 420-22. Thus, NEPA mandates "a particular sort of careful and informed" consideration of environmental "relevant" factors. The APA also requires consideration of relevant factors but in any procedural form an agency chooses.
Evolving Judicial Standards under the NEPA

and potential environmental impact far exceeds any of the projects tested in the courts to date. The pipeline project thus presents a severe test of NEPA's efficacy for protecting the environment.

III. The Trans-Alaska Pipeline Project

In January of 1968, Atlantic-Richfield struck oil near Prudhoe Bay on the North Slope of the Brooks Range in the Alaskan Arctic.81 When the field was fully delineated it was conservatively estimated to hold ten billion barrels of oil, thus making it the largest discovery in North America.82 The three oil companies whose leaseholds controlled the major part of the field organized a consortium called TAPS to build a pipeline from Prudhoe Bay to an ice-free port in southern Alaska,83 and on June 10, 1969, applied to the Bureau of Land Management for the land use permits necessary to build the pipeline across Federal land.84 In September of 1969, the Department of Interior completed a set of “stipulations” or conditions to be attached to the land use permits to protect the environment from the uses authorized by the permits;85 with the receipt of the TAPS engineering submittals

81. Atlantic-Humble Finds Oil on North Slope, ALASKA CONSTRUCTION AND OIL REPORT, April, 1968, at 47.
82. American Petroleum Institute estimate cited in A. Tussing, G. Rogers, & W. Fischer, ALASKA PIPELINE REPORT 55 (1971). This is a conservative estimate. “Proved reserves,” the API’s measurement term, are always the most cautious estimates of a field’s size. Some estimates of the Prudhoe Field and potential surrounding fields range as high as 50 to 70 billion barrels, which would make the field the second or third largest in the world.
83. Atlantic-Richfield, Humble and British Petroleum Alaska Inc. organized the Trans-Alaska Pipeline System (TAPS) on July 31, 1968. See Knott, The Pipeline Story, supra note 5, at 8. TAPS immediately hired Pipeline Technologists, Inc. to study the feasibility and location of a crude oil pipeline from Prudhoe Bay in the north to an ice-free port in the south. In February of 1969, TAPS, now composed of eight oil companies, announced plans to construct a 764 mile pipeline, 48 inches in diameter. The routing contained in those early plans is still the basic route of the pipeline. In August of 1971, TAPS was reorganized into the Alyeska Pipeline Service Co.
84. The application is reprinted in Senate Hearings on the Trans-Alaska Pipeline, pt. 2, supra note 5, at 103-06. See generally note 92 infra.
85. Federal Task Force on Alaskan Oil Development, U.S. Dep’t of the Interior, Stipulations for the Trans-Alaska Pipeline System, September, 1969. These “stipulations” are the regulations that Alyeska must follow in constructing the pipeline; they are attached as conditions to the pipeline and “special use” permits that have been issued. Two other sets of stipulations have been issued since September, 1969; one set was attached to the “draft” impact statement, U.S. Dep’t of the Interior, Draft Environmental Impact Statement for the Trans-Alaska Pipeline, January, 1971 [hereinafter referred to as Draft Impact Statement] and the second set were included with the final impact statement, I U.S. DEP’T OF THE INTERIOR, FINAL ENVIRONMENTAL IMPACT STATEMENT FOR THE TRANS-ALASKA PIPELINE (1972) [hereinafter referred to as IMPACT STATEMENT].
on February 20, 1970, Secretary Hickel prepared to authorize permits for the construction of the haul road designed to parallel the pipeline route.

86. See Menlo Park Working Group Memorandum, Interim Comments on TAPS Submittals of February 20, 1970 (U.S. Geologic Survey, Menlo Park, Calif.), March 23, 1970. The Geologic Survey was severely critical of the TAPS proposals and asked the company a number of questions about the potential environmental effects of the line. The Survey published these studies on the Alaskan environment: O. Ferris, R. Kachadoorian & G. Greene, Permafrost and Related Engineering Problems in Alaska (1969); A. Lachenbruch, Some Estimates of the Thermal Effects of a Heated Oil Pipeline in Permafrost (1969); and D. Alverson, Memorandum to the Federal Task Force on Alaska Oil Development, August 5, 1969. These studies were the source of a significant portion of Interior's environmental data on the pipeline.

87. Before becoming Secretary of Interior in 1969, Walter Hickel was Governor of Alaska for three years. He was the first Republican ever elected to statewide office in Alaska, largely because of a bitter Democratic primary. Before his election as governor, Hickel had never held public office, and had been primarily involved in the hotel and construction businesses. See Hearings on the Nomination of Governor Walter J. Hickel of Alaska to be Secretary of Interior Before the Committee on Interior and Insular Affairs of the U.S. Senate, 91st Cong., 1st Sess., pt. 1, at 2, 325, 353 (1969). Hickel had run for Governor on a platform of “opening up the North” and had gained support in Fairbanks particularly with his advocacy of a transportation system between Fairbanks and the Arctic Coast. As Secretary of Interior Hickel stated repeatedly that he was in favor of building the pipeline. See, e.g., press conference reported at 1 ENR 12 (1970). It was common knowledge in Alaska that Hickel was in total agreement with the TAPS proposals, as indeed almost every Alaskan expected him to be. For an example of Alaskan feelings on construction of the pipeline see Statement of Yale Bartlett, Interior Hearings on the Trans-Alaska Pipeline, supra note 5, reprinted in Knott, The Pipeline Story, supra note 5, at 16.


On April 3, 1970 Judge Hart enjoined issuance of a haul road permit for the TAPS route. Allakaket v. Hickel, 1 ELR 65021 (D.D.C. 1970). However, in January of 1970, the oil companies, relying on their belief that the haul road permit would be issued, sent their subsidiary construction companies up the Hickel Highway. The construction companies threw an icebridge over the Yukon and crossed the river, waiting for spring and the haul road permit. Spring came, melting the icebridge but not melting the injunction against issuance of a permit.

Equipment of the five (haul) road contractors sits idle at 10 camps stretched along the northern half of the route . . . . It was to have been used to build a road. But the whims of politics have only turned it into a $100,000 a day cost item for the beleaguered TAPS participants . . . . The road job became a hot item on the Alaskan scene after it became apparent that the Interior Department would not issue the right-of-way permit for the pipeline in the time Sec. Walter J. Hickel had apparently promised.

Alaskan Oil: Ecology v. Industrial Progress, supra note 5, reprinted in Siehl, supra note 5, at 21 (emphasis added). The story behind TAPS' go-ahead to its contractors is at the heart of the politics of the project. Why would normally cautious oil companies risk huge stand-by costs by ordering their contractors north? The reason suggested by the Oil & Gas Journal, id., was that the oil companies thought they had a promise from Secretary Hickel that the permits would be issued. Hickel, stymied by the injunction, but still undaunted seems to have then convinced Governor Keith Miller—the man who succeeded to the Alaskan governorship after Hickel's appointment to Interior—to introduce a bill in the Alaskan legislature to have the state build the haul road, allowing TAPS to pay the state back if the permit were granted and followed the route of the proposed haul road. The state legislature passed the bill but made construction contingent on TAPS agreeing to pay the state
Evolving Judicial Standards under the NEPA

Several native villages and three conservationist organizations filed separate suits in the district court for the District of Columbia seeking to enjoin the issuance of the haul road permits. Wilderness Society v. Hickel, the conservationists' suit, alleged violations of the Mineral Leasing Act and NEPA. Allakaket v. Hickel, the natives' back; see Alaska Stat. 19.40.020(b) (1971 Supp.). TAPS refused to agree to these terms, until late 1971, when it once again appeared that the permits would definitely be issued. From early 1970 on, the fact that the oil companies have committed massive sums to the project has apparently influenced Interior's deliberations. See Pipe Dreams, Newsweek, April 13, 1972, at 62. Apparently, it was Secretary Hickel's own incautious promise and overall optimism about the project which led to many of the oil companies' major commitments.


90. 30 U.S.C. § 181 et seq. (1970). The argument that Interior has violated the Mineral Leasing Act by preparing to issue permits for the pipeline centers on the probable width of the pipeline. The "Pipeline Statute" section of the Mineral Leasing Act, 20 U.S.C. § 183 (1970) (set out in relevant part, note 195 infra) authorizes permits for a pipeline right-of-way no wider than the width of the pipe plus 25 feet on either side. Interior has granted such a permit for the Trans-Alaska pipeline plus certain "special use" permits, issued pursuant to 43 C.F.R. pt. 2920 (1972), for a 50 foot construction access. Construction access will be extended in certain areas up to 681 feet (river crossings) and 354 feet (road crossings); the total area set aside for construction access will be 8,550 acres. Additional land for pumping stations, communications sites, camping grounds for construction crews, airfields and remote control valves will also be granted.

The conservationist plaintiffs argue that Interior cannot use the "special use" permits to extend the width limitation imposed by the Pipeline Statute. They cite 55 Or. ATT'y Gen. 489, 489 (1928) for the proposition that "special use" permits cannot be granted for land uses which will permanently damage the land in question. Interior's argument is that the right-of-way granted by the Pipeline Statute is meaningless if land around the right-of-way cannot be used for construction activity. In this view the width limitation contained in the Act is a limit only on permanent occupation of the land, not on temporary construction uses. The ultimate issue would therefore seem to be whether the permanent damage construction of the pipeline will cause (for a discussion of that damage see Part IV infra) means that, in fact, the pipeline right-of-way will be more than width-plus-25. Corps of Engineers, in its comments on the draft impact statement, noted that just the pipeline, gravel berms and other supporting equipment will in some places occupy more than the width-plus-25 limitation. Corps of Engineers, DOD Comments on the Dept. of Interior's Draft Impact Statement on a Trans-Alaska Pipeline, March, 1971, at 7 and at 2 of Specific Comments on Environmental Stipulations. Thus the pipeline suits may be resolved without reference to NEPA. See Memorandum of Points and Authorities in Support of Plaintiffs' Motion for Partial Summary Judgment, Wilderness Society v. Morton (Civ. No. 928-70, May 12, 1972).

Another possible violation of the Mineral Leasing Act may develop from the fact that Secretary Morton has granted "Free Use" permits to the State of Alaska pursuant to 43 C.F.R. pt. 3620 (1972) for the free use of gravel from Federal lands for the "state highway" paralleling the pipeline. The Secretary apparently ignored or waived the provisions of 30 U.S.C. § 601 (1970) which require that minerals on Federal lands used for industrial purposes must be disposed of only by payment of "adequate compensation" and then only if such disposal would not be detrimental to the "public interest."


The land claims bill was designed to end the dispute over title to most of the land in
suit, alleged violations of certain fiduciary duties owed to the Indians and of NEPA. Judge George Hart decided both cases initially by issuing preliminary injunctions against authorization of the haul road permits or the use of gravel from Federal lands to build the road. The Department of Interior had filed a ten-page impact statement for the haul road only. Judge Hart, however, ruled that the haul road and the pipeline were one project and could not be separated for the purpose of compliance with NEPA. The injunction delayed construction of the pipeline for two and a half years while Interior has attempted to comply with NEPA's requirements.

In January of 1971, Interior issued a “draft” impact statement on the pipeline project and held hearings in Anchorage and Washington, D.C. This “draft” was circulated to other agencies for comment. TAPS, reorganized as Alyeska Pipeline Service Company, sub-

Alaska, land claimed by the Natives because of aboriginal use and because of language in certain acts of Congress which had established the Territory of Alaska. The Natives had petitioned Congress to settle the dispute, rather than rely on a series of protracted law suits to settle the issue. While Congress was considering the land claims bill, the State of Alaska claimed and took title to several tracts of land (including the Prudhoe Bay area) under the land selection provision of the Alaska Statehood Act, § 6, 72 Stat. 339, which authorized the State to select about one-tenth of Alaskan land under Federal control. These actions infuriated the Natives, leading Secretary Udall to impose the land freeze of 1969, see note 87 supra. Thus, when Hickel modified the freeze to allow disposal of land under claim by the Natives for construction of the pipeline, the Natives reacted angrily, obtaining the April 13 injunction against the pipeline. Allakaket v. Hickel, 1 ELR 65021 (D.D.C. 1970).

Now that the Natives have received 40 million acres of land and $1,000,000,000 in compensation—$500,000,000 of which will come from expected oil royalties—they may be less eager to pursue their suit. However, Secretary Morton has withdrawn all Federal lands in the pipeline corridor from selection by Natives under the 40 million acre allotment of the land claims bill, land the Natives may want to claim. P.L.O. 5150, 36 Fed. Reg. 25410-13 (1971); amended P.L.O. 515, 37 Fed. Reg. 142-43 (1972); amended P.L.O. 5182, 37 Fed. Reg. 5585 (1972); amended P.L.O. 5190, 37 Fed. Reg. 6088-89 (1972).

92. 325 F. Supp. at 424. The first impact statement on the project limited to the haul road, was U.S. Dep't of the Interior, Environmental Statement: Yukon River-North Slope Road, March 20, 1970. The finding of “inseparability” meant that the impact statement was insufficient because it considered the haul road as a separate project when, as Judge Hart found, Hickel had treated the two as one project. The impact statement would probably have been found inadequate under any standard because it contained no environmental analysis. It had been filed only in response to litigation. Judge Hart also ruled that Interior must give the plaintiffs two weeks notice before issuing the pipeline permit; this made the injunction effective against the entire project and not just the haul road, because the plaintiffs would challenge the notice immediately. Thus, Interior realized that it had to prepare an adequate impact statement for the entire pipeline. The posture of the litigation before Secretary Morton's approval of the pipeline permits was that summary judgment on the merits of the plaintiffs' claims would begin when Interior issued the permits.


94. Draft Impact Statement. See note 85 supra. See generally Interior Hearings on the Trans-Alaska Pipeline, supra note 5. The draft was circulated in compliance with NEPA § 102(2)(C).

95. The Corps of Engineers was highly critical of the impact statement. See note 90 supra, and Jorgensen, The Proposed Alaskan Pipeline: Native Alaskan Interests, 117...
Evolving Judicial Standards under the NEPA

mitted a detailed "Project Description" of the pipeline proposal in August of 1971. Six months later, in March of 1972, Interior issued its final impact statement on the project. After waiting 45 days for public reaction to this statement, Secretary Rogers Morton approved the issuance of permits for the project.97 On August 15, Judge Hart held in an oral opinion that Interior had complied with NEPA and the Mineral Leasing Act.98

IV. Interior's Final Impact Statement: Environmental Costs, Benefits and Alternatives

The Department of Interior's final impact statement on the Trans-Alaska Pipeline Project consists of nine volumes. The statement discusses the environmental risks the project presents, the benefits the project is designed to realize and alternative means of realizing those benefits. These three areas of focus will now be reviewed to establish a framework for evaluating the adequacy of Interior's final impact statement under NEPA standards.

Construction and operation of the Trans-Alaska pipeline involves basically four environmental risks, the probable consequences of which comprise the "environmental costs" of the project. These four risks are disruption of Alaskan permafrost, large-scale oil spillage, extraction of significant quantities of construction materials from Alaskan quarries, and the interruption of the movements and activity of Alaskan wildlife.

The threat of massive permafrost disruption is perhaps the most serious environmental risk the project creates. Permafrost is frozen earth, usually covered by a thin moss blanket known as "tundra"...
which "stabilizes the inflow of heat into the frozen ground." Without this protective tundra, the permafrost thaws. The Pipeline project poses a double hazard to permafrost: (1) the buried pipeline carrying oil at temperature between 158 and 176 degrees Fahrenheit is expected by some experts to thaw a cylindrical region 20 to 30 feet in diameter around the pipe after several years of operation and (2) construction machinery, human activity and gravel construction pads will destroy the tundra within the construction area and thaw the permafrost by exposing it to increased surface heat. Ice-heavy permafrost, once thawed, creates vast mud-marshes, incapable of supporting any structures or machinery, and leads to severe erosion. Ground movements resulting from "degraded" permafrost may rupture the pipe and will probably create massive terrain disruption and vegetation destruction.

The Department of Interior's environmental stipulations, attached to its final impact statement, attempt to reduce the risk of permafrost degradation by requiring construction of the pipeline above ground in certain areas, utilization of gravel pads to protect the permafrost from construction activity and general project supervision by the federal government. The stipulations establish a pro-

100. Alverson, supra note 86, quoted in Moxness, supra note 5, at 23, quoting from a Soviet scientist.
101. Lachenbruch, supra note 86, quoted in Moxness, supra note 5, at 21. Professor Lachenbruch states that thawed permafrost underground will "persist as a semi liquid slurry or slush" and would "tend to flow like a viscuous river."

As an extreme example, if these slurries occurred over distances of several miles on an almost imperceptible slope, the uphill end of the pipe could in a few years be lying at the bottom of a slumping trench tens of feet deep, while at the downhill end, millions of cubic feet of mud could be extended over the surface.

Id.

102. Professor Robert Curry states that he has seen slope scars of up to a thousand feet in length and 15 feet deep result from an initial depression on the surface of a few feet. R. Curry, Affidavit Attached to Complaint, Wilderness Soc'y v. Hickel, 325 F. Supp. 422 (D.D.C. 1970) (preliminary injunction granted).

Once scarred the land is slow to heal; vegetation grows at less than \(\frac{3}{4}\) inch a year in some places. For a general discussion of the permafrost problem, see 4 Impact Statement 23 et seq.

103. The impact statement states that 435.2 miles of the pipe (55%) will be buried and 353.9 miles (45%) elevated. 4 Impact Statement 16. The original TAPS design called for the elevation of only 80 miles. Petroleum Press Service, July 1970, supra note 5, at 243. The stipulations discuss the elevated construction mode as a means of protecting against underground permafrost thaw. However, building an elevated pipeline will not halt surface thaw caused by construction activity nor will it necessarily solve the threats of rupture and leakage caused by permafrost degradation and an unstable terrain. The Soviets in building their arctic oil pipeline apparently elevated almost all of it. See Alverson, supra note 86, quoted in Moxness, supra note 5, at 23.

104. Gravel pads five to eight feet thick are one means of limiting surface permafrost degradation although it is conceded that these thicknesses may not be sufficient to prevent thawing of permafrost. 4 Impact Statement 21. Subsequent removal of the gravel pads will not restore the tundra cover or halt surface thaw which will undoubtedly continue after construction has been completed.

105. Stipulations 1.3, 1.5. This is the "Authorized Officer" procedure discussed in pp. 1620-21 infra.
Evolving Judicial Standards under the NEPA

cedure to govern decisions on where the pipeline can be safely buried and require Alyeska to develop procedures to minimize thermal changes during construction.\textsuperscript{106} The impact statement does not offer any estimate of the total acreage which will be affected by permafrost degradation or the magnitude of such effects.\textsuperscript{107} However, it does indicate an awareness of the problem and the stipulations suggest procedures, outlined above, which can minimize permafrost damage if diligently applied.

The second major environmental danger posed by the project is

\textsuperscript{106} Although the impact statement predicts how much of the pipe will be buried, see note 103 \textit{supra}, the stipulations establish a complicated procedure to govern when the pipe will be buried. Stipulations 3.3\textit{et seq.} The impact statement admits that “[d]eterminations of the lengths to be buried . . . is a difficult problem . . . . Soils and their ice conditions vary over a wide range and limiting conditions have been explicitly defined in the stipulations as to where to draw the line between [elevated and buried construction modes] . . . . The [construction modes] must be specified in the final design.” \textbf{1 Impact Statement} 11. Thus it appears that the final decisions on construction modes will be made only after further study.

The stipulations which require Alyeska to minimize surface thaw are: Stipulation 2.4.1.1: “Permittee shall perform all Pipeline System construction, operations and maintenance activities so as to avoid or minimize disturbance to vegetation.” Stipulation 2.4.1.3: “The facilities shall be designed and operations conducted in such a way as to avoid or minimize disturbance to thermal regime.”

\textsuperscript{107} The impact statement warns that the Koyukuk River-Prospect Creek segment of the pipeline should be carefully monitored because “the construction pads may not be thick enough to prevent the underlying permafrost from thawing.” \textbf{1 Impact Statement} 98. Indeed, throughout Interior’s impact statement there are numerous warnings of serious permafrost damage:

Changes in stable terrain caused by construction and maintenance procedures can produce rapid and unexpected changes. Slope instability, modification of surface drainage, accelerated erosion and deposition and other terrain disturbances could result from thawing that follows when heavy construction equipment destroys the natural insulating properties of the tundra vegetation.

\textbf{1 Impact Statement} 94. See id. at 98, 108.

But, while predicting environmental damage from permafrost degradation, the impact statement does not attempt to estimate the extent of such damage. Harold Jorgensen, an official of the Bureau of Land Management, criticized the draft impact statement:

Certainly it is incumbent in the summary to point out the extent of permafrost degradation that is likely to occur in terms such as probable acreage that will be affected by differential settlement and thermokarst development, both in relation to the pipeline corridor and the whole train of oil field developments which it will spur and the implications of this in terms of ecological injury and pipeline disruption and oil spillage damage.

Jorgensen, \textit{supra} note 95, at 3253-54. The impact statement simply points out the dangers permafrost damage poses, where along the line the dangers are most acute, and what measures can be taken to minimize the damage. In place of a hard estimate of probable damage and possible alternatives to avoid damage, it relies upon federal supervision of construction to minimize environmental damage. See \textbf{4 Impact Statement} 8, 23-25 & 102.

In connection with the problem of uncertainty as to damage resulting from permafrost degradation see R. Curry, \textit{Comments on the Environmental Impact Statement for the Trans-Alaska Pipeline}, in \textbf{1 Comments on the Environmental Impact Statement for the Trans-Alaska Pipeline at B8 et seq.} (Wilderness Soc'y, Friends of the Earth & Environmental Defense Funds eds. 1972) [hereinafter referred to as \textit{Pipeline Comments}]; J. Hakala, in \textit{id.} at C4\textit{et seq.}; B. Donnellan, in \textit{id.} at F2 et seq.; G. Clark & L. Shon, in \textit{2 id.} at 1(16) et seq.; M. Ferril, in \textit{2 id.} at P2 et seq. Dr. Curry's comments are typical:

I find inexcusable the publication of an impact statement without scientific basis for determination of impact and am appalled to find publication of such a document apparently ignoring existing information prepared specifically for [Interior] . . . 11. Id. at B2.
serious oil pollution. Spills from the pipeline itself would affect the land surrounding the line and the 80-odd streams the line crosses.\textsuperscript{108} Oil spills in Port Valdez, the terminus of the pipeline on Prince William Sound, and in the shipping lanes south to West Coast ports would affect the marine resources of those areas and the Canadian coastline.\textsuperscript{109} The impact statement, while identifying this problem,\textsuperscript{110} fails to estimate the probable size of oil spills and the possible extent of damage to marine and coastline environment.\textsuperscript{111}

\textsuperscript{108} Operating at full capacity the pipeline will carry 2 million barrels (bbl.) of oil a day from Prudhoe Bay to Port Valdez. The pipeline will cross 80 streams including the Yukon, as well as 800 miles of land. Spills from the line would affect the subsistence Native villages of the north which rely on fishing in these streams for food, would damage the tundra, resulting in permafrost degradation and would destroy the vegetative resources of the area affected. \textit{4 Impact Statement} 110-14. Effective methods to remove oil spills on land without destroying the vegetation cover do not exist. \textit{Id.} at 113.

\textsuperscript{109} Prince William's Sound, which surrounds Port Valdez, has a yearly chum and pink salmon harvest of 5.7 million fish, as well as large catches of crab and herring. Draft Impact Statement at 57. Stipulation 2.14 requires Alyeska to develop an oil spill contingency plan; Alyeska's plan relies on floating skimmers, skimming barges, floating containment boom and oil absorbents. \textit{Project Description, supra} note 96, \textsection 9.3.3.1 \textit{et seq.} There is some doubt about the efficacy of these methods. \textit{See Baldwin, Public Policy on Oil—An Ecological Perspective, Ecology L.Q. 245, 262-64} (1971); M. Blumer, \textit{Oil Contamination and the Living Resources of the Sea, Dec. 9, 1970} (presented to Food & Agriculture Org. Technical Conf. on Marine Pollution and its Effect on Living Resources and Fishing, Rome, Italy). The Coast Guard estimates that spill averages on the route from Prince William Sound south to West Coast ports will average one spill of 129 barrels every 43 days. \textit{4 Impact Statement} Table 22. It estimates that spills in Valdez Arm area will average one spill of 234 barrels every 130 days. \textit{1 Impact Statement} 171.

There is also the problem of ballast discharge by the oil tankers in Prince William Sound. Alyeska, in its \textit{Project Description, supra} note 97, \textsection 4.3.3, 4.2.3.4, promises that all ballast will be treated and that effluent from the treatment facility will "contain less than ten parts of residual oil per million." However, this ballast could build up low-level oil pollution in the Sound over a period of years.

\textsuperscript{110} \textit{4 Impact Statement} 432-41. Oil pollution will kill fresh water fish, destroy vegetation, affect young salmon and herring, kill plankton and have some other lesser known effects in a salt water environment.

\textsuperscript{111} The impact statement observes that, "It is likely this resource [salmon; salmon harvest in Prince William Sound in 1969 was $25 million] would suffer some damage from pollution associated with the proposed project," and notes a State of Alaska estimate that the salmon industry will lose $400,000 a year, \textit{1 Impact Statement} 160. However, the impact statement neither evaluates this figure nor offers an independent estimate of the probable damage to the salmon industry of the Sound. With regard to fresh water spills in inland streams, it conceives that "some adverse but unquantifiable impacts on the fresh water fishery resources would occur" if oil is spilled in fresh water streams. \textit{1 Impact Statement} 124. In respect to potential oil pollution at sea, the impact statement admits that "very little research has been directed toward identifying the less obvious effects of oil pollution due to intentional discharge . . . . The various estimates given previously in this section suggest that even with the best available technology and controls some oil would be spilled from the proposed system." \textit{1 Impact Statement} 174. \textit{See 4 Impact Statement} 621. Thus the impact statement makes no effort to quantify the environmental cost of the project. \textit{See Norgaard, Petroleum Development in Alaska, 12 Natural Res. J. 83, 99} (1972); R. Warner, in \textit{3 Pipeline Comments at A16 et seq.; E. Wenk, J. Vagners, J. Crutchfield & S. Flajser, in id. at Cl et seq.; J. Hedgpeth, in id. at H4 et seq.; J. Devanney, in id. at J1 et seq.; M. Foster, in id. at N1 et seq.} Comments on the impact statement by Professor Foster are typical of criticism leveled at the statement's lack of quantification. 

In the Appendix to vol. 4, "Effect of Oil on Marine Ecosystems," the \textit{Impact State-
Evolving Judicial Standards under the NEPA

The project's potential oil spill threat is aggravated by the fact that the southern two-thirds of the pipeline will cross three areas of high seismicity. The impact statement concedes:

The probability that one or more large magnitude earthquakes would occur in the vicinity of this portion of the pipeline is extremely high, in fact almost a certainty.

Since the geologic fault structure along the pipeline route, especially in the Chugach Mountains, is largely unmapped at present, the magnitude, frequency and consequences of seismic activity affecting the pipeline is impossible to predict. Interior's stipulations attempt to minimize the danger of seismic activity by requiring that (1) the pipeline be able to withstand large scale earthquakes "where technically feasible"; (2) Alyeska "satisfy [federal officials] that all recognizable or reasonably inferrable faults or fault zones along the alignment have been identified and delineated"; and (3) the pipeline be constructed to withstand a minimum of two feet of horizontal or vertical set-off. Alyeska hopes to minimize potential damage from
seismic rupture by a valve system designed to shut off oil flow by remote control.\textsuperscript{118}

The third major environmental risk the project poses is that of erosion, additional permafrost degradation and siltation within Alaskan streams as a result of extraction of construction material.\textsuperscript{119} Alyeska will use an estimated 85 million cubic yards of natural construction materials, such as gravel, during construction of the pipeline; it will acquire these materials from Alaskan quarries and streams.\textsuperscript{120} The impact statement concedes that some damage would occur as a result of siltation but since each stream must be considered separately in final design of the pipeline, the impact statement admits the impossibility of predicting before final design how much damage may result.\textsuperscript{121} That there will be erosion damage is also conceded although the probable extent of such damage is not considered.\textsuperscript{122}

R. Curry, Critical Review of the Environmental Impact Statement for the Trans-Alaska Pipeline, \textit{Interior Hearings on the Trans-Alaska Pipeline, supra} note 5, Supp. Ex. 57, at 7 \textit{et seq.} The Denali Fault, the largest fault the pipe will cross, has an offset of 300 meters. 1 IMPACT STATEMENT 99. Alyeska, in its Project Description, \textit{supra} note 96, \S 1.5.8.2, App. A-3.1002, planned to allow for a "horizontal movement of 20 feet and a vertical movement of 3 feet" across the Denali Fault.

118. 1 IMPACT STATEMENT 104. Alyeska's valve system is discussed \textit{id.} at 13-14. Alyeska has estimated that about 50% of the line will have a maximum drainage of 15,000 barrels. In other words, along half of the line a rupture in the pipe could mean a loss of as much as 15,000 barrels of oil. Alyeska has experimented with techniques to detect leaks in the pipeline and can now detect leaks in which 1\% of the volume of the line is leaking and hopes to get the leak detection system down to the point where it can detect leaks greater than 51 bbl./hr. \textit{Project Description, supra} note 96, \S 9.2.2. Prior experience with damage from oil leakage suggests that leakage can be a major problem. See Moxness, \textit{supra} note 5, at 19.

119. Alyeska will have 112 construction material sites in river bars, flood plains or braided streams. Removal of gravel from these areas causes the streams that flow through the bars and flood plains to "silt up" with soil scoured away from unprotected surfaces bared by the removal. 1 IMPACT STATEMENT 123. Siltation kills plant life and affects the reproductive capacities of fish, 4 \textit{id.} at 105, 126-28. Construction material taken from borrow pits and quarries in permafrost areas will cause erosion, slope instability and permafrost degradation. \textit{id.} at 65-68.

120. \textit{id.} at 68.

121. \textit{id.} at 25, 121-23.

While measures presented in the Stipulations are designed to keep erosion and stream siltation at the lowest practical level, pipeline and road construction activities would result in erosion and stream siltation.

\textit{id.} at 122. While admitting this potential damage the impact statement offers no estimate of the probable magnitude of the damage. See \textit{id.}, at 23-24, 68, 130-31, 516. The stipulations attempt to minimize adverse effects of siltation by protecting fish spawning areas. Stipulation 2.5.2.3.

122. "[T]here will be many changes in the local environment as a result of the many quarries Alyeska will dig." 1 IMPACT STATEMENT 104. However, no estimate of the magnitude of these changes is attempted. See 4 \textit{id.} at 23, 68, 107-09, 516-17. Although the impact statement discusses the problems involved in reclamtion and re-vegetation of "degraded" areas stripped of tundra cover, 1 \textit{id.} at 116-18, it concludes that no successful method exists to re-vegetate and reclaim gravel and rock pits. \textit{See 4 id.} at 102. Professor Curry believes that Alyeska's re-vegetation efforts are probably doomed to failure, as the impact statement seems to admit, and criticizes the impact statement for its failure to consider the environmental impact of the failure to re-vegetate. R. Curry, in 1 \textit{Pipeline Comments} at B83. See D. Gray, in \textit{id.} at D1 \textit{et seq.}; J. Thompson, in \textit{id.} at E1 \textit{et seq.}; J. Barnes, in \textit{id.} at H22 \textit{et seq.}; J. Anderson, in \textit{id.} at K1 \textit{et seq.}.
Evolving Judicial Standards under the NEPA

Finally construction and operation of the pipeline is expected to interrupt the migration habits of caribou and to drive away from construction areas animals which cannot co-exist with humans. While the stipulations allow federal officials discretion to cancel construction activities to protect wildlife and to require Alyeska to facilitate free movements of big game animals, the impact statement concedes that the "effect of the above ground portion of the pipeline on large animal movement cannot be conclusively predicted." No attempt to give reasonably certain quantified estimates of the pipeline's effect on Alaskan animal populations has been made.

Taken together these four environmental threats will cause severe dislocation in the southern Alaskan fishing industry, create massive erosion damage and affect the subsistence habits of Alaskan Native (Indians, Aleuts and Eskimos) communities. The major

These commentaries also discuss the impact statement's study of the hydrology problem, i.e., the flood levels for the various streams the pipe will cross, the velocity and height of which will dictate the depth of burial under streams and the strength of supports for pipe bridged over streams. Comments by scientists in the Pipeline Comments tended to show that insufficient data exists to predict with any accuracy the flood levels of the streams the pipe must cross.

[123] 122. See Stipulations 2.5.3.1, 2.5.4.1.
[124] 123. The lack of any reasonable estimate of the effect of the pipeline on Alaskan animal populations is discussed in the following commentaries: R. Henshaw, in 2 PIPELINE COMMENTS at A3 et seq.; L. Underwood, in id. at B2; G. Clough, in id. at C9; T. Cade, in id. at E1 et seq.; G. Clark & L. Shon, in id. at I(3). Mr. Clark and Ms. Shon state:

Although some forty possible effects of the pipeline and related activities on terrestrial mammals are mentioned in the Statement, the lack of sufficient information regarding many of them is stated frequently and taken as a whole, is quite alarming. . . . In no case is there a qualitative estimate of the extent of damages to wildlife or a consideration of possible long-term effects on species population, habitats and individuals.

[125] Id. at I(3), (4). See 2 IMPACT STATEMENT A-9, A-11.

126. See notes 108-11 supra. While Interior minimizes the danger to the Prince William Sound salmon, herring and crab fisheries, the fishermen are very concerned and have filed suit against the pipeline. Cordova Fisheries Union v. Morton, 2 ENR 13 (1971). There have been reports that Alyeska has attempted to buy out several Prince William Sound fishermen. Conversation with Fisherman A, Anchorage, Alaska, August, 1970. Considering the fact that the impact statement admits that there will be low level pollution in the Sound over a period of years and that spills are sure to occur with 2 million barrels of oil moving through the Sound every day, id., there is at a minimum a very serious threat of massive dislocation to the Sound fishing industry.

127. Interior minimizes the danger of massive erosion damage, yet it admits that the threat is very real. See notes 99-106 supra.

128. The pipeline will affect the Native communities in two direct ways. First, oil development will change the nature of Alaska. For the vast majority of Alaskan Natives, far removed from the proposed oil activities, the development of North Slope oil would accelerate cultural changes similar to those that resulted from such historical developments as the whaling expeditions of the late 1880's, the gold rush near the turn of the century and the military build-up beginning in the early 1940's. Economic expansion resulting from the proposed petroleum development would further support the continuing increase in the size and the influence of the white population which has grown from a minority in the 1930's to 83% in 1971.

1619
The question is how much damage in these respects can be expected from construction and operation of the pipeline. This question is not answered in the final impact statement. The sheer size of the project and the present lack of knowledge about the Alaskan environment appear at present effectively to prevent any reasonably certain quantified estimates of the pipeline's environmental consequences.\textsuperscript{120}

The fact that Interior has qualified its permit issuance through use of site approval techniques is a tacit admission of present uncertainties regarding the environmental consequences of the project. The pipeline will be overseen by an "Authorized Officer" and will be constructed in "segments."\textsuperscript{130} Alyeska will not be allowed to begin construction on a particular segment until a "Notice to Proceed" for the particular segment is given by the Authorized Officer.\textsuperscript{131} The Authorized Officer is empowered to take such measures as he deems necessary to prevent permafrost damage, erosion or other adverse en-

effects on Alaskan white communities as well, taxing over-burdened, primitive municipal services. \textit{See id.} at 271-76; Alaska State Housing Authority, Community Impacts of the Trans-Alaska Pipeline, April, 1971.

Second, the pipeline will affect Native villages along the length of the rivers threatened by oil spill damage and silting (mostly the Copper and Yukon Rivers). 4 IMPACT STATEMENT 421. Moreover, it is admitted that [13] the construction and operation of the Trans-Alaska pipeline could entail significant impact on the resource utilization patterns of the Alaskan Natives. The extent of this impact is largely a matter of speculation . . . . \textit{Id.} at 416. \textit{See id.} at 424.

If one assumes that the future of the Alaskan Natives lies in adapting to the ways of the white community, it must still be conceded that rapid transition from a subsistence livelihood to interdependent community life will have certain long term costs attributable in part to the pipeline. No effort is made in the impact statement to determine these costs. \textit{See id.} at 378; Jorgensen, \textit{supra} note 95, at 3256.

129. Such a conclusion follows from an examination of the environmental questions involved in the project. Permafrost is a new experience for those who construct pipelines.

A large hot oil pipeline buried for hundreds of miles has no precedent. Unique effects unfamiliar in pipeline experience would arise primarily from the loss of strength and change in volume of ice-rich soil when it is thawed by heat from the pipe.

1 IMPACT STATEMENT 93.

With regard to potential oil spillage from the project, "the frequency, volume and location of potential oil spills cannot be modelled or predicted with available information." 1 IMPACT STATEMENT 27.

On potential damage from permafrost degradation, the impact statement admits the need for further study. 4 \textit{id.} at 10. Even the simple problem of building viaducts and tunnels becomes fraught with environmental hazards in the Alaskan environment. \textit{See id.} at 25. The fact that the pipeline will transverse 800 miles and that the oil will be shipped thousands of miles to market spreads these uncertainties over a large geographic area.

130. Stipulation 1.3. The Authorized Officer will be the Director of the Bureau of Land Management or his designated representative. There will be ten segments in the line.

131. Stipulation 1.3-1.5. This notice to proceed will be given after the Authorized Officer is satisfied that the "final design" of the pipeline meets all the stipulations. After Alyeska presents its final design, the Authorized Officer may request further study of certain factors, if he feels that such factors have been inadequately discussed in the final design proposal.

1620
Evolving Judicial Standards under the NEPA

Environmental effects. Basically the Authorized Officer procedure attempts to compensate for those gaps in the impact statement created by Interior's inability to give a "ball park" estimate of the environmental damage the project is expected to cause.

In an apparent effort to counterbalance the inability to give reasonably certain quantified estimates of environmental damage, the impact statement strongly emphasizes the benefits expected to result from the pipeline's operation. Yet its discussion of benefits would appear to suffer from the same infirmities of uncertainty as its discussion of environmental cost.

The three major anticipated benefits of the pipeline are: (1) increased revenues for the State of Alaska and for Alaskan Natives; (2) a more favorable balance of payments position for the United States and (3) increased domestic crude oil production to meet domestic American crude oil demand. The third benefit receives the most discussion and would appear to be the only benefit which could justify the potential environmental costs of the pipeline. The argu-

132. Stipulations 1.3.4, 2.12.1, 3.5.1, 3.4.1, 3.4.2. All reclamation is to be completed to the satisfaction of the Authorized Officer. The Authorized Officer can suspend the project at any time he thinks the environment will be endangered. He decides whether geologic faults have been mapped sufficiently and how much stress the pipe should be able to take in fault zones. He decides where the pipe will be buried or elevated and enforces all prohibitions and admonitions contained in the stipulations. The Corps of Engineers was skeptical of the Authorized Officer procedure:

It should be recognized that successful execution of the immensely complex and diverse responsibilities placed on the Authorized Officer will be extremely difficult. Corps of Engineers, supra note 90, at 1.

133. Russell Train, then Undersecretary of Interior, admitted that written stipulations could only be made effective by vigorous execution. Senate Hearings on the Pipeline, pt. 2, supra note 5, at 109.

The problem with federal supervision is that it is doubtful that the authorized officer will have sufficient information and resources at his disposal to effectively challenge and oversee Alyeska's construction and operation of this immense project. Decisions of the authorized officer are appealable to the Secretary of Interior, Stipulation 1.3.6, which may tend to undercut the lower official's effectiveness. It does not appear that third parties will be able to appeal rulings by the authorized officer; but even if standing were granted, it would appear that courts could reverse an officer's rulings only if such determinations were arbitrary or capricious. See Administrative Procedure Act, 5 U.S.C. §§ 701-706(C)(A) (1970); notes 71-81 supra.

134. The State of Alaska has two taxes on oil: a sliding scale production tax of, at most, 8% of wellhead price, ALASKA STAT. § 43.55.010 (1970), and a simple royalty of 12% of wellhead price, ALASKA STAT. § 38.05.180(a) (1970). Professor Tussing estimates that the State will receive by 1976 (assuming pipeline construction begins in 1972) 238 million dollars a year in additional revenues, and by the year 2000, 375.9 million dollars a year in additional revenue. Tussing, supra note 82, at 74.

135. Under the Alaskan Natives Settlement Act, P.L. No. 92-203 (1971), the Natives will receive $500,000,000 of the royalties the State will receive on oil drawn from Alaskan land.


137. While the benefits to the State of Alaska and Alaskan Natives may be of sufficient magnitude to convince Alaskan citizens to support construction of the pipeline, those benefits are much less significant from a national viewpoint. The consumer will
ment for this third benefit is based on the assumption that the United States' security will be jeopardized by dependence on foreign sources of crude oil.\textsuperscript{138} At least one governmental study—the Report of the President's Task Force on Oil Import Controls—challenges this assumption.\textsuperscript{139} The impact statement offers little or no evaluation of the domestic costs involved in depending on foreign sources of crude oil, the degree of "instability" of foreign sources of crude or what the net

ultimately pay the State and Native royalties and there are many more consumers in the continental United States than in Alaska. Although it is perhaps a "national benefit" that Alaskans become more self-sufficient because of oil development, it is quite probable that this "benefit" could be achieved more easily and cheaply than by construction of the pipeline.

Similarly, while a better balance of payments position for the United States is certainly a national benefit, even a billion dollar improvement in United States' payments deficit would be only a drop in a very large bucket; the balance of payments problem is not centrally linked with oil development (nor with international trade for that matter) and increasing domestic oil production is not a long term solution to the problem of recurring payments deficits. See G. HABERLER & T. WILLET, U.S. BALANCE OF PAYMENTS POLICIES AND INTERNATIONAL REFORM 5-9 (1968); P. DOUGLAS, AMERICA IN THE MARKET PLACE 272-324 (1969).

\textsuperscript{138} The Department of Commerce estimates that U.S. oil demand will rise from 14.7 million barrels per day (bbd.) to 26 million bbd. by 1985; without North Slope oil domestic crude oil production will be able to meet only 34 to 43 percent of U.S. demand, whereas with North Slope oil domestic production could meet 42 to 51 per cent. U.S. Department of Commerce, Economic Effects of Opening the Oil Reserves of Alaska Through the Trans-Alaska Pipeline System, September, 1971, at 8. See American Petroleum Institute, U.S. Oil Consumption Hits All-Time High; Industry Concerned Over Long-Term Supply, Jan. 10, 1971 (news release); 9 IMPACT STATEMENT 3. The Commerce Department report states: "While sufficient foreign resources do exist to meet these needs [U.S. crude demand], it is important to remember that purchase of oil from foreign sources involves negotiations with countries where the political climate may be unstable . . . [whose] interests . . . [could] involve conflict with those of the United States." Economic Effects of the Pipeline, supra, at 7. [D]ependence on foreign supply involves the risk of major price increases . . . ." Id. at 5.

\textsuperscript{139} U.S. CabiNet Task Force on Oil Import Controls, THE OIL IMPORT QUESTION, A REPORT ON THE RELATIONSHIP OF OIL IMPORTS TO THE NATIONAL SECURITY 50-57 (1970). The Task Force makes these points: 1. Eleven major oil exporting companies exist today in comparison with four in 1956 and it is unlikely that they would all combine against the United States; 2. Middle Eastern countries need hard cash, U.S. dollars; 3. Many imports are from Canada, a nation to whom the normal "national security" arguments do not apply; 4. Oil supply problems would not be significant in a nuclear war; 5. The risk of submarine attack on tankers bringing oil from South America is no greater than risk of attack to traffic going from the American East Coast to the West Coast; and 6. In the unlikely event of a protracted war, synthetic fuel development, increased oil storage capacity, and further government exploration on its own oil reserve lands can fulfill vital needs. Furthermore, the Task Force found that the U.S. consumer was losing $5 billion a year because of the import quota. The Task Force recommended that the quota system be replaced by a tariff system. See Baldwin, supra note 62, at 252. President Nixon rejected the recommendations of his Task Force. N.Y. Times, Aug. 18, 1970, at 1, col. 5.

Pres. Proc. 3279 § 6(c), March 10, 1959, as amended, 3 C.F.R. 253 (1972), requires the Office of Emergency Preparedness (OEP) to determine whether increases in domestic crude oil prices "are necessary to accomplish the national security objectives" of the Oil Import Quota System. Following the crude price increases of November 1970, the OEP issued a report defending the quota system, a report severely criticized by the Joint Economic Committee Staff. STAFF OF JOINT ECONOMIC COMM., 92d CONG., 1St Sess., REPORT ON CRUDE OIL & GASOLINE PRICE INCREASES OF NOVEMBER 1970 (1971), at 2-3; The OEP report is printed id. at 27. The OEP report presents the national security benefits of the quota only in a conclusory manner with no discussion of the magnitude of the risk the quota allegedly overcomes. Id. at 24-36.
benefit of Alaskan production in the face of ever-increasing United States' dependence on foreign sources of crude oil will be.\textsuperscript{140} The impact statement admits that by 1980, even with development of Alaskan oil, domestic production will be able to meet only 47\% of United States' demand. Without development of Alaskan oil, domestic production will meet 39\% of United States' demand.\textsuperscript{141}

\textsuperscript{140} The oil import quota system and the national security assumptions that support it are discussed in the final three volumes of the impact statement. \textit{See 7 Impact Statement} App. D. The impact statement views the national security problem in terms of limiting the percentage of "Eastern Hemisphere" imports which will be necessary to the nation's economic well-being. It is admitted that the national security issue is not military, since in an emergency sufficient military reserves exist. The issue therefore centers on protecting civilian oil demands.

\textsuperscript{7} Impact Statement 3 notes that \textit{without} North Slope oil, Eastern Hemisphere imports in 1980 will range from 16 to 53 per cent of U.S. total crude oil consumption and \textit{with} North Slope oil, imports from the "Eastern Hemisphere" will range from 8\% to 46\% of total U.S. consumption. These figures reflect uncertainty as to future U.S. production.

To the argument that North Slope oil is necessary to reduce dependence on "Eastern Hemisphere" imports, three questions may be raised. First, if a national emergency were to occur, is it not possible that exploitation of existing government reserves and rationing would avoid any serious damage to the economy since only 7\% of total consumption would be at stake? Second, since most Alaskan oil will be transported to the West Coast to meet deficiencies there, won't import levels in other parts of the country be largely unaffected? Third, since it appears that the country will be dependent on foreign sources of oil to an unacceptable degree \textit{regardless} of whether Alaskan oil is developed, would it not be more efficient from a national security viewpoint to use the resources which would otherwise be expended on the pipeline to develop sources of energy other than oil in order to end the nation's dependence on oil as a major source of energy?

The impact statement mentions the first question but concludes only that such a situation must be avoided. Neither an estimate of the actual risks involved in having a shortage of oil of 7\% of total demand nor an estimate of the cost of implementing emergency measures is given.

With regard to the second question, \textit{7 Impact Statement D4} estimates that in 1980 with North Slope oil,

\[\text{[d]espite a modest overflow from District V \textit{[the West Coast]} District I \textit{(east coast)} would still be dependent on non-Canadian foreign sources for 98\% of its oil. Thus, unless the oil companies transport Alaskan oil through the Panama Canal or over the Rocky Mountains, the bulk of Alaskan oil will meet West Coast demand and have little effect on the "much larger demand" of the East and Midwest. \textit{Id.}}\]

In partial answer to the third question, \textit{7 Impact Statement D4} concedes that

\[\text{[t]he net effect of adding North Slope oil to otherwise constant or slightly declining domestic production ... may be merely to delay dependence on foreign imports of that amount by two to four years ... until alternative sources \textit{[of energy]} can be brought closer to reality.}\]

The impact statement does not discuss the question of whether the costs of advancing dependence on foreign sources of oil by two to four years, while resources otherwise expended on the pipeline are used to develop alternative sources of energy, outweigh the costs of constructing the pipeline; nor does it consider whether construction of the pipeline, with the suggestion of continued expenditures for oil development, is the best course of action to meet the inevitable need for ending the nation's dependence on oil energy.

The preceding discussion has assumed that the assertions regarding the "undependability" of "Eastern Hemisphere" oil sources are in fact true. However, Interior offers no discussion or evaluation of those assertions. It is clear that dependence on Eastern Hemisphere oil will not mean price increases, since Eastern Hemisphere oil even with transportation costs will be priced at better than a dollar a barrel below U.S. produced oil. \textit{Oil Import Question, supra} note 139, at 22. Furthermore, the impact statement offers no evidence to indicate the gravity of the risk involved in continuing dependence on Eastern Hemisphere oil, nor does it rebut the assertions of the Task Force on Oil Import Controls that there are factors which indicate that Eastern Hemisphere nations need U.S. oil markets. \textit{Oil Import Question, supra} note 139, at 30-37.

\textsuperscript{141} \textit{7 Impact Statement 5.}
There appear to be four alternative means of meeting United States' energy requirements, all discussed to some degree within the impact statement, which could be utilized in lieu of the Trans-Alaska pipeline. The first alternative is eliminating or increasing the oil import quotas to allow the United States' oil needs to be met by imports. The second is the development of alternative energy sources. The third is delay of the project coupled with an increase in the oil import quota to allow completion of a more comprehensive environmental analysis and development of more reliable technology for use in a permafrost situation.

The fourth alternative, the alternative which has received the most public comment, is construction of an oil pipeline across Canada.

The advantages of this alternative are that the line would cross no large, active seismic zones, would involve no shipping of oil and would have little effect on subsistence communities. However, the chief advantage of the Canadian alternative, which makes it the most attractive alternative to the Trans-Alaskan route, is that a natural gas pipeline will probably be built along a Canadian route in any case. Con-

142. See 5 Impact Statement 260-79. The impact statement contends that the alternative of eliminating or loosening the oil import quota is feasible only "to the extent [that] . . . foreign import controls . . . [need not] be maintained to assure domestic production capabilities required to meet national security needs." 1 Impact Statement 288.

143. 5 Impact Statement 294-492. Alternative energy sources discussed include tar sand and oil shale development, solar energy, nuclear energy, and development of other petroleum deposits within the United States. Although the impact statement does not discuss the costs of developing these alternatives in comparison with the costs of construction and operation of the pipeline it does make the general claim that such energy sources are not practical at the present time. See, e.g., id. at 407, 446, 458, 475.

144. This alternative is discussed indirectly in the parts of the impact statement which assert that immediate development of Alaskan oil will bring national security benefits. But see note 150 infra. However, the impact statement offers no evaluation of the extent of this benefit in comparison to the possible benefit to be realized by delaying pipeline construction until a more complete study of the environmental impact of the project can be made.

145. 5 Impact Statement 123-208. The impact statement discusses three routes through Canada; the most practical appears to be a route extending along the Arctic coast to the Mackenzie River delta, then down to Edmonton and the American Midwest.

146. 5 Impact Statement 191-99.

147. The impact statement claims that the environmental impact of the gas transportation system that would necessarily accompany the crude oil transportation system is difficult to evaluate . . . [because] no proposal describing a specific system has been received.

4 Id. at 5. The American Gas Ass'n estimates conservatively that the Prudhoe Bay oilfield alone contains 25 trillion cubic feet of natural gas, enough to supply the United States for a year. Tussing, supra note 82, at 55. Since the oil companies cannot "flare" the gas, they must either re-inject it into the wells or bring it to market. In the summer of 1970, ARCO, Humble and Sohio (which had merged with BP Alaska on Jan. 1, 1970, Knott, The Pipeline Story, supra note 5, at 7) announced a feasibility study for a gas pipeline through Canada. The study was known as the Northwest Project. The Northwest Project Study Group, Press Release, July 15, 1970. See also Alaskan Outlook: Great-But Frustrating, supra note 5.

Since shipping of natural gas by ocean-going tanker is unprofitable because of the

1624
struction of an oil pipeline along this same route would avoid near double damage to the environment. The disadvantages of the Canadian route are that it would cross more permafrost and streams and would cost much more to construct. The impact statement makes no attempt to compare specific cost estimates of the two routes and considers the two routes only in terms of general environmental effect. Furthermore, there is evidence that the Department of Interior made no independent evaluation of the Canadian route.

bulk of the gas, the oil companies will be required to use an overland route to get the gas to market. Furthermore, natural gas is in short supply in the United States and the oil companies have already asked the Federal Power Comm'n for a 50 per cent increase in the price of natural gas sold interstate. Wall St. J., Aug. 26, 1970, at 5, col. 1. See also Baldwin, supra note 62, at 257; Hearings on Supplies of Natural Gas Before the Subcomm. on Minerals, Materials and Fuels of the Senate Comm. on Interior and Insular Affairs, 91st Cong., 1st Sess. (1969). On Aug. 4, 1972, the Federal Power Comm'n announced a new natural gas pricing policy, designed to encourage development of United States natural gas supplies. N.Y. Times, Aug. 4, 1972, at 1, col. 1. Thus it would appear that the oil companies will be leaning toward building a gas pipeline, especially if there are further natural gas discoveries in the arctic area. See 3 ENR 411 (1972).

148. Although a cold gas pipeline will not present the temperature problems of a hot oil pipeline, see 99-100 supra, construction of an oil pipeline and a gas pipeline along the same corridor will cause double damage in both economic and environmental terms.

149. 5 IMPACT STATEMENT 191-94. Another disadvantage not mentioned in the impact statement is that the oil companies have already rejected this route. Two factors may explain their position: (1) the Canadian route is more expensive and will take longer to build; and (2) the oil companies will have to deal with another government which may impose more taxes, permits and stipulations. See 5 ENR (1972); Bradshaw, A Brief for the Pipeline, N.Y. Times, July 31, 1972, at 27, col. 7. Mr. Bradshaw, president of ARCO, claims that the "trans-Canadian route is so obviously a spurious rather than a serious alternative to the Alaskan pipeline that it is [sic] worth discussing," id., but Bradshaw does not discuss the probability that a gas pipeline will be constructed along the Canadian route.

150. The major study of the Canadian route is being carried out by a Canadian oil consortium and has not yet been completed. See L. Aspin, 23 Questions on a Canadian Pipeline Alternative Which Any Good Environmental Impact Statement Should Answer, Dec. 11, 1971; Alyeska Pipeline Service Co., Memorandum re Trans-Canadian Alternative Route, Sept., 1971 (received by Dept of Interior), Secretary Morton admitted at a press conference that the Dept of Interior had not evaluated the Canadian alternative, but that he would recommend that Alyeska discuss the route with the Canadians. 2 ENR at 13 (1971). The Canadian alternative has certain advantages not discussed in the impact statement. A pipeline bringing oil to the Midwest would eliminate the "national security" risk of tankers and would also bring oil to the Midwest and East Coast where the demand is greatest. See note 140 supra; Hobbie & Mancke, Which Pipelines?, New Republic, June 24, 1972, at 16. Furthermore, a Canadian pipeline would avoid the seismic areas which threaten the integrity of the Alaskan line. See R. Mancke & T. Stoel, in 4 PIPELINE COMMENTS at B1; H. Watson, in id. at H1 et seq. The only argument in the impact statement against the Canadian route is that it would bring the oil to market two to four years later than the Alaskan route. 7 IMPACT STATEMENT 1. The validity of this argument is in large part dependent on the questionable strength of the national security argument for the oil import quota. See note 140 supra.

Another argument in favor of the Canadian route is that the Canadian pipeline could be used to pipe oil located in the Mackenzie River area as well as that in the Mackenzie Delta area. See Canada's First Arctic Finds, OIL DIGEST, Nov., 1970, at 11.
V. NEPA and the Trans-Alaska Pipeline

The final impact statement represents a detailed and intelligent description of the probable environmental effects of the Trans-Alaska pipeline. Yet serious questions remain as to the sufficiency of this document in relation to NEPA's standards. (1) Has Interior "pre-judged" the project by committing itself to construction on the Trans-Alaska route before it considered the environmental consequences of the project, and if so, does such pre-judgment violate the standard of "full good faith consideration" which has evolved in Section 102 (2)(C) decisions?151 (2) Is the failure of the Department of Interior to produce reasonably certain qualified estimates of environmental damage, despite a significant effort, a violation of Section 102(2)(G)? (3) Is the impact statement's discussion of alternatives to and benefits of the pipeline sufficient to comply with Section 102(2)(C) and the other more general directives of Section 102 incorporated therein?152 Evaluation of these questions in the context of previous judicial doctrine interpreting NEPA suggests that even if Interior's conduct is found to be "good faith" consideration of the environmental aspects of the pipeline project, Interior cannot be judged in compliance with NEPA as a result of the perhaps unavoidable imprecision and lack of quantification in estimates of environmental damage, the inability to present more systematic analyses of benefits, and the failure to develop fully certain alternatives to the pipeline project.

Not even the first question suggested above is easily resolved in Interior's favor. In Part II it was suggested that NEPA requires agencies to have decision-making procedures in which economic and environmental concerns can be balanced objectively.153 Without such a requirement, Section 102(2)(C) would serve only a disclosure function.154 No decision-making procedure can meet the standard of "full good faith consideration" if the ultimate deciding authority is com-

151. For the development of the standard of "full good faith consideration" see pp. 1598-1606 supra.
152. See notes 53-67 supra.
154. See notes 35, 43 supra. This conclusion applies to NEPA § 102(2)(D) as well. See notes 53-63 supra.
mitted in advance to one course of action. Because high stakes are involved, and because Secretary Hickel presided over most of Interior's study of the line, there exists substantial evidence that the pipeline project was pre-judged from its inception and that such pre-judgment has affected Interior's entire consideration of the project.

With regard to the second question regarding the sufficiency of the impact statement's data, the statement fails to meet NEPA standards, as outlined above, with regard to oil spill probability, magnitude and effect, the probable damage from siltation and erosion, the likely disruption of wildlife and the magnitude of permafrost disruption. The alternative offered by Interior—continuous “federal supervision”—is not authorized by any of NEPA's provisions. Therefore, at its present stage of precision, Interior's environmental cost estimates cannot satisfy the judicial standards of Section 102(2)(C).

155. If the ultimate deciding authority were so committed, there could obviously be no “good faith” consideration of alternatives to the course of action chosen in advance. Thus, the environmental costs of proceeding with the chosen course of action could not be “considered” but only recognized.

156. At full capacity the pipeline will pump two million barrels of crude oil a day; present Los Angeles refinery gate prices are $3.17 per barrel for API 26-26.9 degree crude. Thus, operating at full capacity, the oil companies together would gross $7 million a day (with, of course, some very significant overhead costs, like drilling on the North Slope and taxes paid to the State of Alaska). The State of Alaska expects to realize about 250 million dollars a year in additional revenues generated by the pipeline and oil exploitation. See Tussing, supra note 82, at 70-74.

157. See notes 87, 88 supra.

158. It would appear that Secretary Morton felt, long before the final impact statement was issued, that the Trans-Alaska project would be built. Secretary Morton stated in an interview that the “trouble” with the project was that the oil leases on the North Slope were sold “without the foggiest idea of how to get the oil out.” The interviewer, paraphrasing Secretary Morton, continues:

Pipe Dreams?, NEWSWEEK, April 3, 1972, at 62-63. Why does the official legally responsible for the pipeline decision feel that he has to “sell” his ideas to “the necessary people”? Morton appears to admit that the large initial investment of the oil companies, a significant portion of which may have been due to Secretary Hickel's assurances to the oil companies (see notes 87, 88 supra), now makes it difficult for Interior to disapprove the project. For the figures on oil company investment, see ALASKAN OIL ECOLOGY v. INDUSTRIAL PROGRESS, supra note 5, at 9. Vice-President Agnew, in a recent trip to Alaska, stated that the Nixon Administration was “for progress” and “vigorously supports” construction of the pipeline. N.Y. Times, July 25, 1972, at 18, col. 3.

Further evidence of Interior's apparent unswerving commitment to the project can be seen in its failure to exert any influence on the pipeline's design. The basic route of the pipeline, its terminus, and the construction modes were all determined by Alyeska in 1969 and with the exception of one particular construction mode have not been changed. Compare routing contained in Senate Hearings on the Trans-Alaska Pipeline, pt. 2, supra note 5, at 109 with PROJECT DESCRIPTION, supra note 90, Summary, at 7-9.

159. See Part IV supra.

160. See notes 130-33 supra.

1627
No argument can be made that the anticipated benefits of the project are so great that even "worst case" predictions of environmental damage are outweighed by these benefits for the impact statement fails to quantify benefits, just as it does costs. The chief benefit attributed to the pipeline would be in terms of "national security." While rarely quantifiable, "national security" is not a magic talisman justifying every decision with implications for the national interest. In view of the rather minor increase in the domestic production-domestic consumption ratio that development of Alaskan oil will cause and the lack of any analysis of the risks of depending on foreign sources of oil, the "national security" benefit is not substantiated by the impact statement. Moreover, there are conceivable alternative means of attaining the same benefit, primarily the Canadian pipeline route. The possibilities of the Canadian route, and of other alternatives to the Trans-Alaska pipeline, are acknowledged by Interior but are not fully considered. The standard of "full good faith consideration" does not necessarily mean that Interior must select any of these alternatives. The standard does require, however, that Interior fully assess them. Thus, by the standards of National Resources Defense Council v. Morton and Greene County

161. See notes 136-40 supra. Since discussion of benefits and alternatives is incorporated into the impact statement, see notes 53-57 supra, that discussion must meet the requirements of definiteness established for the impact statement. See pp. 1599-1601 supra.

162. Notes 139-40 supra.

163. See New York Times Co. v. United States, 403 U.S. 713, 730 (1971); Cole v. Young, 351 U.S. 536, 543 (1956); Youngstown Sheet & Tube Co. v. Sawyer, 343 U.S. 579, 587 (1952). But see In Re Debs, 158 U.S. 565 (1899). In the Cole case, supra, the court held invalid Exec. Order No. 10450, 18 Fed. Reg. 2489 (1953) which implemented the Summary Suspension Act, 5 U.S.C. § 7531 et seq. (1970). The Food and Drug Administrator had attempted to fire an inspector because of his admitted communist sympathies. The Summary Suspension Act allowed summary dismissals for employees in "the interest of the national security of the United States." The Executive Order had interpreted this to mean that an individual could be dismissed if his continued employment "is not clearly consistent with the interests of national security." Justice Harlan, writing for the Court, disagreed:

[T]he term "national security" is used in the Act in a definite and limited sense and relates only to those activities which are directly concerned with the Nation's safety, as distinguished from the general welfare . . . . .

351 U.S. at 543; the Court reversed the inspector's dismissal.

164. Development of Alaskan oil will increase domestic production/domestic consumption ratio by approximately 7%. See note 140, supra.

165. See id.

166. 5 IMPACT STATEMENT 123-208; 7 id. 1 et seq.

167. The impact statement's analysis of the Canadian route is as imprecise as its analysis of the Trans-Alaskan route. See Section IV supra; note 150 supra. Certain "national security" implications of the Trans-Canadian route are inadequately discussed.

Id. See 7 IMPACT STATEMENT 1 et seq.; note 140 supra. Finally the effect of two pipelines over different routes in terms of total environmental cost is not considered at all. See note 147 supra. For discussion of other alternatives to the pipeline inadequately considered in the impact statement see p. 1624 and notes 142-44 supra.

168. 458 F.2d 827 (D.C. Cir. 1972)
Evolving Judicial Standards under the NEPA

Planning Bd. v. Federal Power Comm'n, Interior's identification of alternatives to and benefits of the pipeline, does not satisfy evolving NEPA requirements.

In view of the ambiguities and uncertainties which remain in the final impact statement, courts hearing the present challenges to Secretary Morton's approval of land use permits face a difficult task. The National Environmental Protection Act is a recent innovation with a relatively brief history of judicial construction. No NEPA case to date has involved a project which presents such large environmental risks, which will cost as much to construct, and which involves such debatable benefits. The project has already been delayed for three years—two years by a NEPA-authorized injunction. The Department of Interior has now produced an extensive, nine-volume study, costing $25 million, and is apparently willing to offer close supervision of the pipeline's construction. What more can NEPA possibly require?

Courts hearing current pipeline litigation have four basic alternatives for disposition of challenges to the pipeline project: (1) An injunction against Secretary Morton's issuance of permits for the pipeline may be denied; (2) The issuance of pipeline permits can be made conditional on the preparation of a more definite impact statement for each segment of the pipeline before the Authorized Officer approves that segment; (3) The project can be enjoined pending further study and preparation of a more definitive impact statement; and (4) The issuance of permits for this pipeline can be held to be beyond the authority of the Department of the Interior at this time and for the foreseeable future.

If a court elects to follow the first mode of disposition, refusing to enjoin the issuance of permits for the pipeline, it can do so only by answering the three major questions raised by Interior's impact statement in the negative. As argued above, such negative answers would be difficult to justify. There is considerable evidence that the project was prejudged; estimates in the impact statement of environmental damage contain fatal uncertainties; and Interior has failed to con-
sider seriously possible alternatives to the pipeline.\textsuperscript{176} Thus, unless a court chooses to substantially dilute the previously established judicial doctrine of "full good faith consideration,"\textsuperscript{177} an injunction against issuance of the pipeline permits for violation of NEPA standards will be difficult to refuse.

Although the second available disposition of the pipeline litigation would ensnarl the project in bureaucracy and red tape, it is discussed here because it is the one disposition implicitly suggested by Interior's own recommendations. Since Interior has offered segmented approval procedures\textsuperscript{178} as a substitute for a definitive impact statement, the Authorized Officer should require impact statements on each segment before deciding to proceed.\textsuperscript{170} Such a procedure would be opposed by both environmentalists and oil companies. No oil company would construct one segment of the pipeline if there were a possibility that permission to construct other segments would be denied. From the environmentalists' perspective, allowing construction of one segment would give the project so much momentum that no Authorized Officer or court could then refuse permission to build the remaining segments. Large sums of money already committed would substantially prejudice the "particular sort of careful and informed decision-making"\textsuperscript{180} NEPA was designed to effect. Thus, even if the oil companies were to agree to such a stipulation, segmented impact statements would not constitute "full good faith consideration" of the environmental costs of the project.\textsuperscript{181}

The third and fourth alternative dispositions\textsuperscript{182} of the pipeline litigation are both premised on the contention that the Department

\begin{footnotes}
176. See pp. 1621-25 and notes 139-50 supra.
177. This standard is developed at p. 1606 supra. To approve the adequacy of Interior's impact statement, a court would be required to employ lower standards of sufficiency of environmental data, see notes 40-43 supra, of full discussion and evaluation of alternatives and benefits within the "long range character" of the problems, see notes 63-67 supra, and of "good faith" evaluation of information adduced in an impact statement, see notes 45-51 supra. Use of such lower standards would substantially vitiate NEPA's potential for ensuring consideration of environmental factors in bureaucratic decision-making.
178. See notes 130-33 supra.
179. Id. The Authorized Officer has the power to refuse to approve an "application to proceed," thereby preventing any construction on a segment. He may also require Alyeska to perform any and all studies he feels are desirable and could thus require studies meeting NEPA data sufficiency standards for impact statements. If the Authorized Officer gave full good faith consideration to such information prior to approval of a given segment, NEPA policies would be fulfilled.
180. Calvert Cliffs, 449 F.2d at 1115.
181. In fact, if the oil companies were to agree to such a stipulation, "good faith consideration" would be unlikely, since the oil companies would obviously not agree unless they had reason to believe that project would be approved, regardless of the bureaucratic devices employed. See note 88 supra.
182. These possible dispositions are presented at p. 1629 supra.
\end{footnotes}
of Interior has failed to comply with the NEPA standard of "full good faith consideration" in its preparation and consideration of the Trans-Alaska pipeline impact statement. The alternatives differ, however, according to the probability that Interior will be successful in bringing the pipeline project into conformity with NEPA standards within a reasonable period of time and with a reasonable expenditure of resources. If a court believes that Interior can produce more definitive estimates of environmental damage and develop alternatives, then the project should be merely enjoined pending completion of a more definitive impact statement. However, if a court finds that more definitive estimates of environmental cost are not possible or that meaningful evaluation of the benefits and alternatives cannot be undertaken at the present time, then it should remand the decision, in effect, to Congress. It should enjoin issuance of the permits and should also hold that the Department of Interior is without authority to permit construction of this pipeline. On one level the reasoning which would support such a holding is quite simple. By passing the National Environmental Policy Act, Congress, inter alia, established a policy designed to rationalize environmental decision-making by requiring, without exception, that all "major Federal action significantly affecting the... environment" can only be taken after thorough consideration of their environmental consequences. Obviously, only Congress can authorize exceptions to its own inclusive policies. If the Trans-Alaska pipeline proposal cannot meet NEPA standards, only Congress can authorize it.

The importance of this fourth possible disposition of the pipeline litigation lies not so much in the judicial remedy provided—in a technical sense both alternatives three and four rest on exactly the same injunctive process—but in the language employed by a court

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183. This standard is developed at p. 1606 supra. See generally Part II, supra.
184. See pp. 1626-29 supra.
185. The normal disposition of litigation involving projects in which the agency in question has not complied with NEPA is the issuance of an injunction pending further environmental study. See cases cited note 23 supra.
186. For a discussion of limitations on knowledge of the Alaska environment see Part IV, supra. For a list of uncompleted studies of the Alaskan environment see 2 Impact Statement App. A.
187. See notes 139-44 supra.
188. But see McQueary v. Laird, 449 F.2d 608 (10th Cir. 1971) holding that projects involving "national security" are beyond the reach of judicial remedies under NEPA although the Act theoretically applies. McQueary will probably be limited to weaponry cases or military exercises. See note 23 supra.
189. NEPA § 102(2)(C).
190. Part I, supra; National Helium Corp. v. Morton, 455 F.2d 651, 656 (10th Cir. 1971).

1631
in granting such a remedy. It is this language that effectively makes alternative four a "remand to Congress." Alternative four requires a court to state clearly its opinion whether the pipeline project can be brought into compliance with NEPA with a reasonable expenditure of time and effort. The obvious benefit resulting from such judicial explicitness is that the position of the parties would be at once clarified and the party proposing construction would know that the power of redress lay only with Congress. Without such clarification the pipeline project would remain in bureaucratic limbo for at least another two years, causing continued economic loss and uncertainty to the oil companies.

The propriety of the "remand" remedy for the pipeline project is further strengthened by the fact that the Pipeline Statute, which

191. The concept of a remand to a legislative body as a remedy for environmental litigation was previously suggested in a different context. See J. SAX, DEFENDING THE ENVIRONMENT, ch. 8 (1971). Professor Sax argues that the role of the courts is not to make public policy but to see that public policy is made by the right entity. Id. at 176-77. As authority for such remand, Sax cites a line of Massachusetts cases holding that administrative agencies cannot build highways through parks without the express approval of the state legislature. Id. at 177 et seq. Professor Sax attempts to tie this theory of remand into an overall theory of judicial supervision of administrative disposal of public lands. Sax, The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention, 68 MICH. L. REV. 473 (1970); Sax at 168 et seq. The gist of his argument is that common law "public trust" doctrine, originally applicable to underwater lands, see Illinois Central R.R. Co. v. Illinois, 146 U.S. 387 (1892), prevents an administrative agency from authorizing a major conversion of public lands to private uses without the approval of a legislative body. The remand under NEPA proposed herein imposes in effect a similar restraint on federal agencies with regard to projects which involve a major conversion of public environmental assets.

Besides outright congressional approval of the pipeline project, another possible outcome which could emerge after a remand is selection of the pipeline corridor by the State of Alaska under the land selection provision of the Alaska Statehood Act, § 6, 72 Stat. 339. If the Dep't of Interior modified P.L. 5150, 36 Fed. Reg. 25410-3 (1971), to allow the State of Alaska to select the lands containing the pipeline corridor, NEPA then would no longer be applicable to the bulk of the project. No impact statement would be required for a pipeline constructed on lands belonging to the State of Alaska.

192. If at any time Interior could present an acceptable impact statement, the remand would be lifted. However, if the court had previously found that the size of the project, breadth of alternatives and benefits, lack of knowledge about the environment in question, etc. were such that compliance was effectively impossible, it is improbable that Interior could subsequently present an acceptable impact statement.

193. It might also be thought that the goal of increasing public participation in environmental decision-making is furthered by utilization of the remand disposition. NEPA is designed to promote public awareness of environmental problems as well as to structure and direct administrative decision-making. See National Resources Defense Council, 458 F.2d 827, 835 (D.C. Cir. 1972); Gillham Dam, 342 F. Supp. at 1217; note 43 supra. Normally this "visibility-raising" or "disclosure" function is served contemporaneously with NEPA's procedural function in the administrative process. Information disclosed in impact statements may provoke public entry into bureaucratic decision-making, through Congress or the Presidency, though normally the public role is a passive one. The possibility, however, of public intervention is always present. Thus, in the case of a project like the pipeline, which appears to transcend the bounds of administrative authority, resolution by the public, through its elected representatives in Congress, becomes the only possible forum for the problem. The remand to Congress remedy facilitates realization of this possibility by calling the dispute squarely to Congress' attention.

is the basis for Interior's authority to issue the land permits, raises a difficult Delegation of Powers issue because it contains no standards to guide the exercise of administrative discretion. Although possible violations of the Delegation of Powers principle have seldom been remedied by declaring an offending statute unconstitutional,

195: The Delegation of Powers doctrine derives from the exclusive grant of "legislative" power conferred on Congress by the Constitution. See U.S. Const., Art. I, § 1, L. JAFFE, supra note 74, at 48 et seq.; Marshall Field & Co. v. Clark, 145 U.S. 649, 662 (1892). What the Constitution has conferred upon Congress, Congress may not give away, for to do so would alter the Constitution's allocations of political responsibility and power among the three branches of government. Thus, whenever Congress delegates discretionary authority to an administrative agency (the Executive Branch), Congress must also specify the basic policies to govern the exercise of such delegated discretion. Without such "standards," the administrative agency itself would possess the power "to legislate" within the area of delegated discretion. For the courts, then, the Delegation of Powers doctrine serves as the underlying rationale for judicial intervention to maintain constitutional allocations of political power and responsibility. See A. BICKEL, THE LEAST DANGEROUS BRANCH 160 (1962).

196. In relevant part the Pipeline Statute states:
Rights-of-way through the public lands . . . may be granted by the Secretary of Interior for pipeline purposes for the transportation of oil or natural gas to any applicant possessing the qualifications provided in Section 181 [app'ns, corporations or individual must be a U.S. citizen] of this title, to the extent of the pipeline and 25 feet on each side of the same under such regulations and conditions . . . as may be prescribed by the Secretary of Interior and upon the express condition that such pipelines shall be . . . Common Carriers . . . .
30 U.S.C. § 183 (1970) (emphasis added). In essence the statute gives the Secretary of Interior total discretion whether to issue permits to an applicant meeting the minor Section 181 qualifications and agreeing to operate as a common carrier. Neither of these qualifications concerns how the public land is to be used by the permittee.

Although no court has held that a statute expressing such broad administrative discretion as the Pipeline Statute in regard to the administration of public lands is a proper delegation of power, courts have generally allowed administrative agencies a wide range of discretion in administering public lands. See Best v. Humboldt Placer Mining Co., 371 U.S. 334 (1963) (upholding validity of statutory requirement that mining claims be adjudicated before the Bureau of Land Management); United States v. Grimaud, 220 U.S. 506 (1911) (upholding validity of administrative regulation of cattle and sheep grazing on public lands under Act of March 3, 1891, ch. 561, 26 Stat. 1105, which gave the Executive the power to issue "rules and regulations" for the private use of public forest reservations); Sierra Club v. Hickel, 433 F.2d 24, 28 (9th Cir. 1970), aff'd sub nom. on other grounds, Sierra Club v. Morton, 40 U.S.L.W. 4397 (1972) (upholding authority of Secretary of Interior to issue certain land use permits); Forbes v. United States, 125 F.2d 404 (9th Cir. 1942) (upholding authority of Secretary of Interior under Mineral Leasing Act, 30 U.S.C. §§ 221, 225, 189 (1970) to require oil and gas lessees to plug dry wells); California Co. v. Seaton, 187 F. Supp. 445 (D.D.C. 1950), aff'd sub nom. California Co. v. Udall, 286 F.2d 384 (D.C. Cir. 1961) (upholding authority of Secretary of Interior under Mineral Leasing Act, 30 U.S.C. §§ 181 et seq. (1970) to define "value of production" for royalty purposes).

The constitutionality of the delegation of power in the Pipeline Statute has been implicitly upheld in cases defining the Common Carrier requirement of the Act. See Chapman v. El Paso Natural Gas Co., 264 F.2d 46 (D.C. Cir. 1952); Montana-Dakota Utilities Co. v. Federal Power Comm'n, 169 F.2d 392 (8th Cir. 1949), cert. denied, 335 U.S. 833 (1948).

197. Only twice has the Supreme Court held a congressional delegation of power to an administrative body unconstitutional. Both cases were decided in the early New Deal period and involved the National Industrial Recovery Act, ch. 90, 48 Stat. 195. In Schechter Poultry Corp. v. United States, 295 U.S. 495 (1935) [hereinafter referred to as the "Schechter case"] the NIRA provision empowering the President to enact and enforce codes of "fair competition" in industries which requested such codes, ch. 90 § 3(a), 48 Stat. 196, was an illegal delegation of legislative power because the Act provided no standards to govern the implementation of the Codes. In Panama
the principle has been vindicated by construing statutes to imply limits on administrative discretion thus avoiding a Delegation of Powers issue.\textsuperscript{198} In \textit{Fahey v. Mallonee}\textsuperscript{199} the court found that the “accumulated experience” of bank supervision provided a limiting standard of custom for the exercise of administrative discretion in regard to the power of the Federal Home Loan Bank Board to re-organize or liquidate a member bank and upheld the delegation of administrative discretion.\textsuperscript{200} However, where the individual and societal rights subject to wide-ranging or undefined administrative discretion have greater constitutional significance, the Court has been less willing to employ a process of statutory construction to uphold an administrative agency’s discretion with respect to such rights.\textsuperscript{201} Thus in \textit{Kent v. Dulles}\textsuperscript{202} the Court in the process of refusing to uphold an administrative action went to great lengths to find limits of custom on

Refining Co. v. Ryan, 293 U.S. 388 (1935) [hereinafter referred to as the \textit{Hot Oil} case] the Court held that the provision of the NIRA that empowered the President to prohibit the interstate shipment of oil produced in excess of state-imposed production quotas, ch. 90, § 9(c), 48 Stat. 200, was an illegal delegation of legislative power. Both the \textit{Sick Chicken} and \textit{Hot Oil} cases are not very stable precedent. In \textit{Yakus v. United States}, 321 U.S. 414 (1944) the Court held that the Emergency Price Control Act, of Jan. 30, 1942, ch. 26, § 2(a), 56 Stat. 23, was a proper delegation of power. The Act required that the Office of Price Administration set prices as “will be generally fair and equitable and will effectuate the purposes of this Act.” Chief Justice Stone distinguished the \textit{Sick Chicken} case by stating that the National Recovery Act “provided no standards to which [the NRA codes] were to conform . . . .” He noted that the Price Control Act gave a “statement of considerations” to guide the Price Administrator in making decisions on prices and implied that pre-war prices were to be weighed in the decision-making process. The Court thus promulgated this principle to guide judicial disposition of cases involving a Delegation of Powers question:

Only if we could say that there is an absence of standards for the guidance of the Administrator’s action so that it would be impossible in a proper proceeding to ascertain whether the will of Congress has been obeyed would be [sic] justified in over-riding its choice of means for effecting its declared purpose of preventing inflation.


\textsuperscript{199} 332 U.S. 245 (1947).

\textsuperscript{200} The case involved a challenge to the Federal Home Loan Bank Act, 12 U.S.C. § 1464(d) (1970), which authorizes the Federal Home Loan Bank Board to re-organize, consolidate, merge or liquidate a savings and loan bank. Although the Act placed no limitations on these powers and stated no standard for the exercise of administrative discretion as to when such actions were to be taken, the court found that the Act did not involve an improper delegation of power:

Banking is one of the longest regulated and most closely supervised of public callings. It is one in which accumulated experience of supervisors, acting for many States under various statutes, has established well-defined practices . . . . [The FHLBB’s regulations] are sufficiently explicit against the background of custom, to be adequate for proper administration and judicial review . . . .

332 U.S. at 250, 253.


\textsuperscript{202} 357 U.S. 116 (1957).
Evolving Judicial Standards under the NEPA

the Secretary of State’s authority to issue passports to avoid any inference that the Secretary of State had unfettered discretion to grant or withhold a citizen’s right to travel. In effect, the court remanded the Passport Statute to Congress, asking Congress to re-examine its delegation of power to determine whether it had clearly intended to establish such administrative control over the right to travel.

In view of the near total discretion conferred upon the Secretary of Interior by the Pipeline Statute, NEPA’s standards assume special importance as the only limiting statutory standard for the exercise of administrative discretion to grant permits for pipeline construction on public lands and thereby alter the environmental quality of

203. The case involved Secretary Dulles’ refusal to issue a passport to Maxwell Kent, allegedly a member of the Communist Party of the United States. The Passport Act of 1926, 22 U.S.C. § 211(a) (1970), allowed

'[the Secretary of State . . . to] grant and issue passports . . . under such rules and regulations as the President shall designate and prescribe for and on behalf of the United States . . . .

Secretary Dulles had promulgated a regulation that passports would not be issued to communists. Justice Douglas, for the Court, held that the Secretary had exceeded his authority in issuing the regulation, stating:

Since we start with an exercise by an American citizen of an activity included in constitutional protection [the right to travel] we will not readily infer that Congress gave the Secretary of State unbridled discretion to grant or withhold it . . . .

If that “liberty” is regulated, it must be pursuant to the lawmaking functions of the Congress . . . . And if that power [to restrict passports] is delegated, the standards must be adequate to pass scrutiny by the accepted tests. See [the Hot Oil case] . . . . Where activities or enjoyment natural and often necessary to the well-being of an American citizen such as travel are involved, we will construe narrowly all delegated powers that curtail or dilute them . . . .

357 U.S. at 129. Justice Douglas also noted that “while the power of the Secretary of State over the issuance of passports is expressed in broad terms, it was apparently exercised quite narrowly,” 357 U.S. at 127, and used this custom of past limited exercise of discretion to justify future judicially imposed limits on the Secretary’s discretion.

See L. JAFFE, supra note 74, at 78.


205. See note 196 supra.

206. It might be thought that just as the Court was able to uphold the statute in Fahey v. Mallonee, 332 U.S. 245 (1947), by finding a limiting standard of “accumulated experience,” id. at 253, so a court could uphold the Pipeline Statute, 30 U.S.C. § 185 (1970), against a Delegation challenge by inferring a limiting standard from past standards developed by the Department of Interior while administering the statute. The Interior Department, however, has not developed such standards. Historically, Interior has placed only two conditions on the issuance of pipeline permits, both of which are contained in the statute itself: An applicant must agree to operate the line
those lands. *At a minimum*, then, to avoid a Delegation of Powers issue, courts should strictly enforce NEPA standards in litigation involving administrative discretion delegated by the Pipeline Statute. However, if the environmental quality of public lands is believed to be a public right of special significance then courts should not “readily infer that Congress gave . . . unbridled discretion to grant or withhold it,” and should, through the process of remand, give Congress the opportunity to reconsider its broad delegation which allows Interior the unfettered discretion to maintain or vitiate that right.

as a common carrier and not to discriminate against carrying gas or oil produced from government land. See Richfield Oil Co., 68 I.D. 455 (1961); Continental Oil Co., 68 I.D. 186 (1961); Continental Oil Co., 61 I.D. 403 (1954); Frances R. Ray, 61 I.D. 366 (1949); Utah Oil Refining Co., 57 I.D. 79 (1939); Rights-of-Way For the Transportation of Oil & Natural Gas Through the Public Lands, 51 I.D. 41 (1925). In Richfield Oil Co., supra, the Solicitor stated:
The Department's position has been clear that Section 28 [the Pipeline Statute] provides for the grant of a pipeline upon two separate conditions . . . . 68 I.D. at 498. See 43 C.F.R. subpt. 2881 (1972).

The existence of only these two limitations is possibly a result of the fact that the Act originally did not allow for the exercise of any discretion. The Mineral Leasing Act of 1920, ch. 85, § 28, 41 Stat. 437, stated that permits "are hereby granted" for pipeline purposes across federal lands. The Act was amended in 1935 for a number of reasons, one of which was to prohibit pipeline permits from discriminating against producers on government lands. When § 28 was amended to end such discrimination, "are hereby granted" was changed to "may be granted" by the Secretary of Interior." See 79 Cong. Rec. 1631 (1935) (remarks of Senator O'Mahoney upon introducing S. 1772). The final version of Senator O'Mahoney's bill retained this change although the Conference Report did not comment on it. Cong. Rec. No. 1138, 74th Cong., 1st Sess. (1935); 79 Cong. Rec. 12075-6 (1935). Thus, without fanfare, the Pipeline Statute was amended to make issuance of permits discretionary. See Act of August 21, 1935, ch. 599, § 1, 49 Stat. 678. While the legislative history of the 1935 amendments does not suggest why Congress made this change, it is likely that the meaning of the change was clear to Congress. See Hearings on S. 1772 Before the U.S. Senate Comm. on Public Lands & Surveys, 74th Cong., 1st Sess. (1935). The Department of Interior has admitted that the change from "are granted" to "may be granted" is a "material" change. Continental Oil Co., 68 I.D. 435 (1961).

Thus, since Interior's practice has apparently been to approve all permit applications which meet the two statutory criteria, it has developed no standards to govern its statutory discretion to refuse to approve the permit applications for other reasons. See Chapman v. El Paso Natural Gas Co., 294 F.2d 46, 51 (D.C. Cir. 1962). Compare the general policies promulgated by the Bureau of Land Management to govern disposal and administration of public lands, 43 C.F.R. subpt. 1725 (1972).

207. See pp. 1632-36 supra; Fahey v. Mallonee, 332 U.S. 245 (1947). The width limitation upon the granting of pipeline rights-of-way—the width of the pipe plus 25 feet on each side—should also be construed as a limiting standard on the exercise of Interior's discretion. See Utah Power & Light Co. v. United States, 245 U.S. 389, 401, 410 (1917).


Although the "remand to Congress" argument is much stronger in the case of the Trans-Alaska pipeline, because of the Delegation of Powers issue, discussion of NEPA's purposes in the context of the pipeline project's uncertainty problems suggested that a remand disposition could be required under NEPA alone.211 Discussion of the pipeline has also identified a number of factors which distinguish it from normal NEPA cases and which may be generalized as criteria to determine what other possible federal actions might be subject to a remand disposition in NEPA litigation: (1) the extent to which the project is committed to administrative discretion;212 (2) the magnitude of the environmental damage risked by the project;213 (3) the size of the project;214 (4) the sophistication of existing environmental and economic knowledge regarding the cost and benefit issues the project raises;215 (5) the quantum of agency time and money spent on attempting to comply with NEPA;216 (6) the number of insufficient impact
statements issued;\textsuperscript{217} and (7) the extent of “bad faith” procedures used in evaluating the impact statement and the project.\textsuperscript{218} Consideration of these seven factors should enable a court to determine whether an agency can ultimately comply with NEPA’s standards with a reasonable expenditure of time and money. Projects in which an agency cannot effectively comply with the Act will undoubtedly be rare; perhaps only the pipeline, among current federal actions, should be subject to the extraordinary remand remedy.

VI. Conclusion—The Efficacy of NEPA

The National Environmental Policy Act, as it has been interpreted by the courts, embodies a policy of disclosing to the public and Congress those environmental risks created by major federal actions and a policy of structuring, through procedural requirements, agency decision-making processes for consideration of environmental factors. The success of these two policies will clearly depend on whether federal agencies actually give “full good faith consideration” to environmental values when planning projects which will significantly affect the environment. Although some public involvement in environmental decision-making will undoubtedly be stimulated by NEPA’s disclosure functions, ultimately the success of NEPA will depend on the courts’ willingness to require full compliance with NEPA’s evolving judicial standards.\textsuperscript{219} In the three years since NEPA’s debut, it appears that courts have been generally willing to enforce such standards and that many agencies have been persuaded, sometimes reluctantly, to give environmental values full consideration.\textsuperscript{220} NEPA could, however,
Evolving Judicial Standards under the NEPA

over-bureaucratize those federal actions in which agencies cannot effectively comply with the Act. These actions should be remanded to Congress to avoid dilution of existing NEPA standards or compromise of its efficacy in promoting genuine consideration of environmental values.\textsuperscript{221}

\textsuperscript{221} Another factor which may compromise the efficacy of NEPA is the tremendous number of cases and resulting judicial injunctions generated by the Act. See generally the 4 volumes of ERC and the 2 volumes of ELR; cases cited note 23 supra. This present disruption of federal actions and programs will probably decrease as federal agencies become reconciled to the necessity of complying with the Act and develop procedures for producing acceptable impact statements. See 3 ENR 82 (1972) (recommendations of the CEQ to improve present agency practices in compiling and reviewing impact statements); \textit{id.} at 91 (General Accounting Office criticism of inefficiency in agency procedures for compiling impact statements). Once federal agencies develop expertise in NEPA procedural requirements and develop an institutional stake in consideration of environmental values, the number of federal actions subject to injunction pending compliance with NEPA will undoubtedly diminish. Summary judgment procedures should protect genuine agency NEPA compliance from nuisance or harassment litigation.