January 7, 1983 SECY-83-10

ADJUDICATORY ISSUE
(Notation Vote)

For: The Commissioners

From: Martin G. Malsch
Deputy General Counsel

Subject: TMI-1 PSYCHOLOGICAL STRESS: LITIGATION STRATEGY, PANE v. NRC

Discussion: On December 27, 1982, the staff sent SECY-82-500 to the Commission. In that paper,

The purpose of this paper is to review the present status of the PANE litigation and to advise the Commission of its options.

The Government's brief in the PANE case was filed in late December, and followed the approach set forth in the petition for certiorari filed in September. PANE's brief is now in preparation, and the Government will have an opportunity to file a reply. The Government's initial brief is attached to this paper.

It seems likely that

PANE should be viewed as

Contact:
Peter Crane, OGC
x41465

We continue to believe that

We shall discuss the major options in turn.

Under this option,

This approach, a variant of the first option, reasons that

* * * * *

In the view of OGC,

we would note that

We suggest, therefore, that

[redacted]

Recommendation:

Peter Crane for MGM
Martin G. Malsch
Deputy General Counsel

Attachment:
Government's brief in PANE

Commissioners' comments or consent should be provided directly to the Office of the Secretary by c.o.b. Monday, January 24, 1983, unless the Commission acts at the meeting scheduled for discussion of this item.

This paper is tentatively scheduled for discussion at a Closed Meeting on Wednesday, January 12, 1983.

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In the Supreme Court of the United States

OCTOBER TERM, 1982

No. 81-2399

METROPOLITAN EDISON COMPANY, ET AL., PETITIONERS

v.

PEOPLE AGAINST NUCLEAR ENERGY, ET AL.

82-358

UNITED STATES NUCLEAR REGULATORY COMMISSION AND THE UNITED STATES OF AMERICA, PETITIONERS

v.

PEOPLE AGAINST NUCLEAR ENERGY, ET AL.

ON WRITS OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE DISTRICT OF COLUMBIA CIRCUIT

BRIEF FOR THE UNITED STATES AND THE UNITED STATES NUCLEAR REGULATORY COMMISSION

OPINIONS BELOW

The opinion of the court of appeals (81-2399 Pet. App. 1a-76a) is reported at 678 F.2d 222.[1] The orders of the Nuclear Regulatory Commission reviewed by the court of appeals (Pet. App. 77a-78a, 101a-102a) and ancillary opinions (Pet. App. 79a-100a) are reported at 12 N.R.C. 607 and 14 N.R.C. 593. The opinion of the Atomic Safety and Licensing Board (J.A. 29-47) is reported at 11 N.R.C. 297.

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[1] Because the petition appendix in No. 81-2399, reproduces all of the materials required by Rule 21(k), these materials were not duplicated in the petition in No. 82-358. Accordingly, we refer here to the petition appendix in No. 81-2399 (hereafter "Pet. App.").

JURISDICTION

The amended judgment of the court of appeals (Pet. App. 103a-104a) was entered (without supporting opinions) on April 1, 1982.[8] A modified version of the amended judgment (Pet. App. 29a-30a) was entered on May 14, 1982, at the time opinions were issued. On June 23, 1982, the Chief Justice extended the time for filing a petition for a writ of certiorari to and including August 20, 1982. On August 12, 1982, the Chief Justice further extended the time for filing such a petition to and including August 30, 1982. The petition in No. 81-2399 was filed on July 1, 1982, and the petition in No. 82-358 was filed on August 30, 1982. The petitions were granted and the cases consolidated on November 1, 1982. The jurisdiction of this Court rests on 28 U.S.C. 1254(1).

STATUTES INVOLVED

Sections 2, 101 and 102 of the National Environmental Policy Act of 1969, 42 U.S.C. 4321, 4331 and 4332, are reproduced in the appendix to this brief.

STATEMENT

1. This case involves the Three Mile Island Unit 1 nuclear power reactor ("TMI-1"), located near Harrisburg, Pennsylvania. After preparing draft and final environmental statements and conducting an extensive safety review, the Atomic Energy Commission, in 1974, granted the private petitioners, Metropolitan Edison Company et al. ("the utilities"), a license to operate TMI-1, and the unit entered service. Four years later, the utilities received a license from the successor agency, the Nuclear Regulatory Commission, to operate a second facility at the site ("TMI-2"). On March 28, 1979, a significant accident affecting the TMI-2 reactor took place. At the time of the TMI-2 accident, TMI-1 was not in operation, having been shut down by the licensee for routine maintenance and refueling. In

[8] The April 2 judgment, replaced an interim judgment (Pet. App. 105a-107a) issued by the court of appeals, also without opinions, on January 7, 1982.

the aftermath of the accident, the Commission directed the licensee to keep TMI-1 shut down pending further order of the Commission and announced that it would conduct a hearing to determine whether, and under what circumstances, the licensee should be allowed to resume operation of the plant. 44 Fed. Reg. 40461 (1979) (J.A. 8).

By further order, the Commission specified the issues to be addressed by the Atomic Safety and Licensing Board designated to conduct the "restart" proceeding. All related to concerns which the accident at TMI-2 had raised about the safety of TMI-1. *In re Metropolitan Edison Co.*, 10 N.R.C. 141 (1979) (J.A. 9-25). These included: deficiencies in the design common to the two reactors, the potential for interaction between the plants, the possible effect on TMI-1 of the decontamination of TMI-2, the management capability of the licensee, and deficiencies in the licensee's operating procedures and emergency plans. The Commission added that although accident-related psychological distress on the part of members of the public living near TMI that was *"unrelated directly to exposure to radiation"* was the subject of "real and substantial concern," it had not yet determined whether such issues "c[ould] be legally relevant to the[e] proceeding" (J.A. 20; emphasis added). The Commission accordingly invited parties wishing to raise such contentions to address the pertinent legal issues in briefs filed with the Atomic Safety and Licensing Board conducting the restart proceeding. That Board was, in turn, directed to certify the issue to the Commission for decision, with or without its own recommendation.

Respondent, People Against Nuclear Energy ("PANE"), an organization composed of residents of the Harrisburg area that had intervened in the restart proceeding, responded to the Commission's invitation, submitting two draft contentions (Pet. App. 115a-116a) for consideration, along with arguments that their consideration was legally mandated by both the Atomic Energy Act of 1954, 42 U.S.C. (& Supp. IV) 2011 *et seq.*, and the National Environmental Policy Act of 1969 ("NEPA"), 42 U.S.C. (& Supp. IV) 4321 *et seq.*

PANE claimed, first, that the resumed operation of TMI-1 would exacerbate the "severe psychological stress" which its members and other residents of the TMI area had allegedly suffered as a result of the accident at TMI-2. PANE asserted that the prevailing stress took the form of "increased anxiety, tension and fear, [and] a sense of helplessness," accompanied by physical symptoms such as skin rashes, aggravated ulcers, and skeletal and muscular problems. Respondent alleged that continuing injury to the health of the residents of the area would result "[a]s long as th[e] possibility [that TMI Unit 1 will reopen] exists" and that it was accordingly "impossible * * * to operate TMI 1 without endangering the public health and safety" (Pet. App. 115a).

For its second contention, PANE asserted that resumption of operations at TMI-1 would cause communities in the vicinity of TMI to be perceived as undesirable, thereby exacerbating damage to their economic and social "stability, cohesiveness and well being" caused by "a loss of citizen confidence in the ability of [community] institutions to function properly and in a helpful manner during a crisis" resulting from the aftermath of the 1979 TMI-2 accident. PANE urged that for this additional reason, TMI-1 should never again be allowed to operate (Pet. App. 116a).

2. On February 22, 1980, the Licensing Board issued its "Certification to the Commission on Psychological Distress Issues." *In re Metropolitan Edison Co.*, 11 N.R.C. 207 (1980) (J.A. 29-47). The Board concluded that the alleged "psychological stress is probably not cognizable under the Atomic Energy Act" because such effects are not radiation hazards (J.A. 31, 32).[3] On the other hand, the Board concluded that "the Commission, within its discretion, may and

[3] The Board added that "the Commission might conclude to the contrary for reasons not discussed by the parties" (J.A. 31). The Board apparently meant to suggest that the Commission itself had sufficient discretion to conclude that PANE's allegations of a mental health effect rested in part upon "radiological hazards associated with accident conditions" and were accordingly cognizable under the Atomic Energy Act. The Board thought that either position adopted by the Commission on this question of interpretation of its governing statute would be entitled to substantial deference and would withstand judicial review (J.A. 32-33).

should consider psychological stress and community fears under NEPA for the purpose of mitigating the effects of its TMI-1 licensing activity" (J.A. 29, 47).[4] Rejecting the Commission staff's contention that stress and community fears are not cognizable under NEPA because unquantifiable, the Board found "a sufficient prehearing basis for the premise that the effects are measurable," stressing that "[p]recise numerical quantification is not necessary" (*id.* at 36 & n. 8).[5] Acknowledging that there was no evidence before it

[4] The Licensing Board rejected the Commission staff's contention that psychological effects of restart authorization are not cognizable under NEPA because not traceable to a "direct impact upon the physical environment" (J.A. 34). Accepting the staff's premise that such a nexus was required, the Board reasoned, however, that (J.A. 35):

> [t]he psychological stress alleged by intervenors here is related to a significant physical environmental impact: the operation of TMI 1 coupled with residual effects of the accident at TMI 2. * * * The very fact that an EIS and cost/benefit balancing [were] undertaken at the time TMI was initially licensed] is a recognition of the fact that the operation of TMI 1 involves a significant physical impact upon the environment.

[5] The Board distinguished cases in which the courts of appeals have held psychological and socioeconomic effects of agency action to lie outside the scope of NEPA analysis. See, e.g., *Hanly* v. *Mitchell*, 460 F.2d 640 (2d Cir.), cert. denied, 409 U.S. 990 (1972); *Hanly* v. *Kleindienst*, 471 F.2d 823 (2d Cir. 1972), cert. denied, 412 U.S. 908 (1973); *Maryland-National Capital Park & Planning Commission* v. *United States Postal Service*, 487 F.2d 1029, 1037-1038 (D.C. Cir. 1973); *First National Bank of Chicago* v. *Richardson*, 484 F.2d 1369, 1375 (7th Cir. 1973); *Nucleus of Chicago Homeowners Association* v. *Lynn*, 524 F.2d 225 (7th Cir. 1975), cert. denied, 424 U.S. 967 (1976); see also *Como-Falcon Coalition* v. *Department of Labor*, 465 F. Supp. 850, 857 n.2 (D. Minn. 1978), aff'd, 609 F.2d 342 (8th Cir. 1979), cert. denied, 446 U.S. 936 (1980). The Board stressed that none of these decisions *precludes* agency consideration of mental health or socioeconomic effects associated with federal action. The Board noted, as well, that many of the foregoing cases involved "the argument that the mere presence of a disadvantaged group of people could constitute a pollution to the enviro[n]ment of a higher socioeconomic group," an argument with unacceptable overtones of racial and class discrimination, which, as a matter of policy, were to be excluded from environmental analysis. By contrast, here the Board thought "there [we]re no overriding national policies preventing the frank acknowledgement that the presence of the impacting force (operation of TMI 1) * * * may be considered" (J.A. 38).

that methods existed that "would permit the measurement of the psychological stress phenomenon well enough for use in a full-scale cost/benefit balancing in an * * * EIS," and suggesting that it was within the Commission's discretion to determine whether or not its staff should be directed to develop the necessary methodology, the Board nonetheless concluded that NEPA permitted consideration of the alleged stress in some fashion, even though preparation of a formal environmental impact statement (EIS) or even a threshold environmental impact appraisal (EIA) addressing this subject might not be required or even possible (J.A. 32, 40-43).

The Licensing Board rejected the contention, advanced by the licensee and the Commission staff, that stress is not cognizable under NEPA in the setting of this case because the fears that are alleged to occasion it are not rationally grounded (J.A. 38-39). The Board noted that the TMI-2 accident merely underscores the fundamental premise of the Atomic Energy Act that nuclear power improperly controlled is a source of danger, and "urge[d] the Commission to reject out-of-hand" this contention, suggesting that "fears of TMI 1 operation" are cognizable under NEPA because "they are * * * amenable to mitigation" (J.A. 39). The Board acknowledged that "the best way to minimize any psychological stress in the communities around TMI 1 is to make the plant safe or not allow it to operate" (J.A. 44). The Board nonetheless suggested that even if the licensee had met the requirements of the Atomic Energy Act, for instance those requiring monitoring of radiation releases from the plant, consideration under NEPA of stress effects might prompt the Commission to require the licensee to install additional monitoring devices to reduce public apprehension (J.A. 44-45). The Board further reasoned that giving plant neighbors the opportunity to voice their fears in the restart proceeding would in and of itself constitute a significant stress mitigation strategy (J.A. 45).

3, On December 5, 1980, the Commission issued an order (Pet. App. 77a-78a) directing that respondent's contentions based on "psychological stress" be excluded from the restart proceedings. The order reflected that the four Commissioners then holding office were evenly divided as to whether the stress issue should be considered by the licensing board, and that the procedural effect of the tie vote was to exclude the stress issue from the proceeding. The order indicated further that the issue would be reconsidered when the vacant fifth seat on the Commission had been filled.

No opinion for the Commission was issued. Instead, each Commissioner wrote separately setting forth his reasoning. Chairman Ahearne concluded that "an NRC licensing action is not an appropriate forum for psychological stress issues" (Pet. App. 79a). He maintained that stress is not cognizable under the Atomic Energy Act, and described "the issue of whether NEPA provides sufficient authority to impose mitigation measures on the licensee in the context of the restart proceeding" as "problematical" (*id.* at 80a). He concluded that the Commission's only obligation respecting stress is to mitigate any such effects by ensuring that TMI-1 is safe before restart is authorized.

Emphasizing that "the psychological stress at issue is not that associated with actual exposure to radiation—but the stress caused by the possibility that [petitioner] and others might be so exposed by future operation," and that "[t]here is no way to allay that fear except not to build or operate the reactor" (Pet. App. 82a), Commissioner Hendrie agreed that neither the Atomic Energy Act nor NEPA required consideration of respondents' contentions respecting stress, as such, and that the Commission's obligation was, instead, to ensure that TMI-1 is operated safely, and that the public is adequately informed of the relevant facts (*id.* at 82-91a). Commissioner Hendrie concluded that Congress did not intend that the Commission consider stress in licensing decisions under the Atomic Energy Act (*id.* at 83a-87a).

Respecting NEPA, Commission Hendrie relied upon the weight of federal judicial authority (see page 5 note 5, *supra*) placing psychological effects outside the scope of the

required environmental analysis. He rejected respondent's suggestion that the alleged presence of physical manifestations of stress served to distinguish this case, explaining (Pet. App. 89a):

> Presumably, psychological distress will always be accompanied by physical symptoms in a certain proportion of the persons affected. As a legal matter, I see no basis for differentiating between psychological stress that has physical symptoms and that which is without physical symptoms * * *. In either case, the problems of quantification and proof would be such as to make rational factfinding extremely difficult * * *.

Commissioner Hendrie argued that the nature of the alleged effects of the restart decision upon mental health rendered consideration of mitigation possibilities, mandated by NEPA, inapposite (*ibid.*):

> If anxieties are rationally based, the corrective measures which would alleviate the stress would presumably be justifiable in terms of protecting physical health and safety [under the Atomic Energy Act]—irrespective of their effect on psychological stress. If the anxieties are irrationally based, on the other hand, then they are by definition not likely to be alleviated by a demonstration that some additional safety feature has been added.

Finally, Commissioner Hendrie underscored that stress occasioned by fear of operation of TMI-1 was unrelated to any environmental impact of operation and was accordingly entirely outside the intended scope of NEPA (Pet. App. 90a-91a; emphasis in original):

> NEPA is a very broad statute and has had, as it was intended to have, a profound effect upon agency decision making. But unless it is to displace the political process it must have some limits. It cannot be read to require that all conceivably relevant factors be heard by an agency including those already considered by Congress. It was intended and must be so construed to deal with *environmental* degradation. To be sure if one of a project's effects on the environment causes health problems, the associated mental impacts are in an appropriate consideration; but here we are being asked to consider effects apart from any effect upon the environment.
>
> Intervenor's argument is essentially that even if we are satisfied that the environmental impact is minimal, we must nevertheless hear evidence on, and consider in our decision, their fears that we are wrong and the mental stress thus engendered. The short answer is that Congress has already decided that the country is to have a nuclear power program even if it makes some people uneasy.

Commissioners Gilinsky and Bradford would have directed the Licensing Board to hear evidence respecting stress effects. Commissioner Gilinsky relied primarily upon the Licensing Board's analysis (Pet. App. 91a-92a), and did not address the question whether NEPA (or the Atomic Energy Act) *required* consideration of such evidence. Commissioner Bradford argued (*id.* at 93a-100a) that the TMI-2 accident made the TMI-1 restart hearing a unique one and that, under the circumstances, an important means of alleviating stress that might be occasioned by the Commission's decision would be to allow full airing of the stress issue before the Licensing Board. Because he concluded that the Commission should, in the exercise of its discretion, consider respondent's contentions respecting stress, Commissioner Bradford declined to decide whether NEPA requires such consideration (*id.* at 94a n.3).

4. a. On February 3, 1981, pursuant to 28 U.S.C. (Supp. IV) 2342(c) and 42 U.S.C. 2239(b), respondent filed a petition for review of the Commission's order excluding the issues it sought to raise from the restart hearing.[6] In the

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[6] On September 17, 1981, after the vacancy on the Commission had been filled and while the petition for review was pending, the Commission by a majority vote reaffirmed its directive that the stress issue be excluded from the restart proceeding (Pet. App. 101a-102a). No opinion for the Commission was issued.

During the restart proceedings several parties argued that preparation of an EIS was required before any decision respecting restart could be made. The Commission staff disagreed, but, pursuant to Commission regulations, prepared an environmental impact assessment (EIA) to support that determination. The EIA (J.A. 48-65) was issued on March 27, 1981, and supplemented (J.A. 66-87) on May 11, 1981, but

court of appeals, respondent argued that both NEPA and the Atomic Energy Act required the Commission to consider the psychological stress contentions in the restart proceeding. Specifically, respondent asserted that whether the "major federal action" in question was considered to be the restart of TMI-1 considered in isolation or the original licensing of TMI-1, coupled with continued NRC regulation of the plant, psychological stress and community deterioration were impacts of federal action that were required to be evaluated in an environmental impact statement (Pet. App. 30a). Respondent argued as well that the Commission's responsibility under the Atomic Energy Act to protect "public health and safety" encompassed psychological health.

The Commission responded that the projected restart of TMI-1 did not require further environmental analysis under NEPA because an EIS had been prepared when operation of the TMI-1 plant first was authorized, and that the restart decision itself did not represent a proposal for federal action within the meaning of NEPA, because it would restore the status quo as it existed before the Commission took enforcement action requiring that the plant remain shut down pending investigation of the accident at TMI-1 and its implications. Even if there were a proposal for federal action, the Commission argued, stress occasioned by operation of a nuclear power plant was not an effect required to be evaluated in an environmental impact statement. Similarly, the Commission contended that its duty under Section 103(d) of the Atomic Energy Act, 42 U.S.C. 2133(d), to deny any license the issuance of which "would be inimical to * * * the health and safety of the public" comprehended the physical hazards associated with nuclear materials but not psychological effects arising from fears of nuclear technology. The utilities, which had intervened in the court of appeals, took essentially the same position.

b. A panel of the court of appeals, Circuit Judges Wright and Wilkey and Senior Circuit Judge McGowan, heard oral argument on respondent's petition for review on November 17, 1981. On January 7, 1982, the court issued an interim judgment (Pet. App. 105a-107a), unaccompanied by an opinion for the court. That judgment, from which Judge Wilkey dissented, vacated the Commission's order and directed the Commission to prepare an environmental assessment regarding the effect of the proposed restart of TMI-1 on the "psychological health of neighboring residents and on the well-being of the surrounding communities" (*id.* at 106a). The Commission was further ordered to determine, on the basis of this environmental assessment, whether to prepare a full environmental impact statement. The Commission was enjoined from making any decision to restart TMI-1 until it had complied with these requirements. In addition, the Commission was directed (*ibid.*) to submit a statement of its reasons for "its determination that psychological health is not cognizable under the Atomic Energy Act."[7]

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neither document addressed the alleged stress effects of the restart proposal. Among the topics addressed in the EIA are the physical impact of any additional construction upon the site, thermal and chemical effects of liquid effluents upon the receiving waters, effects of cooling water intake and discharge upon aquatic organisms in the adjacent Susquehanna River, the effect of evaporation of cooling water upon stream flow in the Susquehanna and upon local fogging conditions, normal and possible accidental releases of radiation, including the health effects, if any, of radiation releases incident to simultaneous operation of TMI-1 and decontamination of TMI-2, the noise associated with maintenance of a network of emergency warning sirens in the area surrounding the plant, and the visual impact of the plant and appurtenant facilities.

On December 15, 1981, while this case was under submission to the court of appeals, the Licensing Board rendered a decision that the EIA was adequate and that no EIS was required. The Commission itself has yet to take final action respecting NEPA compliance. See page 18 & note 13, *infra*.

[7] On March 30, 1982, the Commission issued a "Memorandum and Order" responding to the court's directive. *In re Metropolitan Edison Co.*, 15 N.R.C. 407. Relying on the text and legislative history of the Atomic Energy Act, as well as pertinent judicial decisions, the Commission set forth its view that in administering the Atomic Energy Act, Congress intended that the Commission address itself only to the physical hazards associated with nuclear materials and activities. The Commission added that even if its statutory authority under the Act were broad enough to permit the discretionary consideration of mental health effects, strong policy considerations counseled against doing so. The Memorandum and Order was adopted by a 3-1 vote, with Commis-

On April 2, 1982, the court of appeals issued an amended judgment (Pet. App. 103a-104a), promising opinions to follow, again over Judge Wilkey's dissent. The amended judgment differed from the prior judgment in several respects. First, the Commission was no longer directed to prepare an environmental assessment, but was instead ordered to determine, by whatever procedures it deemed appropriate, whether since the preparation of the original environmental impact statement on TMI-1, "significant new circumstances or information have arisen with respect to the potential psychological health effects of operating the TMI-1 facility" (*id.* at 104a). If the Commission answered that question in the affirmative, it was to prepare a supplemental environmental impact statement addressing both psychological health effects on individuals and effects on the well-being of the surrounding communities of operating TMI-1. Second, the court of appeals vacated the previously issued injunction against restart, explaining that because of "operating difficulties" at TMI-1 of which it took notice (discovery of a corrosion problem in the plant's steam generators that necessitates major repairs before restart), the injunction against restart was unnecessary. The court directed the Commission, however, to give it 30 days' notice if it intended to permit renewed operation "prior to complying with its obligations under NEPA" (*ibid.*) as declared by the court. See page 18, *infra*. The amended judgment made no reference to the Atomic Energy Act.

c. On May 14, 1982, the court of appeals issued its opinions (Pet. App. 1a-76a).[8] Judge Wright, joined by Judge McGowan, with Judge Wilkey dissenting, held that NEPA requires consideration in the restart proceeding of petitioner's contentions respecting psychological stress. At the same time, a different majority, Judge Wilkey, joined by Judge McGowan, with Judge Wright dissenting, upheld as reasonable the Commission's interpretation of its duties under the Atomic Energy Act, which excluded from consideration in licensing actions "stress allegedly resulting from fear of a nuclear accident" (*id.* at 67a).

On the NEPA issue Judge Wright declared that "[b]oth [of PANE's] contentions allege environmental effects within the meaning of NEPA" (Pet. App. 10a). He deemed it inconceivable that all mental health effects, no matter how severe, of proposed federal action, whatever its nature, are outside the scope of NEPA (*id.* at 11a, 17a). He reasoned that mental health effects of proposed federal actions are cognizable under NEPA because effects on health have generally been regarded as within the scope of NEPA, and because of "the simple fact that effects on psychological health are effects on the health of human beings" (*id.* at 11a-12a). The court of appeals distinguished cases holding that the social fears and anxieties of persons residing near proposed federal projects are not environmental effects cognizable under NEPA (see page 5, note 5, *supra*), observing that "[n]one of these cases * * * presents the holocaust potential of an errant nuclear reactor" (*id.* at 15a).[9] Eschewing any general rule, the court acknowledged that "NEPA does not encompass mere dissatisfactions arising from social opinions, economic concerns, or political disagreements with agency policies" (*id.* at 16a), but held that NEPA does apply to the "post-traumatic anxieties, accompanied by physical effects and caused by fears of recurring catastrophe" alleged by respondent (*id.* at 16a–17a). Without attempting to locate the line between the two classes of effects recognized, the court simply concluded (*ibid.*):

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sioner Gilinsky dissenting and one seat on the Commission again vacant.

[8] A modified version of the amended judgment (Pet. App. 29a-30a) resting upon the opinions for the court was also issued.

[9] Distinguishing earlier court of appeals decisions excluding from NEPA analysis claims that federal projects would induce influxes of undesirable persons into impacted neighborhoods the court proclaimed (Pet. App. 16a):

> In this case, in contrast, PANE is not asking the agency to evaluate the effect of "people pollution" on the environment, but rather the effect of a governmental decision on human health.

> We cannot believe that the psychological aftermath of the March 29 accident falls outside the broad scope of the National Environmental Policy Act[10]

The court of appeals also rejected the Commission's alternative argument that the restart proceeding involved no proposal for federal action subject to NEPA (Pet. App. 18a-23a). Disavowing any reliance upon "the happenstance that TMI-1 was shut down for refueling at the time of the accident," the court instead stated that "the extent of the Commission's statutory responsibilities over licensed nuclear power facilities creates a continuing obligation to comply with NEPA" and that "[t]he 'major federal action' in the case of TMI-1 is not solely the initial licensing decision, but the Commission's continued exercise of supervisory responsibility over its operation and maintenance" (*id.* at 18a-19a). Treating NRC's regulation of its licensee as a continuing proposal for major federal action significantly affecting the environment, the court invoked the criteria for supplementation of an EIS outlined in the Council on Environment Quality's NEPA regulations (40 C.F.R. 1502.9(c)), directing the Commission to prepare a supplemental EIS addressing respondent's stress contentions (as well as the socioeconomic issues raised by respondent (see note 10, *supra*)), if the Commission determined that "significant new circumstances or information" regarding the mental health effects of operating TMI-1 had arisen since completion of the EIS prepared at the time of initial licensing (Pet. App. 23a-26a).

Judge Wilkey dissented from the court's judgment on the NEPA issue (Pet. App. 31a-59a, 67a-69a). He stated that the court had effected an unprecedented expansion of the scope of NEPA obligations by requiring consideration of

[10] Respecting PANE's allegation of socioeconomic effects, the court of appeals endorsed the Commission's suggestion that this represents a "classical 'socioeconomic' issue" constituting a secondary indirect effect that does not in and of itself require preparation or supplementation of an EIS, but which must be addressed if other matters require such formal NEPA analysis (Pet. App. 17a-18a). The court accordingly tied the community deterioration issue to the stress issue for purposes of prescribing the Commission's NEPA obligations.

stress resulting from fears triggered by federal action, an effect that is not traceable to the actual environmental impact of the private activity authorized by the pertinent federal licensing decision (*id.* at 36a-38a; footnotes omitted; emphasis in original):

> Judge Wright's opinion cites several cases holding that agencies must prepare an EIS when there is a potential effect on human health. What the opinion does not acknowledge is that in each of these cases the effect on health was caused by the federal action itself, *not* by individual's *fears* of the federal action. * * *
>
> [O]peration of a nuclear power plant may cause harm to human health—for example, due to the potential for exposure to radiation—and the NRC must therefore prepare an EIS and consider these potential harms before licensing the plant. * * *
>
> PANE's contention, however, is not that operation of TMI-1 will affect human health because of the dangers inherent in operation of a nuclear facility, but that individuals' *fears* of an accident at the plant, combined with their lack of confidence in the NRC, will lead to an extension of the psychological stress allegedly caused by the TMI-2 accident. It is patently obvious that this alleged effect is *entirely different* from those health effects at issue in any NEPA case relied upon by the majority. Instead of being required to assess *the risk* of a proposed activity * * * the agency is now required to assess *how people perceive and react to the risk*. PANE's primary purpose is to force the agency to determine whether people so fear renewed operation of TMI-1 that it should not go forward, even if the agency's assessment of the actual risk indicates that the impact on health will not be significant.
>
> This takes NEPA far beyond its intended purpose. *The environmental effects of a federal activity are now to include the views of the population itself on the very desirability of the activity* * * *.

Judge Wilkey noted that the majority's decision was contrary to decisions of three other courts of appeals, as well as a prior decision of the D.C. Circuit (Pet. App. 39a-40a & nn.19-21). He argued as well that the mental health effects alleged by PANE are too ephemeral, speculative and

subjective to be measured for purposes of NEPA analysis (*id.* at 40a-42a). Finally, Judge Wilkey found insupportable the majority's efforts (see pages 13-14 & note 9, *supra*) to confine its ruling to the facts of this case, explaining that the alleged severity in a particular case of an effect of a particular type relates only to the nature and extent of the analysis required by NEPA, if any, but has no bearing on the threshold question whether the class of effects involved constitutes environmental impacts within the scope of NEPA (*id.* at 42a-48a).

Judge Wilkey also rejected the majority's view that the initial licensing and ensuing oversight regulation of the TMI-1 facility constituted for NEPA purposes a single continuing major federal action (Pet. App. 48a-50a). He noted that under the majority's analysis "the fact that * * * the NRC is proposing to restart the plant is irrelevant." That analysis, Judge Wilkey explained, is inconsistent with the requirements of NEPA, which governs only proposed actions. Judge Wilkey appears to have concluded, however, that because TMI-1 was shut down, the Commission's restart decision itself constituted federal action for NEPA purposes (*id.* at 50a). On the other hand, he stressed that the majority's analysis was overly broad and would effect a substantial and unwarranted increase in the NEPA obligations of NRC and all other federal agencies. For instance, he explained (*id.* at 49a):

> [U]nder the majority's interpretation, the NRC is engaged in * * * "action" [subject to NEPA] every second of every day. It thus will be possible for NEPA to apply even when a nuclear plant is operating pursuant to an NRC license and the NRC proposes to take no action to upset this status quo.

d. On the Atomic Energy Act issue, the court of appeals (Judge Wilkey joined by Judge McGowan) upheld the Commission's conclusion that consideration of respondent's contentions was not mandated by statute (Pet. App. 50a-67a).[11] The court of appeals observed that substantial

[11] Judge McGowan did not write separately to explain his opposed views on the two issues presented to the court of appeals.

deference is due to the Commission's interpretation of the Atomic Energy Act, its governing statute (*id.* at 60a-61a). The court approved the conclusion of the First Circuit in *New Hampshire* v. *Atomic Energy Commission*, 406 F.2d 170, cert. denied, 395 U.S. 962 (1969), based upon pertinent legislative history, administrative interpretation, and congressional oversight, that in enjoining the Commission to "protect the health and safety of the public" (42 U.S.C. 2012(d); see also 42 U.S.C. 2133 (d)) "Congress 'had in mind only the special hazards of radioactivity' and that the Commission's responsibility is 'confined to scrutiny of and protection against hazards from radiation'" (Pet. App. 62a, quoting *New Hampshire* v. *Atomic Energy Commission*, *supra*, 406 F.2d at 174, 175). The court of appeals concluded that Congress' concern was "'the danger from explosion, radioactivity, and other harmful or toxic effects incident to the presence of such materials" (Pet. App. 63a, quoting S. Rep. No. 1211, 79th Cong., 2d Sess. 1335 (1946)).

The court of appeals also rejected respondent's alternative contention that stress induced in neighbors by operation of a nuclear power plant, is, in any event, a "special hazard of radioactivity" within this definition (Pet. App. 64a-66a). The court explained (*id.* at 64a, quoting *In re Metropolitan Edison Co.*, 15 N.R.C. 407, 412 (1982)):

> "Presumably, every hazardous technology gives rise to fears associated with it: fear of being inundated by failure of a newly constructed dam, for example, or of being hit by debris from a crashing airplane." Individuals may experience psychological trauma from the occurrence of accidents or disasters such as these * * *. It is obvious, therefore, that "post-traumatic psychological stress" can result from any traumatic event and is not so peculiar to nuclear energy that Congress can be deemed to have considered it a *special* hazard of radioactivity.

Judge Wright dissented from the judgment of the court of appeals on the Atomic Energy Act issue (Pet. App. 70a-76a). He complained that the court had given undue deference to the Commission's interpretation of the Act and

asserted that the plain meaning of the statutory directive to protect the health and safety of the public dictates that (*id.* at 70a) "[i]f operation of a nuclear facility would be inimical to the psychological health of the public, the Commission must not approve the operation."[18]

5. Subsequent to entry of the court of appeals' decision, on October 6, 1982, the Commission issued an order announcing its intention to decide, after conducting public hearings, whether to lift the immediate effectiveness of the two 1979 orders that required that TMI-1 facility remain shut down pending further order of the Commission (see pages 3–4, *supra*). A decision is presently anticipated in January 1983. However, as the October 6 order makes clear, other barriers to operation of TMI-1 remain, including the resolution of the steam generator corrosion problem noted by the court of appeals (Pet. App. 104a), and any necessary agency review of the licensee's repairs to the steam generators. For this reason, it is the Commission's view that a decision to lift the immediate effectiveness of the shutdown orders would not constitute "a final decision regarding the restart of TMI-1" within the terms of the judgment of the court of appeals requiring advance notice to the court of such a decision (Pet. App. 80a; see page 12, *supra*). The Commission has nonetheless provided notice to the court of appeals of its intention to reach a decision respecting the 1979 shutdown orders.[18]

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[18] Outlining the application of this standard Judge Wright added (Pet. App. 70a):

> Not all fears and worries, of course, are psychological health effects within the definitions of medical science. The adverse psychological impact of restarting TMI-1 may or may not rise to the level of a health problem; even if it does, the same might not be true of the fears and anxieties of neighbors of other power plants. Drawing these lines, on the basis of the facts, is the task of the Commission. * * * [I]f investigation shows that the allegations of psychological health effects are unfounded or that the effects are *de minimis*, the Act does not prohibit grant of a license.

[18] The effect of a decision to lift the shutdown orders will be to authorize restart on an interim basis at such time as the utilities complete repairs to the TMI-1 steam generator, and secure the necessary approval of the Commission or its staff for those repairs. The "restart" proceeding itself, however, will remain pending, for it is only the immediate effectiveness of the shutdown order that the Commission is considering revoking at this time. In the restart proceeding itself, on December 10, 1982, the Atomic Safety and Licensing Appeal Board upheld the Licensing Board's determination (see page 10, note 6, *supra*) that no full scale environmental impact statement need be prepared. *In re Metropolitan Edison Co. (Three Mile Island Nuclear Power Station Unit 1)*, Docket No. 50-289 (ALAB-705). Time for filing of a request for Commission review of the Appeal Board's decision expires January 3, 1983.

SUMMARY OF ARGUMENT

A.1. This case presents a fundamental question of interpretation of the National Environmental Policy Act. In requiring the Nuclear Regulatory Commission to consider stress induced by the proposal to authorize restart of the TMI-1 facility, the court of appeals lost sight of the terms of Section 102(2)(C) of NEPA which establishes the obligation to prepare a "detailed statement" to accompany "every recommendation or report on proposals for * * * major Federal actions significantly affecting the quality of the human environment." Rather than directing a survey of *all effects* of such an action, the statutory requirement is to canvass *"the environmental impact of the proposed action."* The court of appeals' analysis, discarding this limitation, and extending the NEPA obligation to encompass all effects upon the welfare of mankind that may be plausibly assigned the label "health," imposes a substantial burden upon all federal agencies and does not advance the objectives of the National Environmental Policy Act.

2. Respondent has not alleged that the Commission has failed adequately to consider any species of environmental degradation, such as radiation, that will or may flow from the renewed operation of the TMI-1 plant, and has not claimed that such phenomena are the cause of the stress cited by respondent. The court of appeals has nonetheless held the alleged mental health effects of restart are themselves environmental impacts of Commission action, because they relate to human health. But contrary to the court of appeals' view, nothing in the statute requires consideration under NEPA of all effects on human health of

federal action; rather NEPA requires examination only of those health effects (or any other class of effects) that are attributable to environmental causes. And the cases cited by the court of appeals in support of its judgment are inapposite because they embody no broader or different rule.

3. In an effort to escape the restrictive effect of the statutory directive to consider only "environmental impact[s]," respondents note that the statutory language and legislative history express concern with the "*human* environment." But we do not argue that NEPA excludes the effects of federal action on human beings from the mandated analysis; rather, our submission is simply that the consideration mandated by NEPA extends only to those influences on mankind's interests that are environmentally propagated. Indeed, any other rule would render NEPA a noble, but utterly ineffective, call for advancing the human condition in all of its facets.

The legislative history of NEPA confirms that Congress was aware of the importance of man in the environment. But the legislative history equally reflects that precisely because Congress appreciated that man's health and welfare depended upon the continuing vitality of his natural environment, it directed that federal decision makers carefully consider the effects of contemplated federal action upon that natural environment. Solicitude for human health and welfare was thus in a sense a motive for the legislation; but in NEPA Congress addressed only a specific set of problems, deemed theretofore to have been insufficiently recognized, impinging upon that health and welfare: the degradation of the natural environment. The decision of the court of appeals and respondent's argument in support of it confuse the general legislative objective with the specific remedial measures actually adopted.

The decision of the court of appeals is also contrary to the authoritative regulations of the Council on Environmental Quality implementing NEPA. These regulations do not purport to define the statutory term "environmental impact." They do, however, define the related term "human environment" in a manner that makes clear that effects of federal action upon human health and other human concerns are cognizable under the statute only to the extent that they are rooted in the condition of the natural or physical environment. Thus "human environment" is taken to mean "the natural and physical environment and the *relationship* of people with *that* environment." 40 C.F.R. 1508.14 (emphasis added).

4. Ours is not a novel interpretation of NEPA. On the contrary the decision of the court of appeals is inconsistent with decisions of six other courts of appeals, and another decision of the District of Columbia Circuit—all of the courts of appeals that have considered the question whether non-environmentally caused effects of federal action are subject to the requirements of NEPA. The court below thought to distinguish these decisions by reference to the "holocaust potential of an errant nuclear reactor" and stressing that the alleged stress impinges upon human health. But the court of appeals simply ignored the underlying rationale of the conflicting decisions—i.e., that NEPA requires only the analysis of environmental impacts.

5. The decision of the court of appeals is also at odds with the firmly established principle (see *Kleppe* v. *Sierra Club*, 427 U.S. 390, 410 n.21 (1976)) that an agency satisfies its obligations under NEPA by taking a "hard look" at the environmental consequences of agency action. If fear of environmental consequences that are themselves fully appraised in appropriate environmental analysis must be treated as an independent environmental impact of agency action, however, then contrary to this Court's teaching, *Strycker's Bay Neighborhood Council, Inc.* v. *Karlen*, 444 U.S. 223, 227 (1980), the agencies are no longer free to determine what action ultimately to take after appraising the pertinent environmental consequences.

B. The decision of the court of appeals is founded upon the erroneous premise that all effects upon human health are environmental impacts for NEPA purposes even if they are not environmentally caused or propagated. Respondents have argued in this Court, however, that the alleged stress effects of restart of TMI-1 are environmentally caused. But close scrutiny of respondent's original stress contention, as well as its belated argument in this Court,

reveals that respondents are engaged in a word game that cannot bring that stress contention within the ambit of NEPA.

Stripped to its essentials, respondent's argument is simply that both routine operation of TMI-1 and the accident at TMI-2 entailed some level of environmental effects, and could, if all safeguards failed, have produced much more substantial environmental effects. Because the TMI-2 accident allegedly generated stress and fear among persons residing in the surrounding region, and because restart of TMI-1 may renew those effects, respondent claims that stress is an environmental effect of TMI-1 operation. But respondent's argument cannot supply the essential ingredient: an environmental cause for the alleged stress. Without such a nexus, that stress cannot be considered an environmental effect. Respondent demonstrates only that environmental effects and the alleged stress have a common source—the very fact of TMI-1 operation. That coincidence is not a causal relationship, such as is required by Section 102(2)(C) of NEPA. Plainly, most, if not all, environmentally-significant federal actions have significant non-environmental effects. To sweep such effects into the already broad ambit of NEPA analysis would impose a substantial burden upon all federal agencies that finds no warrant in the plain language of the statute.[14]

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[14] As indicated in our petition (Pet. 17 n. 12), if free to do so, we would have presented for review the additional question whether NEPA imposes upon the Nuclear Regulatory Commission a continuing obligation to reassess the environmental impacts of a licensing decision in light of changed circumstances or information even in the absence of any contemplated further federal action. The majority opinion below (Pet. App. 18a-26a) appears to give an affirmative answer that is irreconcilable with this Court's decision in *Weinberger* v. *Catholic Action Peace Education Project*, 454 U.S. 139, 146 (1981); *Kleppe* v. *Sierra Club*, 427 U.S. 390, 398-406 (1976); *Aberdeen & R. R.R.* v. *SCRAP*, 422 U.S. 289, 320, 322 (1975). We do not tender that issue for review only because the result in this case probably does not turn upon its resolution. As Judge Wilkey observed (see page 16, *supra*), the application of NEPA in this case may rest upon the far narrower ground that the NRC is here engaged in federal action—the restart proceeding. Indeed, whether required to do so or not, the Commission staff actually prepared an environmental impact appraisal here, determining on that basis that no EIS was required (see page 9, note 6, *supra*). In this setting, the question whether such NEPA compliance was actually required by law lacks the general importance of the issue that we tendered for review. And because of the availability of the narrower ground suggested by Judge Wilkey, the question whether the court of appeals' continuing obligation analysis (which may be dictum) is sound is not presented in sharp focus here. Should the Court disagree with this assessment, however, and conclude that the issue is properly presented, the Court perforce remains free to address it as necessary for the proper disposition of this case. *Cf. Piper Aircraft Co.* v. *Reyno*, 454 U.S. 235, 246 n.12 (1981).

ARGUMENT

NEPA DOES NOT REQUIRE ANALYSIS OF EMOTIONAL STRESS ALLEGEDLY FLOWING FROM FEAR OF THE CONSEQUENCES OF OPERATION OF A NUCLEAR POWER PLANT

A. NEPA Requires Consideration Only Of The Environmental Effects Of Major Environmentally Significant Federal Actions

1. The question presented in this case is one of statutory interpretation, and thus ultimately of discerning congressional intent. As in other contexts, questions of statutory interpretation under the National Environmental Policy Act must begin with the pertinent statutory language. The duty of federal agencies to file environmental impact statements arises from Section 102 of NEPA, 42 U.S.C. 4332, which provides, in pertinent part:

> The Congress authorizes and directs that, to the fullest extent possible: * * * (2) all agencies of the Federal Government shall—
>
> * * * * *
>
> (C) include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on—
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> (i) the environmental impact of the proposed action * * *.[15]

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[15] The obligations to prepare environmental assessments, to undertake other forms of preliminary environmental analysis less formal than the full environmental impact statement contemplated by Section 102(2)(C), and to prepare supplemental environmental impact statements have been interpolated into NEPA by the courts, see, e.g.,

As the statutory language plainly reflects, the duty imposed is not to assess all effects of proposals for federal action, or even all effects of the subclass of federal actions that are "major Federal actions significantly affecting the quality of the human environment." Rather, the obligation created is to consider the *environmental* impacts of the latter subclass of federal actions. Thus, the criterion of environmental impact must be satisfied in two respects before a particular effect of a federal action triggers assessment obligations under NEPA. First, there must be a proposal for federal action that has an impact of the requisite significance upon man's environment. But even when such an environmentally-sensitive proposal has been identified, the assessment obligation extends only to those impacts of the federal action that are themselves environmental.[16]

Although the precise issue presented here has never been addressed by this Court—presumably because a negative answer to the generic question presented has been self-evident—the decisions rendered by the Court in this field reflect the exclusively environmental focus of the assessment duties imposed by NEPA. Thus, for instance, the Court has described NEPA as "one of the recent major federal efforts at reversing the deterioration of the country's environment * * *." *United States v. SCRAP*, 412 U.S. 669, 693 (1973). And this Court has explained that "NEPA * * * create[s] a discrete procedural obligation on Government agencies to give written consideration of environmental issues in connection with certain major federal actions," *Aberdeen & R. R.R.* v. *SCRAP*, 422 U.S. 289, 319 (1975); *Flint Ridge Development Co.* v. *Scenic Rivers Association*, 426 U.S. 776, 787 (1976). Typical environmental consequences noted by the Court include "increased solid waste disposal and accelerated depletion of natural resources." *Aberdeen & R. R.R.* v. *SCRAP*, *supra*, 422 U.S. at 327; see also *id.* at 331 (Douglas J., dissenting) ("NEPA * * * is a commitment to the preservation of our natural environment").[17]

The EIS itself, the formal record of NEPA analysis, has been characterized as a "detailed statement of environmental consequences," *Kleppe* v. *Sierra Club*, 427 U.S. 390, 394 (1976), and the Court has explained (*Andrus* v. *Sierra Club*, 442 U.S. 347, 350 (1979)) that:

> The thrust of § 102(2)(C) is * * * that environmental concerns be integrated into the very process of agency decisionmaking. The "detailed statement" it requires is the outward sign that environmental values and consequences have been considered * * *.

Hanly v. *Kleindienst*, 471 F.2d 823 (2d Cir. 1972), cert. denied, 412 U.S. 908 (1973); *Society for Animal Rights, Inc.* v. *Schlesinger*, 512 F.2d 915, 917-918 (D.C. Cir. 1975), and have been confirmed and elucidated in the regulations promulgated by the Council on Environmental Quality, see 40 C.F.R. 1501.3, 1501.4(b) and (c), and 1502.9(c), as a means of enforcing the underlying statutory requirement of preparation of environmental impact statements. In this case the court of appeals has ordered the Commission to determine whether a supplemental environmental impact statement is required, the Commission having prepared an original EIS on TMI-1 licensing in 1974. Because Section 102(2)(C) provides the basis for all forms of environmental analysis required by the courts under NEPA, the question whether a particular class of effects is cognizable is to be resolved by the reference to Section 102(2)(C), irrespective of the stage of environmental analysis involved or the label attached to a particular document.

[16] The onerous implications of neglecting the two-faceted environmental trigger built into the statute is readily apparent. For instance, the Secretary of Transportation's decision to allow the Anglo-French Concorde supersonic transport to land at designated United States airports was regarded as an action subject to NEPA. See *Environmental Defense Fund, Inc.* v. *Department of Transportation*, 6 Envtl. L. Rep. (Envtl. L. Inst.) 20581 (D.C. Cir. 1976). That decision, however, had implications for foreign relations and international commercial relationships, as well as the noise level in communities surrounding the airports in question. See *British Airways Board* v. *Port Authority*, 558 F.2d 75 (2d Cir. 1977). Yet it was never suggested, nor could it be, that the Secretary's NEPA analysis obligations extended to the former as well as the latter.

[17] See also *Named Individual Members of the San Antonio Conservation Society* v. *Texas Highway Department*, 400 U.S. 968, 971 (1970) (Black, J., dissenting from denial of certiorari) (NEPA is a major part of "coordinated legislation designed to protect our Nation's environmental from destruction by water pollution, air pollution, and noise pollution").

See also *Weinberger* v. *Catholic Action/Peace Education Project*, 454 U.S. 139, 143 (1981). Although "NEPA does create * * * a right of action in adversely affected parties to enforce" its requirements (*Aberdeen & R. R.R.* v. *SCRAP*, *supra*, 422 U.S. at 319), the Court has repeatedly emphasized that the role entrusted to the courts is strictly delimited: "once an agency has made a decision subject to NEPA's procedural requirements, the only role for a court is to ensure that the agency has considered *the environmental consequences* * * *." *Strycker's Bay Neighborhood Council, Inc.* v. *Karlen*, 444 U.S. 223, 227 (1980) (emphasis added); see also *Vermont Yankee Nuclear Power Corp.* v. *NRDC*, 435 U.S. 519, 558 (1978); *Kleppe* v. *Sierra Club*, *supra*, 427 U.S. at 410 n.21.

2. As Judge Wilkey and Commissioner Hendrie each recognized (see pages 7–9 & 14–16 *supra*; Pet. App. 36a-38a, 90a-91a), the consideration of stress allegedly induced by the fear of operation of TMI-1 (and, indeed by the very pendency of the restart proposal and the mere possibility of restart (see page 4, *supra*)), is radically inconsistent with the above described limiting principle. Significantly, the gravamen of PANE's allegations is not that the Commission has failed adequately to consider some kind of environmental degradation *in any form*. Nor is it that some impact of TMI-1 operation upon the natural environment—such as radiation—will cause injury to the health (whether mental or physiological) of its members that has not been adequately considered. Compare *Weinberger* v. *Catholic Action*, *supra*, 454 U.S. at 142. Rather, respondent's allegation is that the existence of the plant itself, apart from any environmental impact it might create, will cause emotional injury to TMI-1's neighbors. Yet is is precisely that contention that the court of appeals concluded "allege[s] environmental effects within the meaning of NEPA" (Pet. App. 10a).

The logic of the court of appeals is deceptively simple. Effects of federal action upon human health, the court of appeals reasoned, have been recognized in previous cases as environmental impacts for NEPA purposes (Pet. App. 12a-13a). Finding no warrant for a blanket exclusion of mental health concerns from the ambit of NEPA, and perceiving in the statute a solicitude for the overall well-being of mankind (*id.* at 13a), the court concluded that "in the context of NEPA, health encompasses psychological health" (*ibid.*). Finally, the court reasoned that because the "governmental decision" involved—the Commission's restart decision—is alleged to affect "human health" in this respect, the stress effect of restart upon the surrounding community is an environmental impact requiring assessment under NEPA (*id.* at 16a).

This syllogism is seriously flawed. Contrary to the court of appeals' first premise there is no general rule that effects of "governmental decisions" upon human health are environmental impacts subject to NEPA analysis. Rather, such effects are cognizable under NEPA only if the twin requirements of the statute are present: a proposal for significant environmentally-sensitive federal action, and an environmental impact. Indeed, as Judge Wilkey noted in his dissent (Pet. App. 36a), the few authorities cited by the court of appeals (*id.* at 13a & n.8) are fully consistent with this reading; they lend no support to the court of appeals' judgment.[18] Thus health effects, like any other class of effects of federal action that may be cognizable under NEPA, are so only to the extent that they are proximately traceable to the impact of the federal action upon the natural or physical environment, or flow from a physically measurable or discernible variable, such as heat, radiation, noise, pollution, or odors, in that environment.

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[18] Use of toxic herbicides, particularly through aerial spraying, to control unwarranted (or illegal) vegetation potentially affects human health through an environmentally propagated medium. See, e.g., *National Organization for the Reform of Marijuana Laws* v. *United States Department of State*, 452 F.Supp. 1226, 1232 (D. D.C. 1978); *Citizens Against Toxic Sprays, Inc.* v. *Bergland*, 428 F. Supp. 908, 927 (D. Or. 1977). And when the inadequacy of provision for precipitation run-off in the plans for a federal facility is claimed to create a danger of life-threatening flooding, this likewise constitutes an environmental threat to human life and health, properly cognizable under NEPA. See *Maryland-National Capital Park & Planning Commission* v. *United States Postal Service*, 487 F.2d 1029, 1033 (D.C. Cir. 1973).

The range of possible influences upon human health of federal action is potentially unlimited. Bringing all of these within NEPA would radically change that law from one directing special attention to environmental concerns to one dealing generally with human health and welfare. For instance, it has never heretofore been suggested that the Food and Drug Administration must file environmental impact statements pertaining to drug approval and disapproval actions—actions that unquestionably have a powerful impact on human health. Indeed, the pertinent regulations reflect the recognition that drug approval ordinarily is not subject to environmental impact analysis. 21 C.F.R. 25.1(f). The reason is simply that the health effects of such federal actions are not propagated through federal action upon the natural or physical environment. Other examples abound. Proposals for the addition, or termination of governmental health services, welfare programs and other income maintenance schemes surely have as direct a bearing upon human health as the restart of a nuclear power plant. Although we trust that no one would seriously argue that these proposals entail environmental impacts within the meaning of NEPA, the court of appeals' reasoning, treating any and all health effects as environmental impacts, eliminates the principled basis for this limitation.

The range of possible causes of stress is likewise virtually unlimited. Bringing all such causes with NEPA would transform that statute from a mandate for environmental sensitivity in federal administration to an amorphous, and thus ultimately ineffectual, spotlight on human emotions. Assuming that psychological effects are reached by NEPA, only those that are caused by environmental factors are covered.[19] Absent such a causal nexus, the effect of federal action simply does not qualify as an "environmental impact" required to be analyzed under NEPA.

Thus, while effects of federal action upon human health may occasion NEPA analysis, the statutory requirement is necessarily limited to environmentally-generated health effects—a fundamental limitation upon agency responsibility under NEPA that was entirely disregarded by the court of appeals. The issue for NEPA purposes, was not, as the court of appeals assumed, whether NEPA requires consideration of environmentally-generated mental health effects of federal actions. Rather, the relevant inquiry is whether stress that allegedly arises from the very fact that TMI-1 exists and that the Commission has authority delegated by Congress to license its renewed operation—a cause entirely distinct from the radiation or accident potential associated with plant operation—is cognizable under NEPA.[20] The plain statutory language requires a negative answer.

3. In order to escape from the plain meaning of Section 102(2)(C)(i) as outlined above, respondents have in this Court seized upon the use of the term "*human* environment" in Section 102(2)(C), arguing that an effect upon the natural or physical environment is not needed to establish

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[19] Because the court of appeals' decision completely disregards this fundamental limitation upon the scope of the analysis required by NEPA, we have not pursued here the question whether the particular mental health effects alleged by PANE are outside the scope of NEPA for the independent reason that the chain of causation between the federal action and the alleged effects is so lengthy and attenuated, and the effect so speculative as to render NEPA analysis unnecessary. Clearly, there are situations in which effects of federal action, psychological or otherwise, are outside the scope of the mandated NEPA analysis for this reason. *Cf. Vermont Yankee Nuclear Power Corp. v. NRDC*, *supra*, 435 U.S. at 551.

[20] The court of appeals' misconception of the issue presented permeates the decision. For instance, it was simply irrelevant that the court of appeals found it difficult to believe that "[r]egardless of the severity of psychological health effects * * * [they] would [be] exclude[d] from consideration at any stage of the NEPA procedures relating to any proposed federal action" (Pet. App. 11a). This case does not present that broad question, but the narrower one whether psychological health effects that are *not* attributable to an environmental cause can be environmental impacts within the meaning of Section 102(2)(C) of NEPA. Equally misplaced was the majority's reliance (*id.* at 13a) upon language of Section 102(2)(A) of NEPA, 42 U.S.C. 4332(2)(A), requiring use of a "systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts." The court of appeals ignored the purpose which this interdisciplinary approach was to serve, stated in the statutory language that immediately follows the quoted phrase—"in planning and decisionmaking which may have an impact on man's environment."

an environmental impact sufficient to trigger NEPA assessment obligations and that the court of appeals accordingly correctly treated the alleged stress effect as such an impact (Br. in Opp. 47-54). Seeking support in the legislative history of NEPA and the Council on Environmental Quality Regulations, respondents now argue that the "human environment" guarded by NEPA is affected by the restart of TMI-1 because restart "would significantly affect the human environment of [the surrounding] area by significantly altering the *psychological context* for local residents" (Br. in Opp. 53; emphasis added). Like the court of appeals' underlying reasoning, respondent's novel interpretation of the term "human environment" is entirely divorced from the pertinent legislative intent; respondent's overall interpretation of NEPA finds no support in the legislative history or the regulations of the Council on Environmental Quality cited. Indeed, the materials are entirely inconsistent with respondent's contention and the court of appeals' decision.

a. Contrary to respondent's suggestion, it is not our submission that effects upon human beings of federal action are for that reason excluded from the scope of analysis under NEPA. Rather, the point of our argument is simply that NEPA covers only those effects of environmentally significant federal action upon man that are propagated through environmental variables. Thus, contrary to respondent's assertion (Br. in Opp. 47-49), our argument in no respect detracts from the central focus of NEPA upon the "human environment" (42 U.S.C. 4332(2)(C)). A major federal action significantly affecting the quality of man's environment is assuredly the statutory trigger for preparation of an environmental impact statement. *Ibid.* But it is equally clear that the statement required need only address the "environmental impact of the proposed action" (42 U.S.C. 4332(2)(C)(i))—and thus that it need not address *nonenvironmental* effects of federal action whether upon human beings or otherwise. In short, our submission would not, as charged, read out of the statute the intended focus upon the *human* environment; it is respondent and the court of appeals that have rewritten the statute by eliminating the requirement that the effects of federal action addressed be environmentally caused.

To be sure, if pulled away from its statutory context the term "environmental impacts" could theoretically be read in conjunction with the term "human environment" in Section 102(2)(C) to include impacts upon man's "psychological context" as respondent suggests. For that matter, NEPA could in that manner equally be construed to require consideration of all sorts of federal action affecting a host of other "contexts" impinging upon man's existence—his political, social, moral, economic, and spiritual environments. Such an interpretation, however, would render meaningless the critical statutory terms, "human environment" and "environmental impact," rendering them synonymous, respectively, with "human affairs" and "effects on people." Thus construed, NEPA would require preparation of an "environmental" impact statement on all aspects of every major federal action affecting human beings. But such loose statutory construction based entirely upon creative use of the dictionary and thesaurus does not constitute an appropriate means of discerning Congress' intent. See *United States* v. *Bacto-Unidisk*, 394 U.S. 784, 798–799 (1969); see also *New Hampshire* v. *Atomic Energy Commission*, *supra*, 406 F.2d at 173. As Judge Leventhal, writing for a panel of the D.C. Circuit explained, rejecting the claim that an influx of low-income workers into a more affluent suburban community could constitute an environmental impact within the contemplation of NEPA (*Maryland-National Capital Park & Planning Commission* v. *United States Postal Service*, 487 F.2d 1029, 1037 (1973)):

> Concerned persons might fashion a claim, supported by linguistics and etymology, that there is an impact from people pollution on "environment," if the term be stretched to its maximum. * * * [T]his type of effect cannot fairly be projected as having been within the contemplation of Congress.

b. The legislative history of NEPA clearly demonstrates that Congress intended to require systematic assessment only of the effects of federal action (on human beings or otherwise) that are expressed in or propagated through the

natural or physical environment. Conversely, the legislative history provides no support for the court of appeals' view that all human health effects are within the ambit of NEPA, or for respondents' still more far-reaching suggestion (Br. in Opp. 49 n.43) that all federal action that effects human beings is subject the NEPA.

The legislative history of NEPA underscores that Congress intended to require consideration only of the effects of environmental impacts of federal action—i.e., of those effects traceable to some measurable or physically discernible influence upon, or alteration of, the physical environment. Senator Jackson, the "father" of NEPA, and the Senior Manager on the part of the Senate in the conference committee that produced NEPA, explained this nexus and its relevance to human health in presenting the Conference Report (115 Cong. Rec. 40416 (1969)):

> What is involved is a congressional declaration that we do not intend as a government or as a people to initiate actions which endanger the continued existence or the health of mankind: That we will not intentionally initiate actions which will do irreparable damage to the air, land and water which support life on earth.

See also 115 Cong. Rec. 40924 (1969) (remarks of Senior House manager Rep. Dingell) ("we can now move forward to preserve and enhance our air, aquatic, and terrestrial environments, and * * * provide each citizen of this great country a healthful environment"). The legislative history thus makes it clear that Congress' *motive* for protecting air, land, water and natural resources was, in large measure, to protect the health and welfare of mankind. It is equally clear, however, that the *method* adopted for achieving that end in NEPA was to direct special attention to effects of federal decisions upon the natural and physical environment. The court of appeals has thus effectively substituted one of Congress' broad general ends—advancement of human welfare—for the quite specific means of advancing it actually prescribed by law—the environmental impact statement.

This relationship between environmental protection and human welfare that underlies NEPA is also reflected in Senator Jackson's definition of the term "human environment": "[The environmental] movement is concerned with the integrity of man's life support system[s]—the human environment" 115 Cong. Rec. 40417 (1969); 115 Cong. Rec. 19009 (1969). Similarly, Senator Jackson described the terms "environment" and "ecology" as part of "a new set of words and concepts [that] have come into wide public use in discussing the Nation's irreplaceable *natural resource base*." 115 Cong. Rec. 29066 (1969) (emphasis supplied).[11] The Senate Report on the bill that supplied the pertinent language of NEPA also reflects congressional intent to direct attention to the effects of federal actions on the natural environment, and the impact upon man of those effects. S. Rep. No. 91-296, 91st Cong., 1st Sess. 5, 16 (1969) (emphasis supplied):

> The ultimate issue posed by shortsighted, conflicting, and often selfish demands and pressures upon the finite resources of the earth are clear.
>
> * * * * *
>
> The expression 'environmental quality' symbolizes the complex and interrelated aspects of *mans' dependence upon his environment.* * * * The Nation has in many areas overdrawn its bank account in *life-sustaining natural elements.* For these elements—air, water, soil, and living space—technology at present provides no substitutes.

See also H.R. Rep. No. 91-378, 91st Cong., 1st Sess. 3 (1969) (quoting from a *N.Y. Times*, May 3, 1969, editorial).

Both the Senate Report on the legislation (S. Rep. No. 91-296, *supra* at 4) and Senator Jackson's remarks presenting the Conference Report (115 Cong. Rec. 40417 (1969)) contain a revealing listing of perceived environmental quality problems:

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[11] NEPA's legislative history is replete with similar statements reflecting concern with the natural environment and man's dependence thereupon for survival. See 115 Cong. Rec. 26576 (1969) (remarks of Rep. Rogers); *id.* at 26577 (remarks of Rep. Feighan); *id.* at 26579 (remarks of Rep. Yates); *id.* at 26581 (remarks of Rep. Goodling); *id.* at 26581 (remarks of Rep. Obey); *id.* at 26583 (remarks of Rep. Cohelan); *id.* at 26584 (remarks of Rep. Frey).

haphazard urban and suburban growth; *crowding, congestion and conditions within our central cities which result in civil unrest and detract from man's social and psychological well-being;* the loss of valuable open spaces; inconsistent and, often, incoherent rural and urban land-use policies; critical air and water pollution problems; diminishing recreational opportunity; continuing soil erosion; the decline and extinction of fish and wildlife species; faltering and poorly designed transportation systems; poor architectual design and ugliness in public and private structures; rising levels of noise; the continued proliferation of pesticides and chemicals without adequate consideration of the consequences; radiation hazards; thermal pollution; an increasingly ugly landscape cluttered with billboards, powerlines, and junkyards * * *.

Significantly each of the effects listed is rooted in a discernible impact upon the natural or physical environment. Respondent's effort (Br. in Opp. 49 n.43) to find support for the judgment of the court of appeals in the italicized language,is unavailing. As Judge Wilkey observed (Pet. App. 37a n.17), that language reflects only that the underlying environmental causes of social and psychological malaise should be considered. Senator Jackson did not even suggest that the social and psychological effects of physical crowding were, in their own right, environmental quality problems. A fortiori, there is no suggestion that social or mental ills that are not environmentally grounded are nonetheless environmental impacts for NEPA purposes.[22]

Congress' understanding of the relationship between protection of human health and that of the natural environment is also conveyed by the introductory language of NEPA proclaiming the legislative findings and purpose. As this Court has recognized (*Andrus* v. *Sierra Club*, *supra*, 442 U.S. at 349, quoting 42 U.S.C. 4321):

> NEPA sets forth its purposes in bold strokes:
>
> > The purposes of this Act are: To declare a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation * * *.

Congress chose its words carefully; "stimulat[ion] of the health and welfare of man" is adopted as a purpose—but only to the extent achievable by "prevent[ion] or elimination[ion of] damage to the environment and biosphere." Similarly, in Section 101(a) of NEPA, 42 U.S.C. 4331(a), Congress "recogniz[ed] the profound impact of man's activity on * * * the natural environment [and] the critical importance of restoring and maintaining environmental quality to the overall welfare and development of man."

Protection of human health and welfare was thus a motive for adoption of a particular procedural mechanism to advance that end, the environmental impact statement. But reference to that general motive provides no basis for shoehorning any measure that might be thought to advance the human condition into NEPA analysis. The decision of the court of appeals thus loses sight entirely of the means selected by Congress to achieve its ends.

c. The court of appeals' conclusion that, because it relates to human health, stress allegedly associated with restart of TMI-1 is an environmental impact for NEPA purposes is also contrary to the regulations promulgated by the Council on Environmental Quality, 40 C.F.R. 1500 *et seq.* Substantial deference is due to these authoritative regulations. *Andrus* v. *Sierra Club*, *supra*, 442 U.S. at 357-358.

The CEQ regulations repeatedly describe the portion of an environmental impact statement that fulfills the requirements of Section 102(2)(C)(i) of NEPA as a statement of the "[e]nvironmental [c]onsequences" of the proposed action. 40 C.F.R. 1502.10(g), 1502.16. Although the CEQ regulations contain no definition of the term "environmental," employed in 42 U.S.C. 4332(2)(C)(i) (requiring "a detailed statement * * * on the environmental impact of the proposed action"), they provide that the related statutory

[22] Under respondent's view, federal action affecting urban "conditions," such as poverty or drug addiction would apparently require formal analysis under NEPA.

term "human environment" ("major Federal actions significantly affecting the quality of the human environment") embraces "*the natural and physical environment* and the relationship of people with *that* environment." 40 C.F.R. 1508.14 (emphasis added). The CEQ regulations thus make clear that the "human environment" for NEPA purposes includes human affairs only the extent that they are affected by forces expressed in the "natural and physical environment." Plainly, the term "environmental impact" can have no broader ambit than that assigned the term "human environment."

Respondent, however, seeks support for the decision below in the Council's explanatory comment (43 Fed. Reg. 55988 (1978)) that it was not the Council's intention by its definition of human environment to limit that term to "the natural and physical aspects of the environment." Read in context, however, this comment merely reaffirms that the statutory mandate to consider the effects of federal action extends to people, as well as plants, animals and inanimate objects, as long as the operative cause is environmental. Thus the Council's comment goes on to call attention to the definition of the term "effects"—employed in the regulations as a synonym for the statutory term "impact"—which provides that "effects" "includes ecological * * * aesthetic, historic, cultural, economic, social or health, whether direct, indirect or cumulative." Of course, because 40 C.F.R. 1508.8 merely defines the term impact, without defining the term environmental, the inclusiveness of this definition reflects only that the range of "effects" and "impacts" to be considered is broad; it does not purport to eliminate the separate *statutory* directive that the impacts to be surveyed under NEPA be environmentally-grounded. Thus, it follows from the Council's regulations that the effects upon human health of federal action are cognizable under NEPA if and only if environmentally caused.

The Council also declared that "[t]he full scope of the environment is set out in Section 101 of NEPA." 43 Fed. Reg. 55988 (1978). As we have seen (pages 34–35, *supra*), Section 101, 42 U.S.C. 4331, like other introdutory language in NEPA, reflects the role of man in the environment. But the role portrayed is one of dependency: mankind's reliance for survival upon the surrounding natural world. Nothing in Section 101 suggests that the "psychological context" identified by respondent—in which man stands isolated from the natural and physical environment—of which fears induced by nuclear power plant operation are said to be a part, is within the scope of the environment that is the subject of the analysis required by NEPA.

Respondent also urges in this Court (Br. in Opp. 51 n.44) that the express relegation of social and economic effects of federal action to a secondary role under the CEQ regulations, indicates that mental health effects such as those at issue here must receive full analysis under NEPA. On the contrary, the pertinent regulation, set out in the margin[32], actually reflects the fundamental principle we have identified. Social and economic effects are explicitly assigned a secondary role, not merely because the CEQ has determined that they are, in any event, too remote from any environmental cause to warrant preparation of an EIS that is not otherwise necessary (see page 28 note 19, *supra*), but primarily in consequence of the fundamental rule applicable to all classes of "impacts": that absent some environmental cause expressed in the natural or physical environment, an "effect" simply cannot properly be classified as environmental for NEPA purposes. Significantly, even when preparation of an environmental impact statement is required by the presence of other, environmental, effects of federal action, the regulation directs coverage of social or economic effects only to the extent that such effects are related to the natural or physical environmental effects. 40 C.F.R.

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[32] 40 C.F.R. 1508.14 provides:

> Human environment.
>
> "Human environment" shall be interpreted comprehensively to include the natural and physical environment and the relationship of people with that environment. * * * *This means* that economic or social effects are not intended by themselves to require preparation of an environmental impact statement. When an environmental impact statement is prepared and economic or social and natural or physical *environmental* effects are *interrelated*, then the environmental impact statement will discuss all of these effects on the human environment. [Emphasis added.]

1508.14 thus embodies and implements the requirement of environmental causation that is prescribed by Section 102(2)(C)(i).[24]

4. Ours is not a novel interpretation of NEPA. On the contrary, the decision of the court of appeals here is inconsistent with the decisions of every other court of appeals that has considered the issue, as well as a well-reasoned decision of the District of Columbia Circuit itself. These courts of appeals have uniformly recognized that psychological and socioeconomic effects that are not environmentally grounded are outside the scope of the analysis required by NEPA.

As indicated above (page 31), in *Maryland-National Capital Park & Planning Commission* v. *United States Postal Service*, *supra*, the District of Columbia Circuit rejected the claim that an influx of low income workers into an affluent neighborhood could be regarded as an environmental impact subject to analysis under NEPA. To similar effect is *Breckinridge* v. *Rumsfeld*, 537 F.2d 864, 865-866 (6th Cir. 1976), cert. denied, 429 U.S. 1061 (1977). There the court rejected the claim that unemployment caused by closing of a military base was an environmental impact cognizable under NEPA, explaining that although "NEPA goes beyond * * * the 'physical environment' * * * factors other than the physical environment [are to be considered] * * * only when there exist[s] a primary impact on the physical environment." Accord: *Image of Greater San Antonio, Texas* v. *Brown*, 570 F.2d 517, 522 (5th Cir. 1978); *Como-Falcon Coalition, Inc.* v. *Department of Labor*, 609 F.2d 342, 345-346 (8th Cir. 1979), cert. denied, 446 U.S. 936 (1980);[25] *Goodman Group, Inc.* v. *Dishroom*, 679 F.2d 182, 184-185 (9th Cir. 1982); *Citizens Committee Against Interstate Route 675* v. *Lewis*, 542 F. Supp. 496, 531-537 (S.D. Ohio 1982).[26] And several courts of appeals have specifically rejected the claim that social fears and anxieties arising from federal action must be addressed under NEPA, in the absence of an environmental effect. See, e.g., *Nucleus of Chicago Homeowners Association* v. *Lynn*, 524 F.2d 225, 231 (7th Cir. 1975), cert. denied, 424 U.S. 967 (1976); *First National Bank of Chicago* v. *Richardson*, 484 F.2d 1369, 1380 n.13 (7th Cir. 1973); see also *Como-Falcon Coalition, Inc.* v. *Department of Labor*, 465 F. Supp. 850, 861-862 (D. Minn. 1978), aff'd 609 F.2d 342, 345-346 (8th Cir. 1979), cert. denied, 446 U.S. 936 (1980).[27] See also *Hanly* v. *Kleindienst*, 471 F.2d 823, 833 (2d Cir. 1972), cert. denied, 412 U.S. 908 (1973) ("*Hanley II*"); compare *Hanley* v. *Mitchell*, 460 F.2d 640, 647 (2d Cir.), cert. denied, 409 U.S. 990 (1972) ("*Hanly I*").[28]

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[24] Respondent would apparently read Section 1508.14 to require inclusion of all social and economic effects of federal action in an environmental impact statement if any aspect of the action is environmentally significant, even if the social and economic effects are unrelated to the environmental effects. For instance, an environmental impact statement on the construction of a military base would be required to include not only the social and economic consequences of depletion of a scarce water supply, but the purely economic effects of the base on the surrounding region. This interpretation is contradicted, however, by the language of Section 1508.14 reaffirming that social and economic effects need never be addressed under NEPA unless causally connected to the impact of federal action expressed in the natural or physical environment.

[25] Respondent suggests (Br. in Opp. 38) that the decision in this case rests upon a factual finding that the socioeconomic effects in question here were insignificant. On the contrary, although the district court had made such a finding (see 609 F.2d at 345), the court of appeals expressly held that the "district court erred" in considering these issues, and that they were as a matter of law outside NEPA. *Id.* at 345-346.

[26] The rule of these cases is consistent with CEQ regulations. See page 37, *supra*. As explained above those regulations do not require analysis of non-environmentally-grounded socioeconomic effects of federal action. Similarly, none of the cited cases suggest that if preparation of an EIS is required for independent reasons, social and economic effects of federal action must be canvassed unless they are proximately traceable to natural or physical environmental effects of the action.

[27] The court of appeals' reliance (Pet. App. 13a) on *Chelsea Neighborhood Associations* v. *Postal Service*, 516 F.2d 378, 388 (2d Cir. 1975), is misplaced, because the court below overlooked this limitation. In *Chelsea Neighborhood Associations*, the court of appeals merely held that an EIS that had been prepared was inadequate because it failed to address social and psychological effects upon residents of a housing project alleged to arise directly from the unique physical form of the project.

[28] While requiring, in *Hanly I*, that a federal agency take cognizance of a broad range of urban environmental effects, including noise

The court of appeals recognized the force of the above-mentioned decisions, but thought to distinguish them by stressing the special "holocaust potential of an errant nuclear reactor" (Pet. App. 15a), striving to couch its holding in case-specific terms. But there is no logical basis for confining the court's holding to the facts of this case; the cognizability of a class of effects under NEPA cannot turn upon their alleged severity (or mildness) in a particular case. And the court of appeals' cryptic explanation (*id.* at 16a) that "In contrast [to the foregoing cases] PANE is not asking the agency to evaluate the effect of 'people pollution' on the environment, but rather the effect of a governmental decision of human health" simply ignores the rationale of the conflicting decisions, i.e. that NEPA requires only the analysis of environmental impacts. Nothing in the court of appeals' decision explains why the principle recognized by the other courts that have addressed this issue is not controlling here.

5. Thus far our argument has been that the decision of the court of appeals requires consideration of matters that are outside the scope of the environmental analyses commissioned by Congress. Because this additional obligation is a "creature of judicial cloth, not legislative cloth" (*Weinberger* v. *Catholic Action*, *supra*, 454 U.S. at 141), and because NEPA provides no sanction for such judicial law making (*Vermont Yankee Nuclear Power Corp.* v. *NRDC*, *supra*, 435 U.S. at 548), it cannot stand. But it should not escape notice that the decision of the court of appeals imposing a non-statutory obligation is not a mere barnacle upon the statute. Rather it directly undercuts the legislative commands embodied in NEPA, frustrating the statutory scheme.

It is well established that NEPA imposes upon the concerned federal agency ultimate responsibility for determining what action to take after taking a "hard look" at the environmental consequences of contemplated action. *Strycker's Bay Neighborhood Council, Inc.* v. *Karlen*, *supra*, 444 U.S. at 227; *Vermont Yankee Nuclear Power Corp.* v. *NRDC*, *supra*, 435 U.S. at 558; *Kleppe* v. *Sierra Club*, *supra*, 427 U.S. at 410 n.21. In taking that "hard look" we appreciate that the agency may be required to consider eventualities that are not certain to arise; remote and speculative possibilities, however, need not be addressed. *Cf. Vermont Yankee Nuclear Power Corp.* v. *NRDC*, *supra*, 435 U.S. at 551. But to treat individuals' fears respecting the environmental consequences of agency action (and stress occasioned by those fears) as environmental effects of the federal action in their own right, as the court of appeals has done here, threatens the "hard look" principle. Under the court of appeals' analysis, an agency's failure to treat these fears as an independent consideration militating against approval of a proposed federal action would be ground for invalidation of agency action even though the agency had fully appraised the facts underlying the fears in question. In short, under the court of appeals' analysis, it is not enough to take a hard look at the environmental consequences of agency action and to consider the views of interested parties; an agency must also ascertain if public disagreement with the agency's decision will engender stress in the affected population. Nothing in NEPA requires this result; indeed, such an analysis can only detract from the intended focus of NEPA analysis, the effects of federal action upon the natural and physical environment.

The burdens imposed upon federal agencies by the court of appeals' decision are substantial. To be sure, the decision of the court of appeals nominally went no further than to

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associated with construction of a federal detention center in close proximity to a residential setting, the Second Circuit made it equally clear, in *Hanly II*, that the required consideration does not extend to effects comparable to those alleged here (471 F.2d at 833):

> For the most part [plaintiffs'] opposition is based upon a psychological distaste for having a jail located so close to residential apartments * * *. It is doubtful whether psychological and sociological effects upon neighbors constitute the type of factors that may be considered [under NEPA].

The reason articulated by the court of appeals for this exclusion, it is true, was the difficulty of measurement of these effects (*ibid.*). As noted above (page 28 note 19), we have not pursued that argument here. Nevertheless, the distinction between purely psychological effects and environmental variables recognized by the two decisions of the Second Circuit cited, is for the reasons we have stated, a valid one.

hold NEPA applicable to "post-traumatic anxieties, accompanied by physical effects and caused by fears of recurring catastrophe." But as we have explained, there is no principled basis for this limitation. The court of appeals' decision has clear implications for activities licensed or conducted by the Commission and other federal agencies. If agencies must take account of stress that is not proximately traceable to an environmental effect of agency action under NEPA, forms of stress other than "post-traumatic stress" may also be cognizable, as may stress which is not accompanied by physical symptoms or which is caused by factors other than "fears or recurring catastrophe."

Psychological stress contentions are not unique to TMI-1. Indeed, virtually every federal activity arguably generates psychological impacts; such effects simply are not confined, as the court of appeals suggested, to nuclear energy. Examples include management of air traffic control, operation of National Airport, management of federal prisons, economic programs with their effects on life and livelihood, leasing of federal lands for coal mining, construction of dams, and construction and operation of military facilities. The amorphous nature of psychological effects, moreover, renders their assessment in all of these circumstances especially burdensome and subjective. In discarding the requirement of an environmental nexus that limits NEPA obligations, the court of appeals has effected an extraordinary expansion of the task of assessment established by that statute, potentially encompassing all of the non-environmental effects of federal actions that affect the environment, as well as the health-related effects of actions that do not affect the environment at all.

B. Stress Caused By Fear Of Operation Of TMI-1 Is Not Environmentally Caused

1. As we have explained, the court of appeals' decision was founded on the erroneous premise that because some effects of federal action on human health are caused by environmental factors, and may thus be subject to NEPA analysis, all effects of federal action affecting human health are themselves environmental effects (pages 26–29, *supra*).

We have also explained that the stress that is the subject of respondent's contentions is not recognizable as an environmental effect (page 26, *supra*). In this Court, however, respondents have argued (Br. in Opp. 41-46) that even if, as we contend, NEPA requires consideration of human health effects only to the extent that they are caused by an impact upon the natural environment or a discernible or measurable physical phenomen, the alleged stress satisfies that test.[29] Close examination of respondent's actual stress contention, along with the arguments made in this Court, merely confirms that respondent cannot bring these contentions within the scope of the analysis required by NEPA.

As noted above, the mental health effect that respondent would have the Commission consider is not the product of heat, radiation, liquid or gaseous effluents, noise, odors, smoke, or visual impacts associated with operation of the TMI-1 plant. Instead, the alleged effects are caused by stress and fear induced by the simple fact that the plant is, or may in the future be, in operation. The most that can be said is that respondent's members fear the environmental effects, such as low level radiation, associated with routine plant operation, and the possibility of other graver effects should a serious nuclear accident occur. These environmental effects are not in dispute here. But, as we have explained, fear of an environmental effect such as these is not in itself an environmental effect.

[29] In opposition to our petition respondent argued that this case entailed no more than a factual dispute as to whether that was so (Br. in Opp. 45-46). As indicated in our reply brief, that suggestion is disingenuous. The issue in this case has been at all times a purely legal one, and respondent did not argue in the court of appeals that a factual determination was necessary to determine whether the evidence it wished to proffer for consideration was material to an issue properly before the Commission. The court of appeals likewise treated the issue as purely legal in character. Significantly, its judgment was unconditional in character; it did not leave the Commission any discretion to decline, upon proper findings, to entertain petitioner's stress claim. The issues left open for the Commission instead were whether the evidence to be proffered was sufficiently significant to require supplementation of the EIS.

Indeed, the issue framed by the Commission at the outset of the proceedings that led to this case was whether psychological distress associated with restart that was "*unrelated* directly to exposure to radiation" was within the [illegible] respondent's contention was [illegible] alternative argument on the legal issue thus framed, without any suggestion that the contention should be considered irrespective of the Commission's ruling. Respondent thus defined its stress contention as one that would be outside the scope of NEPA should its legal contentions be rejected. Moreover, respondent did not argue in the court of appeals that the Commission was in any event required to take evidence on its contention. Respondent's alternative position in this Court is therefore inconsistent with its prior stance in this litigation.[39]

2. In any event, there is no merit to respondent's argument that the fear-generated stress they would have the Commission consider is environmentally grounded. Indeed, respondent's effort (Br. in Opp. 32-33, 42-45) to demonstrate the necessary causal nexus simply underscores the absence of the required connection. Respondent argues that NEPA mandates assessment of the mental health effects of restart because:

> 1) the TMI-2 accident caused releases of radiation—an environmental effect;
>
> 2) the TMI-2 accident threatened to cause other, more serious, environmental effects;
>
> 3) apprehension caused by the TMI-2 accident engendered mental health effects;
>
> 4) restart of TMI-1 creates potential for future radiation releases or even a serious nuclear accident entailing environmental effects; and
>
> 5) restart of TMI-1 may exacerbate the stresses caused by the TMI-2 accident.

[39] Significantly, respondent's belated argument that the alleged stress flows from an impact upon the natural or physical environment is strikingly similar to its contention rejected by the court of appeals (Pet. App. 61a, see page 17, *supra*) that such stress is a "special hazard of radioactivity."

The foregoing premises, however, are insufficient to establish that any stress that may be occasioned by the restart decision is traceable to the environmental effects, potential or certain, that would be attributable to restart. Respondent simply demonstrates that potential environmental effects and mental health effects flow from a common source. But, as we have explained above, that circumstance is not enough to render the alleged mental health effects "environmental impacts[s]" of the federal action.[39]

Respondent's other efforts to portray stress alleged to result from fear of operation of TMI-1 as an environmental impact are equally unpersuasive. Noting that the Commission recognizes that it must consider the environmental consequences of plant operation, including those that might flow from a major accident, and labeling the possibility of a major accident "holocaust potential," respondent reasons (Br. in Opp. 45):

> That holocaust potential * * * is precisely the sort of impact on the natural or physical environment that the Commission argues must be the proximate cause of any psychological health damage to be considered under NEPA.

Respondents thus identify "holocaust potential" as the environmental cause of the mental health problems they tender for analysis under NEPA. *Quod erat demonstrandum*. But this is no more than a play upon words.

Of course, NEPA may require the consideration of events—such as a major nuclear accident—that are quite unlikely to occur but that would entail substantial environ-

[39] For similar reasons, the Licensing Board, which accepted the contention that NEPA requires consideration only of the environmental effects of federal action (J.A. 35), went astray in suggesting that "the psychological stress alleged by the intervenors here is related to a significant environmental impact" (*ibid.*; see page 5 note 4, *supra*). In support of that conclusion the Board observed only that the operation of TMI-1 and the accident at TMI-2 entailed environmental effects noting that the former had led the Commission to undertake preparation of an EIS when TMI-1 was initially licensed.

mental effects if they occurred.[32] Such a major accident may perhaps be labeled a potential "holocaust." But it does not follow that the mental health effects of the *possibility* ("holocaust potential") of a major nuclear accident entailing environmental effects are themselves environmentally caused.[33] In short, no causal nexus at all exists between the alleged stress and the effects of restart upon "man's life support system—the human environment" (115 Cong. Rec. 40417 (1969) (remarks of Sen. Jackson)). Respondent's analysis, like the court of appeals' judgment it purports to

[32] Thus, respondents err in characterizing (Br. in Opp. 43 n.37) our argument as holding that "psychological health damage rel... d to the restart of Unit 1 cannot be considered because there is no realistic probability of an accident." The question whether a major nuclear accident is so unlikely as to place the environmental effects of such an accident entirely outside the scope of NEPA analysis is not presented here. Neither does our argument depend in any way upon characterization of respondents' members' fears as irrational (compare page 6, *supra*).

[33] That respondents' argument rests on semantic legerdemain is clear from its pervasive reliance upon such verbal formulations to avoid our argument. See, e.g., Br. in Opp. 12 (The alleged "psychological health damage * * * is directly related to the *potential* of a nuclear reactor to cause overwhelming damage to the human environment"), *id.* at 38 (The alleged mental health effects "involve[] a *concern related to the prospect* of further devastating impact on the physical environment"), *id.* at 43 ("The restart of TMI-1 poses the *risk* of a further accident and further, perhaps exposure to radiation—a direct physical impact of the sort required by the Commission's legal theory"), *id.* at 53 ("Restart of [TMI-1] would significantly affect the human environment * * * by significantly altering the *psychological context* for local residents") (emphasis added).

Most revealing in this respect is respondent's ingenuous explanation (Br. in Opp. 53 n.45) that

> The fact that this health damage derives from an alteration of the human environment is most clearly illustrated by the fact that if people were to move away [to a different human environment] they would not suffer from the same damage to their health upon restart of TMI-1.

Similar statements—all literally correct—could be made about any federal action that affects people in any manner. And the relatively localized impact of TMI-1 operation on the [illegible] environment. It [illegible] only to localized phenomena.

support, thus plainly requires consideration under NEPA of non-environmental effects of federal action.[34]

3. The quintessentially non-environmental nature of the stress impacts alleged by PANE is reflected strikingly by considering the nature of measures, if any, that might be attempted to mitigate these effects. Given the fundamental role that mitigation plays in the NEPA process, see 40 C.F.R. 1502.14(f), 1502.16(h), 1503.3(d), 1505.2(c), 1505.3, 1508.20, it is noteworthy that, as Commissioner Hendrie observed (Pet. App. 82a, 89a; see page 8, *supra*), consideration of stress effects admits of no meaningful mitigation.

To be sure, the licensing board suggested (J.A. 39, 44-45; see page 6, *supra*) that mitigation of some kind is possible. Significantly, however, the actual measures identified—provision of an opportunity for airing of fears and installation of additional monitoring devices (assuming they would be effective)—are themselves directed to respondents' consciousness, rather than the environmental effects of operation of TMI-1. In any event, the true gravamen of respondent's claim is better revealed by the

[34] Similarly, amicus curiae American Psychological Association misses the mark with its suggestion (Br. in Opp. 14) that the mental health effects of a restart decision are cognizable under NEPA because "restarting the TMI-1 reactor will have an effect upon the physical * * * environment, through the dramatic alteration of conditions of temperature and pressure within the reactor and other physical effects of reactor operation." Even if these effects, wholly contained within a closed system, could somehow be deemed environmental impacts within the meaning of 42 U.S.C. 4332(2)(C)(i), they do not supply the predicate for analysis of mental health effects of restart. To repeat, our submission is not that reactor restart has no environmental effects, but that the alleged mental health effects of a restart decision do not flow from the distinctively environmental attributes of plant operation. Respondent plainly has not alleged that conditions of high temperature and pressure within the reactor itself directly engender mental illness or distress among its members. Rather, these conditions are merely symptomatic of normal reactor operation, and it is the fact of such operation itself, rather than any of its environmental effects that creates the potential for an accident which in turn gives rise to the alleged mental health effects. Thus the cause of the mental health effects alleged [illegible] fear of risk itself, not any environmental effect [illegible] speculative of restart

mitigation measures implicit in respondent's stress contention itself, and in its arguments in this Court. Respondent's original contention is simply that because of unmitigable stress factors "it [is] impossible for the NRC to operate TMI-1 without endangering public health and safety" (Pet. App. 116a). See also Br. in Opp. 53 n.45 (quoted at page 46 note 33, *supra*). Respondent's frankly stated view that mitigation of the alleged stress requires permanent closing of the TMI-1 plant, rather than any set of measures to improve safety or control environmental effects, is eloquent testimony that the alleged stress is in no sense an environmental effect of operation of TMI-1.

* * * * *

In closing, we pause to emphasize that although neither NEPA nor the Atomic Energy Act requires consideration by the Commission of respondents' allegations of community fears in deciding whether to authorize restart [38] it is our view that these laws do serve effectively to alleviate those fears by assuring that any factual basis therefor is publicly aired and fully explored in the most effective manner. As recognized by Chairman Ahearne (Pet. App. 80a-81a) and most aptly described by Commissioner Hendrie (Pet. App. 83a, 87a):

> [T]he most appropriate way for the Commission to take account of fears related to TMI-1 is, first, to make sure that the technical decision on restart is sound; and second, if the decision is to permit restart, to make sure that the public understands, through accurate and comprehensible information, fully disseminated, the basis for the Commission's determination that the plant can operate safely.
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> * * * * *
>
> [A]n unsafe plant is not made safe by the fact that local citizens are unconcerned about it, any more than a safe plant is made unsafe by the fact that local residents are deeply anxious about it.

[38] Respondents have not sought this Court's review of the court of appeals' judgment on the Atomic Energy Act issue.

Here, prior to authorizing restart, the Commission has undertaken a detailed evaluation of the safety of TMI-1 and has required that safety measures be taken prior to any restart. See page 3, *supra*. In this manner, the subject of community fears—the safety of the operation of TMI—has been addressed by the Commission.

In addition, in order to educate both itself and the public, the Commission has gone to great lengths to involve the public in its decisionmaking process (see, e.g., page 18, *supra*). The Atomic Energy Act, 42 U.S.C. 2239(a), provides that upon the request of interested persons the Commission must hold a public hearing as part of its proceedings on most significant determinations. Similarly, public involvement is a mainstay of the NEPA planning process. See 40 C.F.R. 1506.6. The legislative history of each of these enactments reflects a strong congressional desire to promote public confidence in federal decisionmaking by providing for significant public participation. See S. Rep. No. 1677, 87th Cong., 2d Sess. 7-9 (1962) (Atomic Energy Act); S. Rep. No. 91-296, *supra*, at 5 (NEPA). This important aspect of the latter statute moreover, has been emphasized by this Court most recently in *Weinberger* v. *Catholic Action of Hawaii*, *supra*, 454 U.S. at 143. The District of Columbia Circuit has made the same point about the former statute: "In the Atomic Energy Act, [Congress] * * *, in the interest of public confidence in the thoroughness of the review process, invited public scrutiny * * *." *Union of Concerned Scientists* v. *Atomic Energy Commission*, 499 F.2d 1069, 1078 (D.C. Cir. 1974) (citation omitted).

In the decision under review, the court of appeals has overlooked authoritative teachings on the role of public participation under the statutes that govern nuclear licensing, as well as the clear meaning of Section 102(2)(C) of NEPA. To be sure, there are those who fear the development and utilization of nuclear power. "But Congress has made a choice to at least try nuclear energy, establishing a reasonable review process in which courts are to play only a limited role * * *. Time may prove wrong the decision to develop nuclear energy, but it is Congress or the States within their appropriate agencies which must eventually make

that judgment." *Vermont Yankee Nuclear Power Corp. v. NRDC*, *supra*, 435 U.S. at 557-558. NEPA does not provide the courts a means of second-guessing Congress' considered judgment in the guise of mandating consideration of alleged psychological harm induced by individuals' disagreement with the implementation of congressional enactments by a federal agency. Once an agency has considered the "environmental consequences" of its proposed federal action, it has satisfied its NEPA responsibilities.

CONCLUSION

For the foregoing reasons, the judgment of the court of appeals respecting the Commission's responsibilities under NEPA should be reversed.

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