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Institutionalizing the Mitigated FONSI: A Precautionary Tale

by Rachael Rawlins

Editors' Summary: NEPA, the premier U.S. environmental protection statute, was intended to confront questions of risk, harm, and uncertainty by requiring an EA before beginning certain projects. Following such assessments, project proponents may also have to prepare an EIS to identify and consider alternatives that may result in less harm to the environment. Over time, the line between EAs and EIS became blurred, resulting in an increase in documents known as EAs with a mitigated "finding of no significant impact." In this Article, Rachael Rawlins explains the characteristics of these documents and how they have degraded NEPA and the protection it offers.

I. Introduction

With cancer in the United States affecting nearly one in two men and more than one in three women,[1] and global warming threatening to reach dangerous and irreversible proportions,[2] there is increasing discussion today of the idea of precaution. We have allowed thousands of untested chemicals into the marketplace with a regulatory scheme that puts the burden of proving safety on the government.[3] We have spewed pollution into the air and water, guessing at "safe" levels of carcinogens and ignoring synergistic effects. We have poisoned the ocean's fish to the point that it is no longer safe for small children to eat more than one serving of tuna per week,[4] and where one in six children in the United States are born with dangerous levels of mercury in their bodies.[5] Most of the ecosystem services that support life on earth are being degraded or used unsustainably.[6] Although the evidence remains incomplete, there is enough for experts to warn that the ongoing degradation may lead to abrupt and potentially irreversible changes that will seriously affect human well-being. These changes could include the emergence of new diseases, sudden changes in water quality, creation of dead zones along the coasts, sea level rise, the collapse of fisheries, and shifts in regional climate.[7] Yet, at this potentially critical moment in our history, the United States is currently moving in a direction that threatens to stab at the heart of our premier environmental protection statute, the National Environmental Policy Act (NEPA).

Adopted in 1969, NEPA was intended:

> 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; and to establish a Council on Environmental Quality [CEQ].[8]

Consistent with the precautionary principle,[9] NEPA confronts questions of harm and scientific uncertainty; shifts to proponents the responsibility for demonstrating a project's safety; and requires transparency and democracy in decisionmaking and consideration of alternatives to harmful technologies. NEPA requires an environmental impact

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1. Richard Clap et al., *Environmental and Occupational Causes of Cancer Re-Visited*, 27 J. Pub. Health Pol'y 61, 68-69 (2006).
2. Fred Pearce, *Review: Climate Going Crazy*, New Scientist, *available at* http://www.newscientist.com/channel/earth/climate-change/mg18825315.300 ("The ominous phrase 'tipping point' entered the vocabulary of climate science—a stark warning that global warming may soon spiral out of control.").
3. *See* Wendy Wagner, *Commons Ignorance: The Failure of Environmental Law to Protect Needed Information of Health and the Environment*, 53 Duke L.J. 1619, 1666 (2004).
4. U.S. Environmental Protection Agency (EPA) & U.S. Food & Drug Administration (FDA), EPA and FDA Advice for Women Who Might Become Pregnant, Women Who Are Pregnant, and Nursing Mothers With Young Children (2005) (EPA-823-R-04-005), *available at* http://www.cfsan.fda.gov/~dms/admehg3.html.
5. Public Broadcasting Service, *The Mercury Story*, Jan. 1, 2005, *available at* http://www.pbs.org/now/science/mercuryinfish.html.
6. Millennium Ecosystem Assessment, *Millennium Ecosystem Assessment Synthesis Report: A Report of the Millennium Ecosystem Assessment*, http://www.precaution.org/lib/06/millenium_assessment_main_report.050401.pdf (last visited May 15, 2007).
7. *Id.* at 16-17.
8. 42 U.S.C. §4321(2).
9. Nancy Myers, *Debating the Precautionary Principle*, Sci. & Envtl. Health Network, Mar. 2000, *available at* http://www.sehn.org/ppdebate.html.

statement (EIS) for all major federal actions significantly affecting the quality of the human environment.[10] The precautionary principle is subject to different formulations, but at its core is the idea that action should be taken to prevent harm to the environment and human health, even if scientific evidence is inconclusive.[11] Although NEPA's requirements are purely procedural, its true value lies in its capacity to encourage precaution by forcing decisionmakers to publicly acknowledge and confront potentially significant impacts and to identify and seriously consider alternatives. NEPA requires agencies to consider alternatives if there is a "possibility" of significant impacts from the project under evaluation.[12] To the "fullest extent possible," agencies are called upon to use the NEPA process to identify and assess reasonable alternatives to proposed actions that will avoid or mitigate adverse effects of these actions upon the quality of the human environment.[13] An EIS must minimize and expose the magnitude of uncertainty[14] and consider alternatives in "comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decisionmaker and the public."[15] The final Record of Decision following a full EIS must: "State whether all practicable means to avoid or minimize environmental harm from the alternative selected have been adopted, and if not, why they were not."[16]

As initially conceived, the first step in the NEPA process was to prepare an environmental assessment (EA), a short, concise document used to determine whether there may be significant impacts which would require a full environmental impact study.[17] Today, however, this process has become grossly abbreviated. Instead of pursuing a full EIS, a long EA followed by a mitigated finding of no significant impact (FONSI) has become the predominant way that agencies conduct NEPA analysis. As the CEQ explained in its 1997 report:

> While preparing EAs, agencies often discover impacts that are "significant," which would require preparation of an EIS. Agencies may then propose measures to mitigate those environmental effects. If an agency finds that such mitigation will prevent a project from having significant impacts on the environment, the agency can then conclude the NEPA process by issuing a FONSI, rather than preparing an EIS. The result is a "mitigated FONSI."[18]

The CEQ reported that "the annual number of draft, revised, supplemental, and final EISs prepared declined from approximately 2,000 in 1973 to 608 in 1995, averaging 508 annually between 1990 and 1995. By 1993, a CEQ survey of federal agencies estimated that about 50,000 EAs were being prepared annually."[19]

Although it once took a position against this practice,[20] the CEQ is currently on a potentially misguided course to institutionalize the mitigated FONSI. The CEQ Task Force[21] has recommended—and interagency work groups are currently working to develop—requirements for what they are calling the "long EA." The long EA is used as a "decision document"[22] and is generally indicative of a mitigated FONSI.

The EA's job is to identify potential impacts, not to balance or weigh the impacts against other project alternatives.[23] The long EA with a mitigated FONSI, however, does just that in its judgment of significance. When the EA is used as a decision document, the weighing of risks and benefits in the mitigated FONSI is hidden from public view and insulated from judicial review as a policy decision. Neither NEPA nor the CEQ's regulations contain any standards for determining at what point an impact must be considered significant, how certain an agency must be in its predictions as to the value of mitigation, or the way in which this uncertainty must be conveyed to decisionmakers and the public. In the context of an EA under the current standards, the decision may be made without a full appreciation of the risk involved, without any real consideration of the possibility of preferable alternatives, and without a full assessment of benefits. Regulations and guidelines could perhaps help to address some of these issues in the context of a long EA with a mitigated FONSI, but where there is a finding of no significant impact, interest in serious consideration of alternatives and "all practicable" mitigation necessarily wanes. This is where the heart of NEPA resides.[24]

10. 42 U.S.C. §4332(2)(C).
11. Myers, *supra* note 9.
12. Fritiofson v. Alexander, 772 F.2d 1225, 1238 n.7, 15 ELR 21070 (5th Cir. 1985) (requiring an EIS where there is a possibility of significant impacts from the project under evaluation).
13. 40 C.F.R. §1500.2(e) (2006).
14. *Id.* §1502.22 (requires that the government acquire information relevant to reasonably foreseeable significant adverse impacts essential to a reasoned choice among alternatives unless the costs of obtaining it are exorbitant. Even then, the agency must explain the relevance of the missing information, summarize existing credible scientific evidence, and evaluate impacts based upon generally accepted theoretical approaches or research methods.).
15. *Id.* §1502.14 ("This section [alternatives including the proposed action] is the heart of the environmental impact statement.").
16. *Id.* §1505.2.
17. *Id*. §1508.9.
18. CEQ, NEPA: A Study of Its Effectiveness After 25 Years 19 (1997), *available at* http://ceq.eh.doe.gov/nepa/nepa25fn.pdf.
19. *Id*. at 28.
20. The CEQ had rejected the mitigated FONSI in its 1981 guidance document, *Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations*: "If a proposal appears to have adverse effects which would be significant, and certain mitigation measures are then developed during the scoping or EA stages, the existence of such possible mitigation does not obviate the need for an EIS." 46 Fed. Reg. 18026 (Mar. 23, 1981). Today, however, according to the NEPA Task Force, the CEQ has now taken the position that this approach is obsolete. CEQ, NEPA Task Force Report to the CEQ, Modernizing NEPA Implementation 69 (2003), *available at* http://ceq.eh.doe.gov/ntf/report/index.html [hereinafter Modernizing NEPA Implementation]. The task force recommends that a priority CEQ action should be to revise Question 40.
21. In 2002, the CEQ established a NEPA Task Force to review the current NEPA implementing practices and procedures. The task force membership through January 2003 was composed of career civil servants from EPA, the U.S. Forest Service, the U.S. Department of Energy, the U.S. Department of Transportation, the Federal Aviation Administration, the U.S. Department of the Interior, the U.S. Geological Survey, the Bureau of Land Management, the U.S. Army Corps of Engineers, the U.S. Department of Commerce, and the National Oceanic and Atmospheric Administration. CEQ, *NEPA Task Force Report on CEQ Regional NEPA Roundtables*, http://ceq.eh.doe.gov/ntf/roundtables.html (last modified Apr. 21, 2005).
22. Modernizing NEPA Implementation, *supra* note 20, at 65, 75.
23. Sierra Club v. Marsh, 769 F.2d 868, 875, 15 ELR 20911 (1st Cir. 1985).
24. 40 C.F.R. §1502.14 (identifying the alternatives analysis as the "heart" of an EIS).

Drawing on a recent case example, *Spiller v. Walker*[25] (the Longhorn case), this Article urges a careful consideration of these issues and a reconsideration of the CEQ's original position—a long EA generally indicates that an EIS is needed.[26] The case concerned the conversion and extension of a 50-plus-year-old former crude oil pipeline with a significant history of leaks and spills[27] that ran 458 miles across Texas.[28] The plan called for another 50 years of service to carry gasoline, jet fuel, and diesel in the reverse direction under increased pressure. Most of the old pipe was manufactured before 1970 using low-frequency electronic resistance welded (ERW) pipe—a type known for its relatively unreliable seams and substantial inferiority to modern pipe.[29] It was coated with material known for extremely high corrosion rates[30] and was constructed under old standards requiring burial to a depth of one foot—less than one-half the depth called for today.[31] At the conclusion of the EA process, the mitigated FONSI left the pipeline largely in place but subject to 40 mitigation measures covering testing, repair, and other issues including leak detection and control, right-of-way clearing, patrol and inspection frequency, response planning, secondary containment at pump stations, water quality testing, future studies, funding for a refugium and captive breeding program for the endangered Barton Springs salamander, and planning for the provision of alternative water supplies to certain municipalities and private well users in the event of a leak or spill.[32] Although there was substantial uncertainty as to the efficacy of the mitigation measures, the U.S. Court of Appeals for the Fifth Circuit concluded that the EA "contained all the functional equivalents of an EIS" and that requiring the preparation of an EIS would be "a waste of time and resources."[33] According to the court: "[T]he EA here has all the hallmarks of an EIS: there were public hearings, and costly, extensive, and comprehensive environmental studies which produced reams of material data and resulted in 2,400 pages of analysis."[34] This case, nevertheless, reveals serious limitations in the long EA with a mitigated FONSI approach.

This Article urges caution in the use of the long EA with a mitigated FONSI. The mitigated FONSI approach risks effectively replacing the EIS and stabs at the very heart of NEPA.

II. In a Long EA, the Weighing of Risks and Benefits Is Hidden Within the FONSI

A "finding" of no significant impact sounds like a scientific fact-based decision, but that is not necessarily the case. The Longhorn EA reveals that there is considerable leeway in making a FONSI that may not be fully understood by decisionmakers or the public. As the NEPA Task Force has recognized:

> [T]he traditional "predict, mitigate, implement" environmental management model implies a high degree of certainty in the accuracy of the prediction step that often does not exist. The biological, physical, and social systems analyzed in the NEPA process are complex, which makes it difficult to calculate the potential impacts of an action with absolute certainty. However, agencies are generally reluctant to admit that they cannot be sure of the impact of their proposed action.[35]

In the Longhorn case, uncertainty was buried under a mountain of analysis and obscured by the specificity of leak and spill estimates. The executive summary presented the EA's estimate that the average leak rate of the pipeline as mitigated per mile per year is 0.00007, and that the chance that one or more deaths will occur in any given 2,500-foot segment of the pipeline is 0.00036%.[36] Such precision is contrary, however, to the qualifications in the body and appendices of the 1,200-page EA: that the approach used to generate these estimates "has considerable uncertainty"[37]; that the correlations are "weak in terms of statistically valid data"[38]; that the "predictive power of the . . . probabilities is very limited"[39]; and that the "[r]esidual risks remaining after implementation of the [mitigation measures] cannot be precisely quantified."[40] The EA created such confusion about the reliability of the statistical analyses that the government argued before the court of appeals that the statistical analyses were indeed the basis for the FONSI,[41] and Longhorn Pipeline partners argued that they were not.[42] The "overall risk" probabilities were presented in the Executive Summary to the EA, but buried in Appendix 9B-1 is the clear admission that "[d]ue to the uncertainties involved in such calculations, they are not the primary basis of the EA

25. No. A-98-CA-255-SS, 2002 U.S. Dist. LEXIS 13194 (W.D. Tex.), *aff'd sub nom.* Spiller v. White, 352 F.3d 235 (5th Cir. 2003), *cert. denied*, City of Austin v. Brownlee, 543 U.S. 809 (2004).

26. "In most cases . . . a lengthy EA indicates that an EIS is needed." *Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations*, *supra* note 20.

27. Compliance Assurance & Enforcement Division, U.S. EPA, Final Longhorn Pipeline Environmental Assessment (EA) 3-5 (2005), *available at* http://www.epa.gov/earth1r6/6en/xp/longhorn.htm [hereinafter EA].

28. *Id.* Exec. Summ., at ES-14.

29. *Id.* ch. 5, at 5-7. Engineering studies have identified this pipe as having a "higher susceptibility to certain failure mechanisms." *Id*. "Government agencies have issued advisories regarding this issue[.]" *Id.* ch. 5, at 5-8. This kind of pipe "has an increased susceptibility to a special form of corrosion—'selective seam corrosion' or 'crevice corrosion.'" *Id.* ch. 5, at 5-48. "ERW seam welds [are] generally considered less reliable than fabrication welds produced after 1970." *Id.* ch. 5, at 5-79. Laminations are common in pre-1970 ERW pipe, which can result in "hydrogen blistering," which in turn can result (and, with this pipeline, has resulted) in leaks. *Id.* ch. 5, at 5-8. In addition, cast-iron type materials, which are "weaker than steel," may have been used in this old section of the pipeline. *Id.* ch. 5, at 5-9.

30. *Id.* ch. 5, tbl. 5-2. *See also* California State Fire Marshal, California State Fire Marshal Study: Hazardous Liquid Pipeline Risk Assessment (1993) (Record Document No. 50:11524—MI 007394).

31. EA, *supra* note 27, ch. 5, at 5-19.

32. *Id*. ch. 9, tbl. 9-1.

33. *Spiller*, 353 F.3d at 245 n.6, *cert. denied*, *City of Austin*, 543 U.S. at 809.

34. *Id*.

35. Modernizing NEPA Implementation, *supra* note 20, at 47.

36. *Id*. Exec. Summ., at ES-33.

37. *Id*. ch. 6, at 6-58

38. *Id*. ch. 9, app. 9B, at 9B-5 (Vol. 2).

39. *Id*. ch. 9, at 9-35.

40. *Id*. ch. 9, at 9-32.

41. Brief for the Federal Defendants-Appellees at 39, Spiller v. White, 352 F.3d 235 (5th Cir. 2003), *cert. denied*, City of Austin v. Brownlee, 543 U.S. 809 (2004) (equating "quantitative" with "factual" measurements of probability).

42. Brief of Appellee, Longhorn Partners Pipeline Ltd. Partnership at 30, *Spiller*, 352 F.3d at 235, *cert. denied*, *City of Austin*, 543 U.S. at 809 ("probability calculations . . . not intended to be the primary basis for the [EA's] conclusions").

findings." The FONSI itself explains that the agencies made a qualitative decision based on their judgment. Yet, at the same time, it says that the conclusions are based on "[the agencies'] engineering analysis of the probability of failure and their interdisciplinary analyses of the consequences of any future spill."[43]

A close look at the Longhorn EA demonstrates how the pliability of the risk assessment process creates an opportunity for decisionmakers to transform what appears to be a factual science-based decision about whether there may be significant impacts into a political decision about whether project benefits are worth the risk (but that latter kind of decision is the job of a full EIS not an EA). In the Longhorn EA, policy objectives can be seen infiltrating throughout what is presented as scientifically based risk assessment. An e-mail from the government's contractor, for example, reflects how policy decisions affected the risk assessment decision as to which areas to designate as environmentally sensitive:

> ESAs [environmentally sensitive areas] will be used to focus on a small subset of the entire line rather than providing equal analysis for the entire 700 plus miles. A reasonable goal is to reduce the total length of ESA segments to about 140 miles or 20% of the entire line.[44]

The final EA designates 112 out of 700 miles (16%) as sensitive.[45] The designation thus appears to be based on a "reasonable goal," not environmental science.

With no solid empirical basis required, the leak and spill estimates were also easily manipulated. The EA drafters repeatedly changed the risk assessment model and thereby reduced the leak and spill estimates.[46] In the end, the model relied on several different methods of analysis, each seriously lacking in data.[47] The analysis felt by the drafters to be the best approach[48] was based on such a paucity of data that it relied on a curve drawn through one real and two theoretical data points. The data was created by matching the leak rate for the old pipeline with a pre-mitigation score based on a subjective scoring system of four causes of pipeline failure: (1) third-party damage; (2) corrosion; (3) design flaws; and (4) incorrect operations. Two additional, theoretical data points were created by hypothesizing a score and leak rate for the best and for the worst possible pipelines.[49] Drawing a curve through these three points, a score for the post-mitigation pipeline was matched to a leak rate. The Executive Summary of the final EA presented a series of leak-and-spill impact estimates drawn from this analysis.[50] Impacts were minimized and uncertainty obscured through presentation of the estimated risks in a disaggregate fashion and specified to the 10,000ths percentage point.[51]

Although the Fifth Circuit found "no evidence of a causal link between the Lead Agencies' decision to issue a FONSI and the alleged political machinations,"[52] the district court had "no doubt the White House's policy goals affected the ultimate decision to issue a FONSI."[53] Lobbyists on both sides were traipsing the halls of the U.S. Congress. There were reports of vote trading on the Longhorn Pipeline and the Chinese Trade Deal.[54] Ultimately, joint lead agencies, the Office of Pipeline Safety (OPS), and the U.S. Environmental Protection Agency (EPA) reached an impasse on whether to conduct an EIS or, instead, stop at an EA. They requested the CEQ's help to make what the agencies themselves termed a policy decision on whether to conduct an EIS for the proposed project.[55] In response, the chair of the CEQ recommended issuance of a FONSI, urging completion of the FONSI by mid-October, just before the 2000

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> The issue for decision is whether risks have been mitigated below the level of significance. In the final analysis, this is a qualitative decision which can only be rendered through the application of the best professional judgment of the Lead Agencies and their multi-disciplinary contract support team. Based on their engineering analysis of the probability of failure and their interdisciplinary analyses of the consequences of any future spill, they concluded that the residual risk of environmental harm from the pipeline as mitigated is not significant and does not warrant preparation of an EIS.

EA, *supra* note 27, FNSI, at 10.

44. E-mail from Bob Davis, to Gregg Tatum (Sept. 6, 1999) (Record Document No. URS 027408).

45. EA, *supra* note 27, ch. 9, at 9-6.

46. *See* Record Document No. 49:11458—OR/DOT 001210 ("Even if we use the last 10 years of EPC data as a basis we still have high probabilities over 50 years. We still might have arguments for further reducing the estimates. . . ."). *Id*. at Record Document No. 62:13772—OR/URS 004535) (explaining "last minute but nonetheless very important change in the risk assessment approach," noting that the new model will "drop consideration of receptors [it] will not include factors that address population density along the pipeline, stream crossing, and aquifer sensitivity," and explaining that the change "avoids the almost certainty of contradictory results coming out of [EA] Chapter 6 and Chapter 7").

47. First, the EA attempts to examine release frequencies on the Office of Pipeline Safety (OPS) database for "best performing" pipelines. EA, *supra* note 27, ch. 9, app. 9B (Vol. 2). Yet, the EA admits this is a "weak" comparison due to known inaccuracies in the database. *Id*. at 6-17. Further, there is no comparison of critical factors such as design, substance, pressure, operations, and potential for third-party damage. Next, the EA turns to Longhorn's "Mock" Operational Reliability Assessment. However, in relation to this exercise, the EA admits that "Longhorn does not commit to a calculated failure probability threshold for the ORA because of the high level of uncertainty surrounding the ongoing evaluations of pertinent conditions." *Id*. at 9D-6 (Vol. 2). This exercise was also criticized by plaintiffs' experts for serious mathematical and statistical errors. Record Document No. R. 48:11164-85—Ross Declaration Part B. The EA then turns to an exercise in logic with no empirical foundation, a "scenario-based analysis of estimated release rate reductions for third-party damage." EA, *supra* note 27, ch. 9, app. 9B, at 9B-4 (Vol. 2). According to one of the plaintiff's experts, "[t]here is no evidence whatever" that these probabilities are "even approximately correct." Record Document No. R. 48:11236—Spelman Declaration on Third-Party Damage. Finally, the EA speculated that there would be no significant impact because of "possible high release frequency reductions" based on "unprecedented" mitigation measures. EA, *supra* note 27, ch. 9, app. 9B, at 9B-5 (Vol. 2).

48. The EA explained, that "this approach has considerable uncertainty but is felt to be the most realistic appraisal of post-mitigation leak rates." *Id.* ch. 6, at 6-58.

49. "The regression model is based on very limited data. As a result, there is some uncertainty about the prediction because of the small amount of information available for the regression." *Id*. ch. 9, app. 9B, at 9B-E-3 (Vol. 2).

50. *Id*. Exec. Summ., tbl. ES-4.

51. *Id.*

52. Spiller v. Walker, 352 F.3d 235, 242 (5th Cir. 2003), *cert. denied*, City of Austin v. Brownlee, 543 U.S. 809 (2004).

53. Spiller v. Walker, No. A-98-CA-255-SS, 2002 U.S. Dist. LEXIS 13194, at *30 (W.D. Tex.), *aff'd sub nom. Spiller*, 352 F.3d at 235, *cert. denied*, *City of Austin*, 543 U.S. at 809.

54. Public Citizen's Global Trade Watch, *The Record on Deals for Trade Votes: Don't Get Fooled Again*, Dec. 2001, http://www.citizen.org/documents/fast_track_deals.PDF.

55. "The DOJ has advised us that, on the present state of the record, it could defend either a FONSI or an EIS, and that the choice is a policy choice for our two agencies." CEQ 009276.

presidential election.[56] The lead agencies issued the FONSI and the final EA on November 3, 2000, the Friday before the election.

In the words of the district court, the mitigated FONSI in the Longhorn case was balanced on a hope and a prayer: "Time will only tell if the mitigation measures will be sufficient to contain the dangers inherent in this decrepit Pipeline, and the people and critters in its threatening shadow can only hope and pray that they will."[57] Yet, the court felt that it must nevertheless uphold the decision. Although concerned about the adequacy of the insurance[58] and exclaiming that "this Pipeline puts in jeopardy thousands of people who live above it and many more thousands of people who depend upon the water it runs through,"[59] the court approved the EA, and its decision was affirmed by the court of appeals.[60] The district court explained that "leftover uncertainties result from the unavailability of data and the simple fact that predictions based on mitigation measures that have not yet been done are necessarily uncertain."[61]

Although the district court noted that the political influence in the case "does add a certain stench to the FONSI,"[62] it explained that under the "highly deferential" arbitrary and capricious standard of review, a reviewing court has the "least latitude in finding grounds for reversal" of an agency decision.[63] Although the district court would have found it "reasonable" to order Longhorn to replace the 52-year-old pipe in all populated areas and in areas that affect people's drinking water supply, it concluded that it had no choice but to approve the mitigated FONSI[64] given the arbitrary and capricious standard of review.[65] The government had discussed the risk and concluded that it did not rise to the level of "significance," which would mandate a full EIS. It was a permissible policy decision. The Fifth Circuit explained: "[O]ur deference to the Lead Agencies' fact-finding and conclusions includes deference to their judgment as to whether any particular environmental impact of the proposed pipeline rises to the level of significance. . . . [D]etermining whether significance exists inherently involves some sort of a subjective judgment call," which must include judgment about "acceptable risk."[66]

If it is a defensible judgment call for the government to decide that the impacts in the Longhorn case do not rise to the level of significance, a mitigated FONSI may be defensible in virtually any case. Adding up the impacts to various resources over the 50-year project, the cumulative possibility of harmful impacts—not actually mentioned in the EA—was a disturbingly high 18.3%.[67] Given the uncertainty of the predictions, the actual likelihood of adverse events could clearly be considerably higher.

III. Judgment Is Made Without Full Consideration of Alternatives or a Full Assessment of Benefit

Although a long EA supporting a mitigated FONSI may look a lot like an EIS, and indeed, regulatory requirements could be devised such that it would contain all the functional elements, there is a fundamental difference: the EA concludes with a FONSI, and the EIS does not. An EA provides no record basis for accepting significant environmental effects.[68] In *Sierra Club v. March*,[69] the U.S Court of Appeals for the First Circuit explained that

> under NEPA and its implementing regulations, we cannot accept the EA as a *substitute* for an EIS—despite the time, effort, and analysis that went into their production—because an EA and an EIS serve very different purposes. An EA aims simply to identify (and assess the "significance" of) potential impacts on the environment; it does not balance different kinds of positive and negative environmental effects, one against the other; nor does it weigh negative environmental impacts against a project's other objectives, such as, for example, economic development. This latter balancing job belongs to the officials who decide whether to approve the project; and (where there are "significant effects") those officials should make the decision in light of an EIS. An EIS helps them make their decision by describing and evaluating the project's likely effects on the environment. The purpose of an EA is simply to help the agencies decide if an EIS is needed.
>
> To treat an EA as if it were an EIS would confuse these different roles, to the point where neither the agency nor those outside it could be certain that the government fully recognized and took proper account of environmental effects in making a decision with a likely significant impact on the environment.[70]

Although, after a full EIS, the government might conclude that there are significant impacts but the project

56. Brief of Appellants, Marian Collins, Barton Springs Edwards Aquifer Conservation District, and David Robertson at 6 (*Spiller*, 352 F.3d at 235, *cert. denied*, *City of Austin*, 543 U.S. at 809).

57. *Walker*, No. A-98-CA-255-SS, 2002 U.S. Dist. LEXIS 13194, *aff'd sub nom. Spiller*, 352 F.3d at 235, *cert. denied*, *City of Austin*, 543 U.S. at 809.

58. "The undersigned personally is extremely concerned Longhorn will begin pushing high-grade gasoline through the Pipeline in less than a month, which it has assured the Court it intends to do. The Court finds no consolation whatsoever in the fact that Longhorn is a limited partnership with limited liability and has only $15 million of liability insurance." *Walker*, No. A-98-CA-255-SS, 2002 U.S. Dist. LEXIS 13194, at *65.

59. *Id.* at 67.

60. *Spiller*, 352 F.3d at 235, *cert. denied*, *City of Austin*, 543 U.S. at 809.

61. *Walker*, No. A-98-CA-255-SS, 2002 U.S. Dist. LEXIS 13194, at *37.

62. *Id.* at *31.

63. *Id.* at *17.

64. *Id.* at **65-66.

65. Although the U.S. Court of Appeals for the Second Circuit has said that if it is a "close call" whether a significant impact will occur, an EIS is required, National Audubon Soc'y v. Hoffman, 132 F.3d 7, 13 (2d Cir. 1997), the Fifth Circuit rejected this approach in the Longhorn case "given the seeming conflict between such a rule and the highly deferential 'arbitrary and capricious' standard" of review generally applicable to challenge a FONSI. *Spiller*, 353 F.3d at 245 n.4.

66. *Spiller*, 352 F.3d at 244 n.5, *cert. denied*, *City of Austin*, 543 U.S. at 809.

67. The EA estimates that there is an 8% chance that a recreational stream will be contaminated at least once, a 5% chance that a wetland will be contaminated at least once, a 0.3% chance that a surface or subsurface public drinking water supply will be contaminated at least once, a 0.5% chance that one or more deaths will occur from a flash fire; and a 2.3% chance that injury will occur from a flash fire. Adding up the total, the government was finding insignificant a 15.3% probability of harmful impacts. EA, *supra* note 27, Exec. Summ., tbl. ES-2, at ES-4. The Executive Summary omitted to include the EA's calculation of the estimated threat of prime agricultural land contamination, which would raise the total to a 18.3% probability of a harmful environmental impact.

68. *Id.* FNSI, at 15.

69. 769 F.2d 868, 874, 15 ELR 20911 (1st Cir. 1985).

70. *Id.* at 875.

should nevertheless proceed, the decisionmaking process is publicly exposed, and the decision is transparent. If the government concludes with a FONSI, finding that the project's impacts are not significant because it believes that the project should proceed, then there is no public accounting. The CEQ has previously acknowledged that the "weighing of risks and benefits for a particular [proposed project] is properly done after completion of the entire NEPA process and is reflected in the Record of Decision."[71]

The mitigated FONSI defies the precautionary approach by cutting short the analysis of project alternatives at the very heart of NEPA:

> Recourse to the precautionary principle presupposes that potentially dangerous effects deriving from a phenomenon, product or process have been identified, and that scientific evaluation does not allow the risk to be determined with sufficient certainty.[72]

A finding of no significant impact implies that the risk has been determined with sufficient certainty and thereby dismisses the precautionary approach. The EA need only include "brief discussions" of the alternatives.[73] The Longhorn EA easily dismissed all alternatives other than to allow Longhorn's use of the old pipeline with only those mitigation measures determined to be affordable to Longhorn. The EA narrowly defined the purpose to be "to allow Longhorn to compete in the El Paso gateway markets through the use of its existing pipeline."[74] The rerouting alternatives were "dismissed from detailed analysis."[75] The possibility of new pipe, an alternative that the district court would have considered reasonable for critical areas, was considered only briefly.[76] Analysis was abbreviated and transparency compromised. Mitigation measures were determined through closed door negotiations. There were 21 distinct versions of the mitigation plan (plus a supplement to the last version)[77] privately negotiated between Longhorn and the government. In critiquing the OPS Draft Rational for a FONSI, EPA staff reported the following:

> It is difficult to conclude that "all measures" which might avoid or reduce harm to the environment have been considered or incorporated in the Longhorn mitigation plan. The lead agencies have merely found a specific suite of mitigation measures proffered by Longhorn exceeds "target" risk scores established by the agencies.[78]

The Final Longhorn EA briefly explains that this proposed project "would address the underlying need for more competitive motor fuel prices in Odessa and the El Paso Gateway Markets," and the "purchase and conversion of an existing operating pipeline covering a majority of the length of the Longhorn Pipeline System is critical to meeting this need."[79] There is no discussion as to whether there are other ways to meet this need, or its importance in comparison to the potential environmental destruction. If a full EIS had been undertaken, it would have had to fully evaluate alternatives while exposing, to both the decisionmakers and the public, the possibility of significant impacts. In an EIS, the purpose and need may be challenged if so narrowly defined as to preclude all reasonable alternatives.[80]

IV. The EA With a Mitigated FONSI—The Price Is Too High

The Longhorn FONSI touts the benefits of the mitigated FONSI approach:

> An environmental benefit associated with "mitigated FONSIs" is the degree of mitigation they encourage in licensing and approval situations. To avoid the expense and delay associated with EISs, applicants may often voluntarily proffer more mitigation than an action agency would or could require after preparation and consideration of an EIS, even though an action agency cannot directly compel an applicant to adopt mitigation in the EA process.[81]

In the Longhorn case, the government concluded that the EA resulted in "greater mitigation than would likely result from the EIS process."[82] This is pure conjecture.[83] We can not have such little faith in the democratic process that those in a pipeline's path must hang on a hope and a prayer. The limits of agency jurisdiction were never intended to be used to override the EIS. The CEQ regulations specifically require that an EIS include reasonable alternatives not within the jurisdiction of the lead agency.[84] "[A]n agency's refusal to consider an alternative that would require some action beyond that of its congressional authorization is counter to NEPA's intent to provide options for both agencies and Congress."[85] If the real problem is that our federal agencies lack

71. Incomplete or Unavailable Information, 51 Fed. Reg. 15621 (Apr. 25, 1986) (amending 40 C.F.R. §1502.22).

72. Communication from the Commission on the Precautionary Principle, Commission of the European Communities, Brussels, 2.2.2000. COM(2000), 3.

73. Fritiofson v. Alexander, 772 F.2d 1225, 1236, 15 ELR 21070 (5th Cir. 1985).

74. EA, *supra* note 27, ch. 2, at 2-2 (Vol. 4).

75. *Id*. ch. 3, at 3-18.

76. *Id*. ch. 3, at 3-16.

77. *Id.* FNSI, at 5 n.4.

78. Outside the record document, OR/EPA 003019.

79. EA, *supra* note 27, ch. 2, at 2-1.

80. Davis v. Mineta, 302 F.3d 1104, 32 ELR 20727 (10th Cir. 2002) ("While it is true that defendants could reject alternatives that did not meet the purpose and need of the project . . . they could not define the project so narrowly that it foreclosed a reasonable consideration of alternatives."); Simmons v. Corps of Eng'rs, 120 F.3d 664, 669, 27 ELR 21204 (7th Cir. 1997); City of Carmel-by-the-Sea v. Department of Transp., 123 F.3d 1142, 1155, 27 ELR 21428 (9th Cir. 1997) ("an agency cannot define its objectives in unreasonably narrow terms"); Citizens Against Burlington v. Busey, 290 U.S. App. D.C. 371, 938 F.2d 190, 196 (D.C. Cir. 1991) ("An agency may not define the objectives of its action in terms so unreasonably narrow that only one alternative from among the environmentally benign ones in the agency's power would accomplish the goals of the agency's action, and the EIS would become a foreordained formality."); City of New York v. Department of Transp., 715 F.2d 732, 743, 13 ELR 20823 (2d Cir. 1983) ("An agency will not be permitted to narrow the objective of its action artificially and thereby circumvent the requirement that relevant alternatives be considered.").

81. EA, *supra* note 27, FNSI, at 15.

82. *Id.* FNSI, at 16.

83. The Longhorn FONSI explains that the OPS does not have authority to prescribe the route. *Id*. at 1. But requiring new pipe is a different issue, and even the former could be corrected by political action.

84. 40 C.F.R. §1502.14(c).

85. *See* Natural Resources Defense Council v. Morton, 458 F.2d 827, 836, 2 ELR 20029 (D.C. Cir. 1972) ("The mere fact that an alternative requires legislative implementation does not automatically establish it as beyond the domain of what is required for discussion, particularly since NEPA was intended to provide a basis for consideration and choice by decisionmakers in the legislative as well as the executive branch.").

authority, that issue should be addressed directly, not through the back door of a mitigated FONSI. A full consideration of alternatives, including legislative possibilities, would have the potential to affect pipelines nationwide. According to the FONSI, as of the late 1980s, 41% (46,000 miles) of all interstate pipelines in the United States were constructed of antiquated, low-frequency ERW pipe.[86] A FONSI followed by an EIS may have served as a precedent and encouraged a political dialog as to the appropriate limits to pipeline conversion and reuse projects nationwide,[87] while a FONSI dismisses the danger and reduces the likelihood of any public discussion of this important public health and safety policy issue.

V. Risk of Risk Assessments in Mitigated FONSIs

The Longhorn Pipeline case demonstrates how risk assessment can be used to support a FONSI and avoid serious consideration of alternatives even in the face of considerable uncertainty and a serious risk of harm. "The injury of an increased risk of harm due to an agency's uninformed decision is precisely the type of injury the National Environmental Policy Act was designed to prevent."[88] Implying a degree of certainty that does not exist, the long EA with a mitigated FONSI approach is fundamentally at odds with NEPA. NEPA, as initially conceived, established a process whereby the government was to confront uncertainty in the context of public scrutiny and with the possibility of political pressure. Part of NEPA's very purpose was to address the fact that "[t]here has long been concern that federal agencies fail to take uncertainty into account in their decisions, particularly in the environmental area."[89] Thus, NEPA was designed in substantial part to "prevent agencies from hiding behind this ignorance of a project's true environmental ramifications."[90]

Under the current regulatory regime, there are no standards in place for communicating uncertainty at the EA phase of the NEPA process. During the NEPA Task Force evaluation, many agencies noted that the ability to verify information is often compromised by a lack of internal expertise in specialized areas and a lack of adequate documentation on how the information was developed.[91] The task force has urged the CEQ and federal agencies to begin a review of information quality issues and quality control mechanisms.[92] Reform of the NEPA process should heed the words of William Ruckelshaus, the first EPA Administrator, expressed more than two decades ago:

> We have to expose the assumptions that go into risk assessments. We have to admit our uncertainties and confront the public with the complex nature of decisions about risk.
>
> First, we must insist on risk calculations being expressed as distributions of estimates and not as magic numbers that can be manipulated without regard to what they really mean. We must try to display more realistic estimates about risk to show a range of probabilities. To help us do this we need new tools for quantifying and ordering sources of uncertainty and putting them into perspective.
>
> Second, we must expose to public scrutiny the assumptions that underlie our analysis and management of risk. . . .[93]

Unless there are clear requirements for statistical certainty and disclosure, flimsy FONSI conclusions may undermine any subsequent analysis of alternatives.[94] Risk assessment based on assumptions about the value of future mitigation is easily manipulated. "We should remember that risk assessment data can be like the captured spy: If you torture it long enough, it will tell you anything you want to know."[95] There must be an honest admission of the possibility of significant impacts to force a real consideration of alternatives. In 1992, Secretary of Energy James Watkins praised NEPA in his decision to defer selection of a tritium production technology to the U.S. House of Representatives Armed Services Committee: "Thank God for NEPA because there were so many pressures to make a selection for a technology that might have been forced upon us and that would have been wrong for the country. . . ."[96]

The NEPA Task Force has proposed adaptive management to help resolve uncertainty by compensating for incomplete or unavailable information.[97] There are potential problems with future funding and enforcement authority with this approach. Once the regulatory action that triggered NEPA is completed, the agency may no longer retain juris-

86. EA, *supra* note 27, FNSI, at 6 n.5.

87. Another pipeline conversion followed in Longhorn's footsteps. Advocacy groups remarked: "With 267,000 miles of pipeline in Texas, why would the energy industry in this state want to lay new pipelines if it can get away with using old ones." Iconmedia, *A Kinder Gentler Pipeline? A Report on Kinder Morgan's Planned Conversion of the Rancho Pipeline From Crude Oil to Natural Gas*, http://www.iconmedia.org/rancho/km_report.php (last visited May 15, 2007).

88. Save the Rio Hondo v. Lucero, 102 F.3d 445, 448-49, 27 ELR 20576 (10th Cir. 1996).

89. Sierra Club v. Sigler, 695 F.2d 957, 970, 13 ELR 20210 (5th Cir. 1983).

90. *Id.* at 971.

91. Modernizing NEPA Implementation, *supra* note 20, §1.5.

92. *Id.*

93. William Ruckelshaus, *Risk in a Free Society*, 4 Risk Analysis 157, 161 (1984).

94. In the context of a full EIS, the CEQ rules establish a procedure to deal with incomplete or unavailable information, but it also fails to fully address these issues. The agency is required to make it clear if information is incomplete or unavailable. 40 C.F.R. §1502.22. If the information is "essential to a reasoned choice among alternatives and the overall costs of obtaining it are not exorbitant," the agency is required to include the information in the EIS. *Id.* §1502.22(a) If the information cannot be obtained, the agency must include a statement in the EIS that explains that the information is incomplete or unavailable, its relevance, a summary of existing credible scientific evidence, and the agency's evaluation of such impacts based upon theoretical approaches or research methods generally accepted in the scientific community. *Id.* §1502.22(b).

95. *See* Ruckelshaus, *supra* note 93.

96. Dinah Bear, *Modest Suggestions for Improving Implementation of NEPA*, Nat. Resources J., Fall 2003, at 931, 940.

97. An interagency work group will develop and recommend guidance on integrating the NEPA process with environmental management systems to facilitate the use of adaptive management for the operational and environmental aspects associated with implementing the proposed action. The 2003 NEPA Task Force Report explains:

> An adaptive management approach to the NEPA process helps to address [ ] uncertainty and to manage any associated environmental risk. . . . Agencies could use adaptive management to compensate for incomplete or unavailable information and, when similar projects arise, they can use the monitoring results to more accurately predict and mitigate potentially adverse impacts.

Modernizing NEPA Implementation, *supra* note 20, at 47, 48.

diction to enforce mitigation.[98] For example, once the permit has been issued, there may no longer be an opportunity to add conditions and instructions. Even if these issues are resolved, however, adaptive management remains problematic. Once the project is constructed, alternatives analysis will be severely limited.

Adaptive management may add more to the problem than the solution. With adaptive management, it is even easier to dismiss uncertainty and assume a FONSI with the idea that the mitigation will be adjusted to resolve any significant impacts.[99] The NEPA Task Force report noted that adaptive management would be appropriate for those situations "when there is a high degree of confidence" that the mitigation would effectively compensate and reduce the adverse environmental effects below the significance threshold.[100] There is no further discussion of this critical issue.

Guidelines could perhaps specify when that necessary degree of confidence would be reached. Mitigation, even if subject to adjustment, may fail to bring the impacts to a truly minimal level. The Longhorn EA assumed the success of a future testing and repair program. However, it is not clear that inspection technology has reached the point where it can ensure the safety of an old pipeline. Results of in-line inspection are subject to interpretation and an appropriate response. In 1999, there was a pipeline rupture in Bellingham, Washington, at a location where a problem had previously been detected by an in-line inspection tool but was thought to be insignificant.[101] Two 10-year-old boys and an 18-year-old young man died. Property damages were estimated at $45 million.[102]

Over the years, the NEPA process has been degraded by the mitigated FONSI. The pliability of the risk assessment process has allowed decisionmakers to transform the decision about whether there may be significant impacts into a decision on whether the project should proceed, that is, whether project benefits are worth the risk. In the context of an EA, however, the decision may be made without a full appreciation of the risk involved, without any real consideration of the possibility of preferable alternatives, and without a full assessment of the value of the benefits. The NEPA Task Force specifically proposes to address alternatives and mitigation in the context of the mitigated FONSI.[103] In the face of a FONSI, however, alternatives are unlikely to receive any real consideration, regardless of the time devoted to their discussion. The alternatives discussion simply becomes a post hoc rationalization of a preordained decision. At this point, the project has already been conceived and carries with it a certain momentum that would be very hard to reverse given a FONSI. A mitigated FONSI premised on highly uncertain analysis is fundamentally at odds with NEPA.

VI. Conclusion

Given the state of the environment today, it is time to return to NEPA's precautionary approach, not to institutionalize its demise. The CEQ's former approach was perhaps the best. In its 1986 document, "Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations," the CEQ took the position that "[i]n most cases . . . a lengthy EA indicates that an EIS is needed."[104] Some courts have also come to this conclusion.[105] Although the length of an EA does not necessarily bear on the necessity of an EIS under the current regulatory regime,[106] encouraging the long EA with a mitigated FONSI does not serve the principles of NEPA. With projects as potentially dangerous as the Longhorn Pipeline, it would be extremely hard to justify a FONSI with a short, concise EA. It is not easy to dismiss the potential impacts of a 50-year-old pipeline with a history of leaks and spills that traverses sensitive aquifers and tunnels through neighborhoods and under playgrounds. If the justification necessitates a complicated risk assessment, then perhaps it is a project where alterna-

98.

> The potential for expanded judicial review due to adaptive management actions was another concern brought to the task force's attention. If NEPA-related adaptive management actions can occur at any time throughout a project, does the NEPA process for the proposed action originally reviewed remain active? Similarly, do the activities associated with the adaptive management measures remain subject to litigation? Agencies would prefer that their procedural responsibilities for all proposed actions reviewed during the NEPA process not continue indefinitely. The task force believes it is possible to clearly demarcate the procedural responsibilities of NEPA, and subsequent adaptive management actions. This approach is described in the environmental management system (EMS) discussion later in this chapter. However, the issue requires additional study by the proposed work group, which should receive input from legal counsel."

Id. at 48-49.

99. The task force acknowledged that there is a concern that federal agencies might use adaptive management to avoid careful consideration of the potential impacts of the proposed action. *Id*. at 48.

100. *Id*. at 70.

101. National Transportation Safety Board, Pipeline Rupture and Subsequent Fire in Bellingham, Washington, June 10, 1999, at 30 (2002) (Pipeline Accident Report NTSB/PAR-02/02).

102. *Id*. at 4.

103.

> The proposed guidance currently under development through the interagency work groups will address: the requirements and contents of EA's, the appropriate range in size of EA's based on the magnitude and complexity of environmental issues, public concerns, and project scope; public involvement; alternatives and mitigation, particularly when the EA concludes with a mitigated FONSI.

CEQ Task Force, Recommendations to Modernize NEPA Implementation Interagency Work Groups 13 (2005), *available at* http://ceq.eh.doe.gov/ntf/NTF_Agency_Roles_in_Implementation.pdf.

104. 46 Fed. Reg. 18026, 18037 (Question 36b) (Mar. 23, 1981).

105. *See* Curry v. U.S. Forest Serv., 988 F. Supp. 541, 551-52 (W.D. Pa. 1997) (EA with 49 pages and a 349-page appendix undermined decision not to prepare EIS for proposed timber sales on 5,000 acres which would involve logging, herbicide use, fencing, and road construction); National Audubon Soc'y v. Hoffman, 917 F. Supp. 280, 287 (D. Vt. 1995), *aff'd in relevant part*, 132 F.3d 7, 28 ELR 20318 (2d Cir. 1997) (magnitude of proposals set forth in more than 65 pages long environmental assessment undermined agency's contention that proposal to clear-cut 300 acres, with an admitted intrusion into bear and bird habitat, was not significant).

106. Tomac v. Norton, 433 F.3d 852, 36 ELR 20007 (D.C. Cir. 2006) (the length of an EA has no bearing on the necessity of an EIS); *see also* Sierra Club v. Marsh, 769 F.2d 868, 874, 15 ELR 20911 (1st Cir. 1985) (commenting that length of environmental assessment does not raise presumption one way or the other); Hoosier Envtl. Council v. Corps of Eng'rs, 105 F. Supp. 2d 953, 998, 30 ELR 20786 (S.D. Ind. 2000), (rejecting argument that the length of the EA demonstrated need for EIS); Heartwood, Inc. v. U.S. Forest Serv., 380 F.3d 428, 434, 34 ELR 20083 (8th Cir. 2004) ("What ultimately determines whether an EIS rather than an EA is required is the scope of the project itself, not the length of the agency's report.").

tives should be fully considered. The alternatives analysis, described in the regulations as the heart of NEPA, is what makes the law work. In the words of former CEQ General Counsel Nicholas C. Yost[107]: "NEPA is now the model for similar laws in half our states and in more than 80 countries . . . . EPA's implementation always can and should be improved, but it would be a shame to undercut this successful law in the land of its birth."[108]

107. Yost drafted the CEQ regulations. He served as General Counsel of the CEQ from 1977-1981.

108. Nicholas C. Yost, *Don't Undermine But Streamline Implementation*, ENVTL. F., May/June 2005, at 41.