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Alternatives, Adoption, and Administrative Hearings: Keys to Performing Environmental Reviews for Yucca Mountain

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For the past fifty years, spent nuclear fuel has been accumulating at power reactor sites across the country, but very little progress has been made in finding a way to dispose of it. However, with the 2004 presidential election well behind us—and the avowed anti-Yucca Mountain candidate defeated nationally (and in Nevada)—there might finally be some movement in Department of Energy’s (DOE’s) efforts to construct and operate a permanent geologic repository. Indeed, DOE stated that it would submit its application for a license to construct and operate a repository in late-2005 or early-2006.

This article examines several aspects of that license application related to the obligations of both DOE and the Nuclear Regulatory Commission (NRC) under the National Environmental Policy Act (NEPA). More specifically, it addresses the timing and venue for challenges to DOE’s Final Environmental Impact Statement (FEIS) used to support its application for construction authorization of a geologic repository. This article focuses on judicial and administrative reviews in the context of FEIS adoption by NRC. Finally, this article discusses the NRC staff's review of DOE’s FEIS and the extent to which substantive challenges to DOE’s FEIS may be pursued in the course of NRC administrative hearings.
I. INTRODUCTION

In 1983, Congress passed the Nuclear Waste Policy Act (NWPA), which acknowledged federal responsibility to provide for permanent disposal of the nation’s spent nuclear fuel and high-level radioactive waste.\(^1\) The NWPA did not select a site; rather, it initiated the process by selecting sites for study as potential geologic repositories.\(^2\) Accordingly, DOE identified nine candidate sites, and the Secretary of Energy nominated five of the nine for further characterization: Yucca Mountain, Nevada; Deaf Smith County, Texas; the Hanford Reservation, Washington; Richton Dome, Mississippi; and Davis Canyon, Utah.\(^3\) After issuing environmental assessments for those five sites, DOE recommended and the President approved three of the five as candidates for a permanent repository: Yucca Mountain, Nevada; Deaf Smith County, Texas; and the Hanford Reservation, Washington.\(^4\) In 1987, Congress made substantial changes to the NWPA, including identifying one of the three candidate sites, Yucca Mountain, as the only site to be further characterized as a potential repository location.\(^5\)

In February 2002, the Secretary of Energy formally recommended the Yucca Mountain site to the President for approval, along with the DOE’s FEIS.\(^6\) The following day, the President recommended the Yucca Mountain site to Congress pursuant to section 114(a) of the NWPA.\(^7\) The State of Nevada submitted a notice of disapproval to Congress within sixty days of the President’s recommendation.\(^8\) On July 9, 2002, the U.S. Senate cast the final legislative vote, overriding the notice of disapproval; and on July 23, 2002, the President signed a joint resolution designating

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2. Id. § 10132(b).
3. DOE, FINAL ENVIRONMENTAL IMPACT STATEMENT FOR A GEOLOGIC REPOSITORY FOR THE DISPOSAL OF SPENT NUCLEAR FUEL AND HIGH-LEVEL RADIOACTIVE WASTE AT YUCCA MOUNTAIN, NYE COUNTY, NEVADA 1-9 (2002) [hereinafter DOE FEIS].
4. Id.
7. 42 U.S.C. § 10134(a); Letter to Congressional Leaders Recommending the Yucca Mountain Site for the Disposal of Spent Nuclear Fuel and Nuclear Waste, 1 PUB. PAPERS 234 (Feb. 15, 2002).
Yucca Mountain as the site for a geologic repository. The next step is for the Secretary of Energy to submit an application for construction authorization to the NRC, accompanied by DOE's FEIS. The following sections describe how the NWPA has limited the alternatives to be considered in the DOE FEIS and discusses how the NRC will implement its NEPA responsibilities under the NWPA.

II. NEPA AND NUCLEAR WASTE: FEIS ALTERNATIVES

A. Defining DOE's Duties

While NEPA would typically require consideration of both alternative methods of disposal of spent nuclear fuel and alternative locations for disposal of spent nuclear fuel, the NWPA restricts the scope of alternatives in a repository environmental impact statement. Specifically, with regard to NEPA, "compliance with the procedures and requirements of [the NWPA] shall be deemed adequate consideration of the need for a repository, the time of the initial availability of a repository, and all alternatives to the isolation of high-level radioactive waste and spent nuclear fuel in a repository." As to DOE-specific NEPA obligations, the Secretary of Energy "need not consider alternative sites to the Yucca Mountain site for the repository to be developed ...." Further, the Commission will adopt DOE's FEIS "to the extent practicable," and "such adoption shall ... satisfy the responsibilities of the Commission under [NEPA]." The NWPA goes on to limit the responsibilities of DOE and the Commission under NEPA by precluding consideration of "the need for a repository, the time of initial availability of a repository, alternate sites to the Yucca Mountain site, or nongeologic alternatives to such site."

12. Id. § 4332.
14. Id. § 10134(f)(2).
15. Id. § 10134(f)(3).
16. Id. § 10134(f)(4).
17. Id. § 10134(f)(6). At first blush, this language appears to suggest that the NRC is required to issue its own FEIS. However, the language in question appears to have been designed as an editorial measure, lacking substantive effect. See NEPA Review Procedures for Geologic Repositories for High-Level Waste, 54 Fed. Reg. 27,864, 27,867 (July 3, 1989). The legislative history demonstrates that no important change was being made in NRC's NEPA responsibilities, which under the 1982 stat-
B. Why the Limitations?

The restrictions on NEPA analyses and consideration of alternatives fall into two categories: alternative methods of disposal and alternative sites for disposal. The limitations on consideration of alternative disposal technologies were first imposed in the 1982 Act, while the 1987 Amendments further limited consideration of alternative sites to a single site: Yucca Mountain. Taken together, the scope of a NEPA alternatives analysis in a repository FEIS is considerably limited, but portions are nevertheless left intact.

First, the NWPA of 1982 limited consideration of disposal alternatives of spent nuclear fuel to a geologic repository and thus ended speculation as to the fate of spent nuclear fuel from the nation’s reactor fleet. Previously, the nation had flirted with fuel reprocessing and had also examined various technologies for management and disposal of spent nuclear fuel, including mined geologic disposal, very deep hole disposal, disposal in a mined cavity that resulted from rock melting, island-based geologic disposal, sub-seabed disposal, ice sheet disposal, well injection disposal, transmutation, and space disposal. But, in the NWPA of 1982, Congress announced geologic disposal as the nation’s method of choice for spent fuel disposal and began a process for selecting sites for technical study as potential geologic repository locations. To streamline the NEPA process and to take into account this legislative selection of a preferred disposal method, the 1982 Act limited NEPA by excluding consideration of alternative methods of disposal other than a geologic repository.
Next, the 1987 Amendments to the NWPA further restricted the scope of NEPA alternatives for the geologic repository program by limiting consideration of alternative sites for a repository to a single site, Yucca Mountain.\textsuperscript{24} The amended NWPA effectively ended the process of site characterization that had begun with five potential repository sites in three different geologic media and directed the Secretary of Energy to study the Yucca Mountain site and recommend whether the President should approve the site for development as a repository to the exclusion of other sites.\textsuperscript{25} To address the NEPA implications stemming from the choice of Yucca Mountain as the sole candidate for a geologic repository, Congress made two amendments to the provisions limiting the scope of NEPA review. Those amendments specify that an FEIS for the repository "need not consider alternate sites to the Yucca Mountain site . . . ."\textsuperscript{26} Thus, Congress effectively precluded DOE's FEIS from considering development of an alternative repository at any of the four other sites.

The NRC regulations implementing the NEPA limitations of the 1987 Amendments also demonstrate the Commission's contemporaneous view of the NWPA and NEPA. To give effect to the limitations on the NEPA process imposed by the NWPA, those regulations prescribe the environmental information that DOE is required to submit to the NRC as an applicant for a license amendment or construction authorization.\textsuperscript{27} "In lieu of an environmental report, [DOE] . . . shall submit . . . any final environmental impact statement which the Department prepares in connection with any geologic repository . . . ."\textsuperscript{28} In addition, the FEIS "shall include, among the alternatives under consideration, denial of a license or construction authorization by the Commission."\textsuperscript{29} This requirement is consistent with the Council on Environmental Quality's (CEQ's) NEPA regulations requiring agencies to consider the "alternative of no action" as part of any environmental impact statement.\textsuperscript{30} Moreover, the NRC's "no-action alter-

\textsuperscript{24} Id. § 10172.
\textsuperscript{25} 42 U.S.C. §§ 10132-10134.
\textsuperscript{26} Id. § 10134(f)(3); see also id. § 10134(f)(6).
\textsuperscript{27} NEPA Review Procedures for Geologic Repositories for High-Level Waste, 54 Fed. Reg. 27,867 (July 3, 1989). It is worth noting that, at this point, DOE did not object to the proposed NRC regulations that required the repository FEIS to consider denial of a construction authorization or license as an alternative. See id. at 27,867-27,868.
\textsuperscript{28} 10 C.F.R. § 51.67(a) (2005).
\textsuperscript{29} Id.
native" requirement is consistent with the NWPA because the Commission requires a discussion of denial of the application to license Yucca Mountain but not a discussion of alternative disposal methods or sites.

Thus, the FEIS that DOE submits to support its license application is considerably limited relative to the general obligations that NEPA imposes on most federal agency actions. The next section will examine how the NWPA affects the NRC environmental review process and satisfies NRC's NEPA obligations.

III. NEPA AND THE NRC: FEIS ADOPTION

A. The Commission's Regulations

The NWPA imposes some specific requirements for the NRC environmental review process aside from the limitations on NEPA. Section 114(f)(4) requires the NRC to "[adopt] to the extent practicable" DOE's repository FEIS. Further, "[t]o the extent such statement is adopted by the Commission, such adoption shall be deemed to also satisfy the responsibilities of the Commission under [NEPA] and no further consideration shall be required . . . ."32

In 1989, the Commission promulgated regulations to implement the NWPA's NEPA provisions with respect to a licensing proceeding for the proposed repository, in part to guide the determination of whether adoption of DOE's FEIS is "practicable" within the meaning of section 114(f)(4) of the NWPA.33 Upon receipt of DOE's license application for the proposed geologic repository, "the appropriate NRC staff director will include in the notice of docketing required to be published by § 2.101(f)(8) of this chapter a statement of Commission intention to adopt the [FEIS] to the extent practicable."34 Further, the final rules dictated that "upon the publication of the notice of hearing in the Federal Register" for the proceeding, "the NRC staff shall . . . present its position on whether it is practicable to adopt, without further supplementation, the [FEIS] (including any supplement thereto) prepared by the Secretary of Energy."35 However, the most important part of

32. Id.
34. 10 C.F.R. § 51.26(c).
35. Id. § 51.109(a)(1).
the final rule was the Commission standard governing the determination of "practicability." It states that:

The presiding officer will find that it is practicable to adopt any environmental impact statement prepared by the Secretary of Energy in connection with a geologic repository proposed to be constructed under Title I of the [NWPA], unless:

1. (i) The action proposed to be taken by the Commission differs from the action proposed in the license application submitted by the Secretary of Energy; and (ii) The difference may significantly affect the quality of the human environment; or

2. Significant and substantial new information or new considerations render such environmental impact statement inadequate.\(^{36}\)

This standard will guide the staff in formulating its position on whether it is practicable to adopt the FEIS.\(^{37}\) Ultimately, the presiding officer in the proceeding will find that it is practicable to adopt DOE's FEIS unless it is deficient under the criteria specified in paragraphs (c)(1) or (2).\(^{38}\)

Although the Commission's regulations may seem fairly straightforward, they are complicated by some of the underlying assumptions in the rule. The following paragraphs discuss the tension among these issues: the Commission's NEPA responsibilities, the appropriate venue for review of the adequacy of the FEIS,

\(^{36}\)Id. § 51.109(c).

\(^{37}\)Id. § 51.109(a)(1).

\(^{38}\)This reflects the view taken by the Commission in the course of its 1989 rulemaking that an independent analysis of DOE's FEIS is not necessary for NRC adoption of DOE's FEIS so long as the NRC's standard for adoption is met. See NEPA Review Procedures for Geologic Repositories for High-Level Waste, 53 Fed. Reg. 16,131, 16,138 (May 5, 1988). This view is contrary to the CEQ's regulations on FEIS adoption, which provide that an agency adopting another agency's FEIS must independently review the FEIS to ascertain that it satisfies NEPA. See 40 C.F.R. § 1506.3(b) (2005); Guidance Regarding NEPA Regulations, 48 Fed. Reg. 34,263, 34,265 (July 28, 1983). Executive Order 11,991, which is the source of CEQ's authority to promulgate regulations, states that federal agencies must comply with CEQ regulations, "except where such compliance would be inconsistent with statutory requirements." Exec. Order No. 11,991, 42 Fed. Reg. 26,967 (May 24, 1977). This language may be interpreted as exempting an agency from full compliance whenever an implicit or an explicit conflict with its statutory mission exists. Here, the Commission departed from the CEQ's position because it believed that Congress had intentionally restricted the NRC's normal NEPA duties in the NWPA, in which the adequacy of the repository FEIS is to be determined by Congress and the courts outside of the NRC's licensing process. NEPA Review Procedures for Geologic Repositories for High-Level Waste, 53 Fed. Reg. at 16,138.
and the views of the United States Court of Appeals for the District of Columbia (D.C. Circuit) on judicial review of the DOE’s FEIS, as expressed in the case of Nuclear Energy Institute, Inc. v. EPA. This article also charts a possible solution that would reconcile the NWPA, NRC regulations on adoption, and Nuclear Energy Institute, Inc. The suggested solution would achieve the Commission’s goals of early judicial review of the adequacy of the FEIS, focus NRC administrative proceedings on radiological safety, and ensure fairness by granting an opportunity for potential parties to seek review, in some forum, of the FEIS.

B. Conflicting Views on Adoption

Implementation of the adoption process is complicated by the lack of prior judicial review of the adequacy of the DOE’s FEIS. More specifically, one presumption in the NRC’s rulemaking on practicability is that the FEIS would be subject to prior judicial and congressional scrutiny before being used to support a license application for construction authorization. The Commission has taken a consistent view of its responsibilities since at least 1988. In its discussion of the proposed rules on practicability, the Commission opined that:

In the light of the policies and procedures established by the Nuclear Waste Policy Act, the Commission regards the scope of its NEPA review to be narrowly constrained, with those issues that were ripe for consideration after issuance of DOE’s [F]EIS being excluded from independent examination, for purposes of NEPA, in the course of NRC licensing proceedings.

The Commission explicitly declared that an entirely independent review of the adequacy of DOE’s FEIS prior to adoption was not necessary because “there had been an opportunity for judicial review.” Further, the Commission reasoned that total deference to the balancing judgments in DOE’s FEIS would not “be an abdication of the Commission’s NEPA authority” because there was a special scheme in the NWPA for consideration of environmental impacts by interested parties and Congress, and there would be a

42. Id. at 16,138.
prior judicial determination that the FEIS was adequate. In short, based on opportunities for judicial and congressional review in the NWPA, the Commission decided that it could safely presume the adequacy of DOE's FEIS. Based on that presumption, the Commissions concluded that it needed to focus only on "[s]ignificant and substantial new information or new considerations [that might] render such environmental impact statement inadequate." In the statements of consideration accompanying the final rule, the Commission elaborated on the special statutory provisions governing the NRC's NEPA responsibilities. First, "the Commission [emphasized] that its role under NWPA is oriented toward health and safety issues and that, in general, nonradiological environmental issues are intended to be resolved in advance of NRC licensing decisions through the actions of the [DOE], subject to congressional and judicial review . . . ." The Commission also addressed comments that cautioned the NRC not to rely on a prior court ruling that had upheld the adequacy of DOE's FEIS. The Commission responded:

In fact, such reliance is not essential. It is our expectation that, under NWPA, a petition for review of the [F]EIS would need to have been filed roughly contemporaneously with DOE's submission of a license application to NRC, and that judgment might have been entered within the three years envisaged for Commission licensing. Whether or not this proves to be the case is not controlling, for the standard for adoption does not rest upon col-

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43. Id.

44. 10 C.F.R. § 51.109(c)(2) (2005). This standard is substantially the same as the applicable CEQ regulations that specify when agencies must prepare a supplemental FEIS. See 40 C.F.R. § 1502.9(c)(1) (2005). Courts have interpreted these regulations as requiring supplementation where "new information" shows "that the remaining action will 'affect[ ] the quality of the human environment' in a significant manner or to a significant extent not already considered." Marsh v. Or. Nat. Resources Council, 490 U.S. 360, 374 (1989) (citations omitted). "[T]he new circumstance must present a seriously different picture of the environmental impact of the proposed project from what was previously envisioned." Sierra Club v. Froehlke, 816 F.2d 205, 210 (5th Cir. 1987).


46. At least in part, the comment recognized that any challenge to the FEIS in federal court would not be complete at the time of the license application submission because the NWPA required DOE to submit the application within ninety days of the site designation taking effect. 42 U.S.C. § 10134(b) (2000). Although DOE did not meet this deadline, the Commission's response nevertheless addresses the implications of federal court proceedings.
lateral estoppel principles. Similarly, we find it beside the point to speculate regarding the possibility that a reviewing court might delay its decision on the adequacy until it sees the NRC conclusions in the licensing proceeding. Such delay would not stand in the way of the Commission's taking final action. 47

In that statement, the Commission acknowledges that judicial review of the FEIS could occur prior to the license application or could take place while the application was under NRC review, and explains that, in any event, the Commission would not consider the adequacy of the FEIS in its administrative process. The presumption of judicial review would apply no matter the posture because there would be an opportunity for judicial review. Thus, the Commission chose a clear path forward: presume the adequacy of the FEIS at the time of submission and limit the scope of NRC's NEPA adoption review to new and significant information while, at the same time, recognizing that parallel proceedings in federal court may be reviewing the adequacy of DOE's FEIS.

However, in Nuclear Energy Institute, Inc., v. EPA, the D.C. Circuit appeared to expand the issues to be considered in NRC administrative hearings beyond those contemplated in the NRC's regulations. The court held that Nevada would not feel the effect of the FEIS in a concrete way until it was used to support some other DOE or NRC final decision, and thus Nevada's substantive claims against the FEIS would not be ripe until the FEIS is used to support a concrete and final decision of DOE or NRC. 48 More ominously, however, the court went on to speculate about the extent to which substantive claims on the FEIS could be addressed in NRC administrative hearings. The court opined that substantive claims against the FEIS "would certainly raise 'new considerations' with regard to any decision to adopt the FEIS," and therefore "Nevada will not be foreclosed from raising substantive claims against the FEIS in administrative proceedings . . . ." 49

48. See Nuclear Energy Inst., Inc. v. EPA, 373 F.3d 1251, 1312 (D.C. Cir. 2004) ("We agree with DOE that any challenge to the FEIS, insofar as it may be adopted in support of a future NRC construction-authorization or licensing decision or used by DOE in support of a future transportation-alternative selection, is not yet ripe for review.").
49. Id. at 1314. The court's conclusion was buttressed by "the assurances of counsel for both NRC and DOE at oral argument that Nevada will be permitted to raise its substantive challenges to the FEIS in any NRC proceeding to decide whether to adopt the FEIS and in any DOE proceeding to select a transportation alternative." Id. at
Thus, the court’s decision created a tension between the Commission’s view of the scope of its NEPA review responsibilities under the NWPA (as embodied in NRC regulations on adoption) and judicial and administrative review of final agency actions (as described by the D.C. Circuit). The Commission took the view that its focus should be on the “delta” between DOE’s FEIS and new and significant information not already considered, and that substantive challenges to the adequacy of the “base” FEIS should be taken up in the federal courts. Consequently, the Commission’s regulations on adoption of the repository FEIS do not contain any regulatory standards or processes for assessing the adequacy of DOE’s “base” FEIS. On the other hand, the court seems to suggest that all FEIS-related issues (including the adequacy of both the “base” and “delta” FEIS) are open to substantive review in NRC administrative hearings. Thus, the NRC staff is faced with conflicting judicial and regulatory mandates, without a guiding review standard.

C. Resolving the Conflict

1. Basics of the Resolution

At the outset, the NRC staff’s position should, at a minimum, ensure consistency between the statutory provisions of the NWPA, the Commission’s regulations, and the holding of the D.C. Circuit in Nuclear Energy Institute, Inc. In addition, the staff perspective should reflect congressional efforts (via the NWPA) to avoid dupli-

1313 (citing Oral Argument Tr. at 149-52, 169-71). However, this issue was not briefed by the parties, nor was it discussed in detail at oral argument.

50. The Commission does not generally review an FEIS for adequacy, because the NRC would typically prepare and be responsible for producing a document that satisfies NEPA in the first instance. NRC has developed guidance on preparing an FEIS. See, e.g., NRC, Final Report: Environmental Review Guidance for Licensing Actions Associated with NMSS Programs, NUREG-1748 (2003). Because the goal of NEPA is to identify impacts and inform an agency decision rather than produce a particular result, see 42 U.S.C. §§ 4332-4334 (2000), DOE’s FEIS could be adequate to fulfill the requirements of NEPA even if the NRC, looking at the same set of environmental impacts, would choose a different proposed action. As a result, this guidance would not be wholly applicable to a review of the adequacy of another agency’s FEIS because the weighing and balancing of socio-economic costs and benefits (or the determination of significance of environmental impacts and mitigation) have already been made by DOE. However, the guidance could be helpful for some aspects of an adequacy review such as describing the form and content of the FEIS, identifying the scope of review of environmental impacts, and determining whether the FEIS adequately addresses public comments. Nevertheless, neither the adoption regulations nor the staff guidance provide a definitive regulatory standard for determining the adequacy of another agency’s FEIS.
cation of NEPA reviews, the Commission’s conclusion that its environmental reviews should focus on radiological safety, and the public’s right to meaningful review of agency decisions. Taking these factors into account, the best solution is to consider submission of DOE’s license application and accompanying FEIS a “final agency action” triggering an opportunity for review of DOE’s FEIS in the courts of appeals and limiting NEPA considerations in NRC proceedings to the criteria in 10 C.F.R. § 51.109(c). As a result, review of the adequacy of the “base” FEIS and the “delta” FEIS would proceed on parallel tracks in a court of appeals and NRC administrative proceedings, respectively. This interpretation of the statute and regulation avoids duplicate adjudication of the “base” FEIS and the adoption process and delivers substantial practical benefits.

2. Judicial Review

Section 119 of the NWPA does not itself provide for judicial review. Instead, section 119 merely confers subject matter jurisdiction on the courts of appeals. Thus, any cause of action challenging the adequacy of the FEIS must be brought under the Administrative Procedures Act (APA), which authorizes suits challenging only final agency actions for which there is no remedy in court. Thus, the question arises whether submission of the license application is a “final agency action” that would trigger an opportunity for judicial review. An analysis of this issue, and the related issues of ripeness and exhaustion, follows.

a. Final Agency Action

The APA authorizes judicial review of final agency actions for which there is no other adequate remedy at law. For an agency action to be final, generally two conditions must be satisfied: “First, the action must mark the ‘consummation’ of the agency’s decisionmaking process . . . . And second, the action must be one by which ‘rights or obligations have been determined,’ or from which legal obligations flow.”

52. Id. at § 10139(a).
55. Id.
To determine whether an agency action is final, courts look to whether the agency "has arrived at a definitive position on the issue" in question and whether its impact is "sufficiently direct and immediate." Also, an agency action is not final if it is "only the ruling of a subordinate official... or tentative." The phrase "final action" does not turn on the word "action," "which is meant to cover comprehensively every manner in which an agency may exercise its power." Rather, it turns on the word "final," which requires that the action under review "mark the consummation of the agency's decisionmaking process." For the reasons discussed below, the DOE license application constitutes a final agency action for which there is no adequate remedy at law.

According to DOE, the license application is a "formal document an applicant submits to the NRC to present proposed activities" that "must be signed by the Secretary of Energy or [an] authorized representative." The application consists of general information and a Safety Analysis Report (SAR) and must be accompanied by an FEIS. The application reflects the DOE perspective on pre- and post-closure safety analyses, including structures, systems, and components important to safety; design features for preventing and minimizing safety hazards; and information on how natural and engineered barriers will work together to contain and isolate waste. The application also describes programmatic activities such as quality assurance programs and recordkeeping obligations. In short, the license application is a single, comprehensive, and concrete document that reflects DOE's balancing among competing policy, environmental, and safety concerns. As such, the Secretary of Energy's signature on the license application consummates DOE's decision to seek permission to build and operate a repository of a certain type at the Yucca Mountain site.

59. Id. at 151.
61. Id. (quoting Bennett v. Spear, 520 U.S. 154, 177-78).
63. 10 C.F.R. § 63.22 (2005).
64. License Application Fact Sheet, supra note 62.
65. Id.
66. Id.
The license application also implicates a variety of rights and obligations and directly initiates legal consequences. First, as discussed above, the application satisfies DOE's statutory responsibility to submit a license application. Submitting the application and accompanying FEIS obligates the Commission to submit annual reports to Congress and triggers the start of the NRC's three-year deadline (with a four-year period possible, provided that the NRC fulfills certain reporting requirements) to issue a licensing decision on the application. Accordingly, submitting the license application and FEIS creates legal duties and compels nondiscretionary actions by the Secretary of Energy and by the Commission. Moreover, if the NRC determines that the tendered application is complete and acceptable for docketing, the Commission must present a position on adoption. The docketing of the license application also commences a thirty-day period for submitting contentions (and facts supporting standing), which, if accepted by the licensing board, would confer party status on the host state, affected units of local government, or other interested entities. Thus, the Secretary of Energy's decision directly determines DOE and NRC's legal obligations and leads to an immediate impact on potential intervenors.

The legal conclusion that the license application and FEIS submission constitute a final agency action is valid despite the facts that DOE's license application is subject to change through the NRC administrative process and construction will not begin until the NRC has made a licensing decision. First, the "final agency action" conclusion must focus on the DOE application rather than NRC's administrative process. An extensive body of case law addresses similar situations involving multiple federal agencies, and each case finds a final agency action even where the proposed action was subject to modification. For example, in

68. Id. § 10134(c), (d).
69. See generally Corus Group PLC v. Int'l Trade Comm'n, 352 F.3d 1351, 1358-59 (Fed. Cir. 2003) (finding "legal consequences" where the agency action triggered nondiscretionary activities). Although it is unlikely that anyone would bring a legal challenge to force the NRC to make a decision so long as the administrative process was underway, there could clearly be an APA claim to compel "unreasonably delayed" agency action if the administrative process appeared inexplicably stalled. 5 U.S.C. § 706(1) (2000).
71. Id. § 51.109(a)(2).
72. See e.g., Bennett v. Spear, 520 U.S. 154, 177-78 (1997) (involving one agency's Biological Opinion and another agency's Biological Assessment); Strahan v. Linnon,
the context of the Endangered Species Act (ESA), if an agency
determines in its Biological Assessment (BA) that its action has
the potential to affect listed species, that agency (the action
agency) must consult with the Fish & Wildlife Service (the Ser-
vice), which must provide a Biological Opinion (BiOp) explaining
how the proposed action will affect the species or its habitat. If
the Service concludes that the action will result in adverse habitat
modification, the BiOp must outline "reasonable and prudent al-
ternatives" that the Service believes will avoid that conse-
quence. After the Service issues the BiOp, the action agency
must decide whether to revisit its BA and adopt the reasonable
and prudent alternatives; however, the action agency is not legally
obligated to do so.

In Bennett v. Spear, the Supreme Court held that the Ser-
vice's BiOp constituted a final agency action because it altered the
legal regime to which the action agency was subject and thus ef-
effectively authorized it to take action if it complied with the pre-
scribed conditions—even though the action agency was free to
ignore the Service's conclusion. Similarly, DOE's application
does not obligate the NRC to make a particular decision on the
license application, but it does alter the legal regime to which the
NRC is subject, because the license application launches the NRC
administrative process. Like the BiOp in the ESA context, DOE's
license application is no less final just because the NRC may or
may not require changes to the application prior to making its de-
cision. Instead, the DOE application and FEIS constitute DOE's
final decision (like the BiOp), while the NRC's licensing decision

967 F. Supp. 581, 595 (D. Mass. 1997) (same); Southwest Center for Biological Diver-
sity v. Glickman, 932 F. Supp. 1189, 1194 (D. Ariz. 1996) (same); see also Sierra Club
v. U.S. Army Corps of Engineers, 295 F.3d 1209, 1219 (11th Cir. 2002) (considering
the overlap between a Biological Assessment produced pursuant to the Endangered
Species Act and an EIS prepared under NEPA).

74. Id. § 1536(b)(3)(A).
75. Id.
76. Although no court has explicitly addressed whether a BA constitutes a "final
agency action," several courts have implicitly assumed that BAs were final agency
that the Coast Guard's Biological Assessment was not "arbitrary, capricious, an abuse
of discretion, or otherwise not in accordance with law," the standard of review for final
agency actions); Sw. Ctr. for Biological Diversity v. Glickman, 932 F. Supp. 1189, 1194
(D. Ariz. 1996). Further, a BA may often constitute a final agency action, although it
will not be ripe for review until there is a legal consequence. See infra Part III.C.2.c.
will represent its final decision (like the BA). Though related, the two decisions are separate and distinct final agency actions.

In addition, the license application and FEIS submission constitute a final agency action because once the site designation takes effect, section 114 of the NWPA requires DOE to submit an application for a construction authorization.\(^78\) Thus, the application is nondiscretionary and fulfills DOE's statutory responsibility.\(^79\) More importantly, section 114 lacks language designating the filing of the application as a "preliminary activity," language which would render the recommendation of candidate sites and the site characterization non-final for APA judicial review purposes.\(^80\) Accordingly, by negative implication, Congress did not preclude judicial review of the Secretary of Energy's submission as a non-final action.

In conclusion, there would be no point in submitting the license application if DOE had not determined that, in its view, the Yucca Mountain site and certain facility attributes in the application would meet the project goals. Thus, the Secretary of Energy's decision to submit a discrete set of documents to the NRC (i.e., the license application and supporting FEIS) constitutes a final agency action because it signals the conclusion of DOE efforts to craft an application that satisfies NRC and EPA regulatory standards as well as DOE's determination that the FEIS encompasses the impacts projected by the application.

b. No Adequate Remedy in Court

In addition to the requirement that an agency action be final, the APA requires that there be no other available remedy to review a final agency action.\(^81\) It could be argued that DOE's application—the license application, including the SAR and general information—would not be immediately reviewable under the APA, because the NRC's administrative process provides an adequate alternative to judicial review. Certainly, judicial review of the NRC's decision on radiological and safety issues or adoption

\(^78\) 42 U.S.C. § 10134(b) (2000).
\(^79\) It is now undisputed that an agency's failure to perform a statutorily required duty constitutes a final agency action under the APA. See, e.g., Webster v. Doe, 486 U.S. 592, 599 (1988). Thus, it is nearly axiomatic that an action that completes a substantive (as opposed to procedural) statutory duty is itself a "final agency action."

\(^80\) See Nevada v. Watkins, 939 F.2d 710, 716 (9th Cir. 1991) (holding that Congress, in defining certain activities as "preliminary," precluded judicial review); see also 42 U.S.C. §§ 10132(d), 10133(d) (2000).

would be appropriate after the NRC makes a final licensing decision. However, the administrative process does not afford potential parties with an adequate alternative remedy on the adequacy of the “base” FEIS because, to the extent the NRC adopts the FEIS, the NRC decision “shall be deemed to also satisfy the responsibilities of the Commission under [NEPA].” Further, NRC regulations specifically limit the circumstances in which the NRC would refuse to adopt the FEIS. Because those regulations do not provide for substantive challenges to the adequacy of the FEIS (i.e., they only allow challenges to NRC’s adoption determination), and because the NRC’s reasonable interpretation of its own adoption regulations is entitled to substantial deference upon judicial review, Nevada and other parties would have no avenue for meaningful judicial review of the overall adequacy of the “base” FEIS.

Additionally, any administrative review would necessarily be limited because the Commission has directed that the presiding officer review adoption contentions under the “motion to reopen” standard, a standard that requires a showing that a cure of a purported inadequacy would lead to a materially different result before administrative review is granted. This standard, which looks to the substantive decision, is more difficult to satisfy than the “arbitrary and capricious” standard in the APA, which allows review of mere procedural defects.

The view that the NRC’s administrative process fails to lead to an adequate remedy in a reviewing court is buttressed by the few cases discussing what constitutes an “adequate remedy in court” under the APA. In Bowen v. Massachusetts, the Supreme Court described section 704 of the APA as a codification of the exhaustion requirement for the purpose of avoiding duplication of existing procedures for review of agency action. However, the Court made clear that the APA’s “‘generous review provisions’ must be given ‘hospitable’ interpretation.” Indeed, many courts recognize an exception to the exhaustion requirement under the

87. Id. at 904 (quoting Abbott Labs. v. Gardner, 387 U.S. 136, 140-41 (1967)).
APA when an agency lacks the power to grant effective relief, making exhaustion a futile endeavor. This exception applies to the NRC's review of DOE's license application because the NRC licensing board does not have the equitable powers to require DOE to revise or update its FEIS because the NRC, not DOE, is the action agency in the administrative proceeding. Of course, the licensing board could order the NRC to supplement or modify the FEIS for purposes of making the NRC decision, but the board does not have the equitable powers to order DOE to remedy any perceived inadequacies in DOE's FEIS (i.e., the DOE decision).

Another exception to the exhaustion requirement exists when the agency has otherwise predetermined the issue before it. This exception also applies because, here, the NRC regulations are premised on the adequacy of the "base" FEIS (or that such adequacy will be determined outside the NRC administrative process), and thus application of NRC regulations may not remedy substantive inadequacies in the FEIS. For these reasons, there is no adequate remedy beyond judicial review of the FEIS.

c. Ripeness

In light of DOE's past legal position with regard to judicial review of activities related to Yucca Mountain, it is probable that DOE will argue that a challenge to the FEIS at the time the license application is submitted is not yet ripe. However, under the three factors relevant under the doctrine of ripeness—(1) whether delayed review would cause hardship to the plaintiffs; (2) whether judicial intervention would inappropriately interfere with further administrative action; and (3) whether the courts would benefit from further factual development of the issues presented,—the adequacy of the "base" FEIS would be ripe at the time the license application is submitted by DOE to the NRC.

89. Id. at 148.
90. In its brief to the D.C. Circuit arguing that Nevada's challenge to the FEIS was not yet ripe, DOE noted that "review of the FEIS would be only an academic exercise" until DOE used "the FEIS to support a proposed action related to Yucca Mountain." Brief for Respondents at 42, Nuclear Energy Inst., Inc. v. EPA, 373 F. 3d 1251 (D.C. Cir. 2004) (Nos. 01-156, 02-1036, 02-1077, 02-1179, 02-1196), available at http://www.state.nv.us/nucwaste/legal/nl030224cons.pdf. However, it is not clear whether DOE intentionally left open the possibility for the interpretation advanced by this note.
First, delaying review will cause significant hardship because the docketed license application creates legal consequences for the NRC, DOE, and other parties in the administrative process. More importantly, withholding consideration will cause hardship because it will effectively preclude judicial review of the adequacy of the FEIS because the NRC administrative proceedings focus only on adoption, do not provide for review of the adequacy of the FEIS, satisfy the agency's NEPA obligations, and lead to substantial deference upon judicial review. Next, the early resolution of issues related to the FEIS will not inappropriately interfere with further administrative action; instead, it will foster effective NRC administration by reducing the scope of issues to be considered administratively, resolving environmental issues outside of NRC proceedings (consistent with congressional intent for the NWPA), and leading to early resolution of certain environmental issues. This view is consistent with the D.C. Circuit's conclusion in *Nuclear Energy Institute, Inc.* that "the effect of the FEIS will not be felt... until it is used to support some other final decision of DOE or NRC."
Lastly, the issue to be reviewed—whether DOE's FEIS satisfies the requirements of NEPA—is purely legal. A reviewing court can assess whether the FEIS is adequate to support the DOE action described in the license application. Thus, judicial review of the legal sufficiency of the FEIS would not benefit from additional factual development, and therefore, review of the adequacy of the FEIS would be ripe at the time of DOE's submission of the license application.

In contrast, however, review of the substantive proposal in the license application is not ripe because there would be no hardship to the parties (i.e., they can participate in the administrative process), and a court will benefit from further administrative proceedings and factual development. Thus, review of the adequacy of the FEIS is ripe while a challenge to DOE's design is not. This conclusion is buttressed by the Supreme Court's discussion of the ripeness of NEPA claims in the case of *Ohio Forestry*. There, the Court noted that a "person with standing who is injured by a failure to comply with the NEPA procedure may complain of that failure at the time the failure takes place, for the claim can never be riper."

A series of cases on programmatic FEISs also lends support to the view that DOE's FEIS is ripe. DOE's FEIS can be seen as a programmatic document, because it will be used to support a host of DOE activities related to the geologic repository operation area that are not yet defined. According to DOE, the FEIS conservatively presents the reasonable foreseeable impacts and uses bounding assumptions to address incomplete or unavailable information or uncertainties for several different activities, including the site recommendation, the selection of the transportation alternative, the license application, and, to the extent it is adopted, the NRC licensing decision. Thus, in the sense that the FEIS is designed to encompass a range of activities related to recommending, constructing, operating, and sending waste to a geologic repository operations area, the FEIS can be seen as a programmatic document.

In *Salmon River Concerned Citizens v. Robertson*, the court determined that a challenge to a Forest Service programmatic

95. See City of Angoon v. Hodel, 803 F.2d 1016, 1022 (9th Cir. 1986).
97. Id. at 737 (emphasis added).
98. See, e.g., DOE FEIS, supra note 3, at S-36, CR8-1 (site recommendation and transportation).
FEIS proposing a plan for a herbicides application program was reviewable before any specific applications of herbicides had been authorized. The court held that "plaintiffs need not wait to challenge a specific project when their grievance is with an overall plan." Because the FEIS set guidelines that determined future herbicide applications, the court concluded that the Forest Service's failure to comply with NEPA represented a concrete injury, and the plaintiffs' challenge was ripe for review. Similarly, Nevada or others may take issue with the overall adequacy of the FEIS rather than the way the FEIS is used to support a specific action. Likewise, since the DOE proposal shapes the issues considered in the NRC administrative proceedings (i.e., the NRC will assess the DOE proposal's compliance with regulatory requirements rather than propose its own repository) and other site-specific proposals such as the rail corridor, DOE's alleged failure to comply with NEPA's requirements would be ripe for immediate judicial review.

The court in *Idaho Conservation League v. Mumma* reasoned that "if the agency action only could be challenged at the site-specific development stage, the underlying programmatic authorization would forever escape review." Similarly, if DOE's FEIS can only be challenged in a piecemeal fashion as it is used to support individual, specific decisions (e.g., license application or transportation selection), the overall FEIS will escape comprehensive judicial review because, absent substantial and significant new information, the decisions tiered off of the FEIS will not revisit impacts and alternatives already considered (i.e., the repository FEIS bounds impacts in the application and the transportation selection). Thus, viewing the DOE FEIS as a programmatic document leads to the same conclusion as the *Ohio Forestry* analysis—that the FEIS would be ripe for review once it is used to support DOE's application.

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99. Salmon River Concerned Citizens v. Robertson, 32 F.3d 1346 (9th Cir. 1994).
100. Id. at 1355; see also Idaho Conservation League v. Mumma, 956 F.2d 1508, 1516 (9th Cir. 1992).
101. Salmon River Concerned Citizens, 32 F.3d at 1355.
102. Idaho Conservation League, 956 F.2d at 1516.
104. See Ohio Forestry Ass'n, 523 U.S. 726.
d. Exhaustion

The DOE could try to direct a challenge to the FEIS into NRC proceedings by asserting that Nevada and other intervenors failed to exhaust their administrative remedies prior to filing a civil action in federal court. This effort would likely fail, because the availability of exhaustion is based on congressional intent, and thus statutory language can repeal or amend the judicially created doctrine of exhaustion. Since statutes providing for judicial review in courts of appeals, like the NWPA, “are jurisdictional in nature and must be construed with strict fidelity to their terms,” exhaustion is not likely to be an issue because judicial review would not be based on any NRC action. Instead, judicial review would be based on the DOE action, which has no administrative options to exhaust. Moreover, even if a reviewing court were to read an exhaustion requirement into section 119 of the NWPA, the exceptions discussed in section III.C.2(b) may apply. Thus, administrative exhaustion is not likely to apply to the DOE action.

3. Subject Matter Jurisdiction of the Courts of Appeals

Having determined that there is a final agency action, any challenge to the FEIS used to support DOE's license application must be brought in the courts of appeals. Section 119(a)(1)(D) of the NWPA grants original and exclusive jurisdiction to the courts of appeals over any civil action “for review of any environmental impact statement prepared . . . with respect to any action under this subtitle.” The NWPA further requires that such a civil action be brought within 180 days after the date of the decision or action or failure to act. Because DOE's submission of a license application for construction authorization is required by section 114(b) of the NWPA (i.e., it is an action under the NWPA), the accompanying FEIS must be challenged within 180 days of tendering the application. Indeed, the Commission has previ-
viously noted that the "NWPA authorizes a civil action to review any EIS prepared with respect to 'any action' under the applicable subpart and, given our perspective on the intended allocation of functions between DOE and NRC, 'any action' could include the Secretary of Energy's submission of an application to the Commission." While it is doubtful that the NWPA actually creates a cause of action as the Commission asserted, its view that tendering the license application is an action under the NWPA remains valid. Further, this position is not inconsistent with the D.C. Circuit opinion in Nuclear Energy Institute, Inc. In holding that Nevada's challenge to the FEIS was not ripe for review, the court reasoned that Nevada's substantive claims against the FEIS would not be fit for review until the FEIS was used to support a concrete and final decision, because the effect of the FEIS would not be felt until it was used to support some other final decision of DOE or NRC. Although the court appears to be primarily concerned with the use of the FEIS to support DOE selection of a transportation alternative or an NRC decision on construction authorization, it nevertheless recognizes that "DOE is expected to use the FEIS to support one or more future decisions related to Yucca Mountain . . . ." As discussed previously, the license application and FEIS are concrete and final decisions. The remainder of the court's discourse on review of substantive claims against the FEIS in administrative hearings is dicta. Thus, requiring judicial review, as opposed to administrative review, of the FEIS used to support DOE's license application is consistent with the construction authorization. As such, if the presiding officer in the NRC's licensing proceeding were to issue an initial decision on the practicability of adoption, that action would dispose of a major segment of the proceeding and would therefore be appealable to the Commission. See In re Boston Edison Co., 13 N.R.C. 91, 93 n.2 (1981) (holding that a partial initial decision in an operating license proceeding that resolves a number of safety issues, but does not authorize issuance of an operating license, is nevertheless appealable, because it disposes of a major segment of the case). A final Commission decision on appeal would trigger a separate opportunity for federal court review of the adoption determination under the APA and section 119(a). Alternatively, if the Commission did not issue a separate decision on adoption apart from its final licensing determination, the courts of appeals would have jurisdiction to review that licensing decision and adoption determination. 42 U.S.C. § 10139(a)(1)(D).

111. The Commission also takes the position that, consistent with the clear policy of the NWPA requiring prompt adjudication of the issues raised by the FEIS, failure to challenge DOE's FEIS promptly in the courts bars subsequent challenges to the FEIS in NRC proceedings. NEPA Review Procedures for Geologic Repositories for High-Level Waste, 54 Fed. Reg. 27,864, 27,866 (July 3, 1989).

NWPA and the Commission's views and is not inconsistent with the court's holding.

4. Practical Implications

Requiring immediate judicial review of the FEIS has several implications for the NRC adoption process and the scope of review in NRC administrative proceedings. First, instead of relying heavily on the congressional resolution selecting Yucca Mountain and NRC review of the Draft EIS, the basis for the Commission presumption of FEIS adequacy would expand to include judicial review. Before making a final decision on adoption (at the end of the administrative hearing process), the Commission could have the benefit of judicial review of the FEIS where any inadequacies would be treated as "new considerations" subject to admission for adjudication under the NRC late-filed contentions standard. In that case, the Commission could ensure satisfaction of a "basic premise of § 51.109 . . . that it is practicable to adopt the [F]EIS prepared by DOE if [it] is adequate to meet the requirements of section 102(2)(C) of NEPA." Furthermore, there are substantial practical benefits to requiring parallel, but not overlapping, reviews of the FEIS. First, because the NRC's primary expertise is radiological health and safety, NRC administrative resources would be focused on those areas rather than diluted through a broad inquiry into environmental impacts. The NRC would therefore be able to save the resources necessary to determine and adjudicate the adequacy of the FEIS. Second, reducing the scope of the NRC administrative responsibilities would help the agency meet its statutory goal for making a licensing decision.

Additionally, requiring DOE to defend its FEIS in federal court would eliminate the awkwardness of having the NRC defend DOE's FEIS in NRC proceedings (and perhaps ultimately in the court of appeals) when the NRC played no role in crafting the balance of impacts in the FEIS and, in fact, may not even agree with DOE's conclusions. Instead, the NRC staff's role would be lim-

117. Simply because the staff provided comments to DOE on the Draft EIS does not mean that DOE adopted the position advanced in those comments, nor does it
ited to assessing the impacts associated with new and significant information or impacts associated with the NRC action (if different from the DOE action) as required by the NRC's adoption regulations. In making the adoption determination, the NRC, as opposed to DOE, would craft the balance between competing interests, and its position would not necessarily be aligned with DOE. In addition, there would be little to no information on the administrative record to support a staff position on the adequacy of the FEIS, because the staff did not make the initial conclusion in the FEIS. This would also clarify the scope of the staff's review of the FEIS prior to its initial recommendation on the practicability of adoption. For instance, the resources necessary to independently review the entire FEIS for adequacy are greater than those required to determine whether there is new and significant information. This view would also ensure fairness by granting interested parties an opportunity to challenge the adequacy of the FEIS in some forum—either federal court or NRC administrative proceedings.

Lastly, parallel reviews of the FEIS would reduce the risk that NRC's regulations for adoption might be found inadequate as applied or that the NRC final position on the adequacy of the FEIS was incorrect upon judicial review of the NRC's final licensing decision. In either instance, having a court initiate review of the FEIS contemporaneously with the license application would accelerate the timing of a final decision on the adequacy of the FEIS.

mean that the NRC would have independently arrived at the same conclusion regarding the proper balancing of the environmental costs and benefits of the proposed action. For example, DOE might decide that certain radiological releases to the environment are of small significance, while the NRC staff, on the same set of facts, might conclude that the impacts are moderate. However, that difference would not prevent the NRC from adopting the FEIS unless there was significant or substantial new information. If, however, substantive challenges to the FEIS were admitted in the licensing proceeding, NRC staff could find itself defending DOE's conclusion that the significance was small. On the other hand, if judicial review of the FEIS was available, DOE would have to defend its own conclusion in federal court.

118. As one solution to this odd posture, the NRC staff might elect to not participate with regard to substantive environmental contentions. While the regulations governing proceedings for licensing of geologic repositories, or Subpart J proceedings, do not explicitly allow the NRC staff to elect not to participate, see 10 C.F.R. ch.1, pt. 2, subpt. J (2005), as is allowed in Subpart L proceedings (informal hearings and NRC adjudications), see 10 C.F.R. § 2.1202(b), the staff could decline to take a position on a specific contention challenging the adequacy of the FEIS.
IV. CONCLUSION

The NWPA changes the generally applicable requirements of NEPA in two significant ways for both the NRC and DOE. First, the NWPA severely limits the range of alternatives to be considered as part of an environmental impact statement associated with a geologic repository at Yucca Mountain to the no-action alternative. Second, the NWPA alters the NRC's role in performing environmental reviews and also seeks to avoid any duplication of those reviews. Any party seeking to challenge the substantive adequacy of DOE's FEIS should be able to raise those concerns by challenging DOE (not the NRC) in federal court once DOE submits its license application. The NRC's administrative process is not the appropriate venue for such challenges because Congress has made clear that environmental issues are to be resolved by DOE via federal courts while the NRC and its administrative proceedings should focus on issues of radiological health and safety. Any administrative hearing on Yucca Mountain is likely to be a long and protracted affair given the tenacity of the repository's opponents. Judicial review of the adequacy of the FEIS in federal court would make this process more efficient by giving DOE a definitive decision on the FEIS and allowing NRC to make a faster decision on the license application.