

NRC Legal Authorities Concerning Offsite Property Damage

Summary

The Atomic Energy Act of 1954, as amended (AEA), provides the NRC with authority to regulate its licensees or applicants for the purpose of avoiding or mitigating offsite property damage (i.e., damages to offsite property resulting from a release of radionuclides from an NRC-licensed facility during or following a severe accident or other event at the facility). In addition, the National Environmental Policy Act of 1969, as amended (NEPA), requires Federal agencies to consider the potential environmental impacts of proposed actions and reasonable alternatives to such actions.

As a general matter, there are considerations that *must* be included in Commission deliberations on regulatory matters, and considerations that *may* be considered since they are within the Commission's discretion. Under section 182 of the AEA, the Commission must take those actions it deems necessary to achieve "adequate protection" of public health and safety. Courts have interpreted the AEA to mean that costs must not be considered by the NRC when it determines that a given regulatory action is necessary for adequate protection.

The AEA provides the NRC additional authority (primarily under AEA sections 103 and 161) to take measures, beyond those needed to achieve adequate protection, to protect health and to *minimize* danger to life or property as the Commission deems necessary or desirable.¹ Thus, courts have held that once adequate protection of public health and safety has been achieved, the NRC has broad discretionary authority to determine what additional actions are necessary or desirable to minimize danger to life or property. Courts have further held that when exercising this discretionary authority, the Commission may consider other factors, such as costs, when deciding whether to take an action. While NRC discretion is not totally unfettered (i.e., there must be some reasonable nexus between the statutory mission of protecting against radiological dangers and the impacts being addressed), the NRC has broad discretion to determine the impacts to be considered in its determinations.

For its part, NEPA requires an analysis of the reasonably foreseeable environmental impacts of major federal actions. In this regard, NRC's environmental analyses may include evaluations of impacts that are not limited to human health effects. NRC's NEPA guidance includes discussions of the impacts from construction, as well as from both normal operations and accident scenarios.²

AEA—Adequate Protection Standard

The AEA is the NRC's organic statute, providing virtually all of the NRC's rulemaking, licensing, and enforcement authority. The AEA's minimum safety standard for production and utilization facilities, which is mandatory for the NRC to ensure, is the "adequate protection" standard, as set forth in subsection a. of section 182, "License Applications." Section 182a. states, in pertinent part:

¹ Note that while the "Price-Anderson" provisions of section 170 of the AEA provide for indemnification for certain losses from regulated activities, those provisions do not expand or alter the authority of the NRC in developing its underlying regulatory requirements.

² E.g., NUREG-1555, "Standard Review Plans for Environmental Review for Nuclear Power Plants" (October 1999); NUREG-1748, "Environmental Review Guidance for Licensing Actions Associated with NMSS Programs" (August 2003).

In connection with applications for licenses to operate production or utilization facilities, the applicant shall state such technical specifications . . . and such other information as the Commission may, by rule or regulation, deem necessary in order **to enable it to find that the utilization or production of special nuclear material will be in accord with the common defense and security and will provide adequate protection to the health and safety of the public.**³

The term “adequate protection” is not defined in the AEA; it is a subjective, yet mandatory standard. Under applicable case law, the NRC must have “reasonable assurance” that there is “adequate protection” of public health and safety before approving a licensing action.⁴ In addition, case law has further clarified that the NRC does not have to regulate to zero risk⁵ and that there is no requirement for unanimity among technical experts as to what constitutes “adequate protection.”⁶ It has been held that “adequate protection” must be defined without regard for the economic costs that must be borne by the licensee⁷, however, there is a layer of protection beyond “adequate protection” in which the Commission can consider costs (as well as societal benefits) under section 161 of the AEA.⁸

AEA—Minimizing Offsite Property Damage

The NRC’s authority to minimize danger to offsite property arises primarily out of sections 103b., 161b., and 161i.⁹ The Commission may consider measures the sole purpose of which is to minimize danger to offsite property and may rely upon a cost-benefit analysis in determining whether to implement such a measure. It is, primarily, a Commission policy decision as to whether the NRC should act to protect offsite property, and if the Commission chooses to protect such property, what the appropriate measures should be. Likewise, the manner in which the Commission may protect offsite property or the methodology the Commission may employ in determining the adequacy of such measures is also a matter of Commission discretion and technical judgment.

³ 42 U.S.C. § 2232(a) (emphasis added).

⁴ *Power Reactor Development Co. v. Int’l Union, Electrical Workers*, 367 U.S. 396, 407 (1961); *Nader v. Ray*, 363 F. Supp. 946, 954 (D.D.C. 1973).

⁵ *Nader v. Ray*, 363 F. Supp. at 954.

⁶ *Nader v. Nuclear Regulatory Commission*, 513 F.2d 1045, 1054 (D.C. Cir. 1975).

⁷ If there is more than one method of achieving adequate protection, the NRC may take cost into account in selecting the method. Only in this event may the NRC take cost into account for adequate protection matters. 10 CFR 50.109(a)(7) (“[S]hould it be necessary or appropriate for the Commission to prescribe a specific way to comply with its requirements or to achieve adequate protection, then cost may be a factor in selecting the way, provided that the objective of compliance or adequate protection is met.”)

⁸ *Union of Concerned Scientists v. NRC*, 824 F.2d 108 (D.C. Cir. 1987) (*UCS I*); *Union of Concerned Scientists v. NRC*, 880 F.2d 552 (D.C. Cir. 1989) (*UCS II*).

⁹ The authority to minimize danger to property is also set forth in AEA sections 31d.(2), 53e.(7), 83b.(1)(A), and 84b.(1).

Section 161 of the AEA, entitled “General Provisions,” provides the general authorities of the NRC and includes two subsections of note. Under AEA section 161b., the Commission is authorized to:

Establish by rule, regulation, or order, such standards and instructions to govern the possession and use of special nuclear material, source material, and byproduct material as the Commission *may* deem necessary or desirable to promote the common defense and security or to protect health *or to minimize danger to life or property*.¹⁰

Under AEA section 161i.(3), the Commission is authorized to prescribe such regulations or order as it may deem necessary to:

Govern any activity authorized pursuant to this chapter, including standards and restrictions *governing* the design, location, and operation of facilities used in the conduct of such activity, in order to protect health and to *minimize danger to life or property*.¹¹

The key phrase used in these two subsections is “minimize danger to life or property.” For the purposes of this memorandum, the phrase “minimize danger to . . . property” refers to the authority granted by these sections. Notably, the phrase “minimize danger to . . . property” also appears in section 103, “Commercial Licenses,” which is the AEA provision governing the licensing of nuclear power reactors and production facilities. Specifically, section 103b.(2) states that the Commission shall:

Issue such licenses on a nonexclusive basis to persons applying therefor . . . (2) who are equipped to observe and who agree to observe such safety standards to protect health and *to minimize danger to life or property* as the Commission may by rule establish.¹²

The phrase is also used in various NRC regulations.¹³ The terms “minimize,” “eliminate,” “danger” or “property” are not defined in AEA section 11, “Definitions.”¹⁴ As AEA section 11 does not define the terms constituting the phrase “minimize danger to . . . property” and given that the legislative history of neither the AEA nor the predecessor 1946 AEA provides any particular discussion as to the meanings of these terms, then, under the rules of statutory construction, the terms are given their “plain meaning” if the terms are clear and unambiguous.¹⁵ As the various sections of the AEA all address the regulation of the use of radiological materials,

¹⁰ 42 U.S.C. § 2201(b) (emphasis added).

¹¹ 42 U.S.C. § 2201(i)(3) (emphasis added).

¹² 42 U.S.C. § 2133(b) (emphasis added).

¹³ *E.g.*, 10 CFR §§ 20.2302, 30.33(a)(2); 40.32(b) and (c), 70.22(a)(7)-(8), and 72.40(a)(5).

¹⁴ The terms “govern” and “governing,” as used in subsection 161i.(3) are also not defined in the section 11.

¹⁵ Sutherland Statutory Construction, § 46.01(6th ed. 2000).

it is reasonable to interpret the ordinary meaning of the phrase “minimize danger to . . . property” when used within the context of these statutory provisions as meaning reducing the risk of radiological harm or damage to property.¹⁶

Further, it is also reasonable to interpret the word “property” broadly. In the sections of the AEA identified above, the word “property” is used without an adjective. In other AEA sections, however, the word “property” is preceded by an adjective such as “real”¹⁷ or “personal.”¹⁸ Given that Congress chose to specify certain types of property in some sections of the AEA (i.e., real property and personal property), then it is reasonable to interpret the word “property” in those AEA sections using the phrase “minimize danger to . . . property,” as including both real and personal property. Thus, “property” would include land, buildings, equipment, vehicles, livestock and crops.¹⁹ Additionally, the term “property” may fairly be viewed as including intangible aspects of property, such as incorporeal real estate interests (e.g., easements, water rights or mining rights), and other related property interests, such as income or profits from property.²⁰ It logically follows that any radiological harm or damage to property, such as land contamination, would have economic consequences, namely, the permanent or temporary loss to the owner of all or part of his or her property.

Courts Have Interpreted the AEA to Give Commission Broad Authority

Given the broad language of the provisions of AEA sections 103 and 161, and the plain meaning of the phrase “minimize danger to . . . property,” the Commission has the legal authority to consider offsite property damage resulting from radiological events, and if it chooses, may regulate its licensees for the purpose of avoiding or mitigating such offsite property damage. If the Commission were to decide to regulate for this purpose, within the limitations discussed in the next section, the Commission’s actions would be within the bounds of the AEA. Federal case law has consistently held that the Commission has broad authority in interpreting the provisions of the AEA, such as sections 103 and 161. The Commission’s broad discretion is enshrined in the *Siegel* decision, in which the D.C. Circuit described the AEA as “virtually unique in the degree to which broad responsibility is reposed in the administering agency, free of close prescription in its charter as to how it shall proceed in achieving the statutory objectives.”²¹ Similarly, the First Circuit stated that the AEA “is hallmarked by the amount of discretion granted the Commission in working to achieve the statute’s ends.”²²

¹⁶ See *Kerr-McGee Chemical Corp.*, LBP-86-18, 23 NRC at 805-06 (AEA section 161b. provides the NRC jurisdiction to regulate offsite radiation hazards caused by a licensee).

¹⁷ E.g., AEA §§ 43 (42 U.S.C. § 2063), 66b (42 U.S.C § 2096).

¹⁸ E.g., AEA §§ 161g (42 U.S.C. § 2201), 167 (42 U.S.C. § 2207).

¹⁹ See *Black’s Law Dictionary* 1095 (5th ed. 1979).

²⁰ *Id.*

²¹ *Siegel v. AEC*, 400 F.2d 778, 783 (D.C. Cir. 1968).

²² *Public Service Company of New Hampshire v. NRC*, 582 F.2d 77, 82 (1st Cir. 1978).

AEA—Case Law Suggesting Limits to the Commission’s Discretion

1. Intervenor Standing Cases

We have identified no cases in which agency regulatory action in the form of rulemaking or orders has been challenged as having been based on considerations of health, safety or property damage that is too far attenuated from NRC authority under the AEA. However, two Commission intervenor standing cases, *Quivira Mining Company* and *Gulf States Utilities Company* are illustrative of the potential limits in Commission regulation of offsite property damage. In both these cases, the petitioner alleged a purely economic injury (no potential physical harm was offered as the basis for standing). The Commission found no standing (i.e., no basis to bring a claim before the Commission) in one case because the economic injury had no link to a radiological harm, but found standing in the other because the economic injury (i.e., damage to the petitioner’s property) had a potential link to a prospective radiological harm.

The Commission, in the *Quivira Mining Company* proceeding, held that an economic injury, “unlinked to a claim of radiological injury, is not among those interests arguably protected or regulated under the Atomic Energy Act.”²³ In *Quivira Mining Company*, the matter before the licensing board and ultimately the Commission concerned a challenge to Quivira’s license amendment request brought by a competing operator of a commercial disposal facility, Envirocare of Utah, Inc. Envirocare asserted that the license amendment request would allow Quivira to become a general commercial disposal facility like Envirocare, but that the NRC did not require Quivira to meet the same regulatory standards the NRC imposed upon Envirocare.²⁴

The Commission, in upholding the Licensing Board decision²⁵ to deny Envirocare’s request for a hearing, determined that Envirocare would indeed suffer an economic injury,²⁶ but that the injury failed to be within the “zone of interests”²⁷ protected by the AEA.²⁸ The Commission determined that the AEA “zone of interests” did not cover economic injury resulting from a mere competitive disadvantage.²⁹ Rather, the AEA “concentrates on the licensing and regulation of nuclear materials for the purpose of protecting public health and safety and the common defense and security.”³⁰

The requisite element missing in Envirocare’s request for a hearing and leave to intervene, a nexus between its economic injury and a radiological harm, was present in an earlier case, *Gulf States Utilities Company*.³¹ In *Gulf States*, the licensee of the River Bend Station, Gulf States

²³ *Quivira Mining Company*, CLI-98-11, 48 NRC 1, 10 (1998).

²⁴ *Quivira Mining Company*, CLI-98-11, 48 NRC at 4.

²⁵ *Quivira Mining Company*, LBP-97-20, 46 NRC 257 (1997).

²⁶ *Quivira Mining Company*, CLI-98-11, 48 NRC at 6.

²⁷ *Id.* at 8.

²⁸ *Id.* at 10.

²⁹ *Id.* at 14.

³⁰ *Id.*

³¹ *Gulf States Utilities Company, et al*, LBP-94-3, 39 NRC 31 (1994) *aff’d* CLI-94-10, 40 NRC 43 (1994).

Utilities Company (Gulf States), sought to amend its operating license to allow Gulf States to become a wholly owned subsidiary of Entergy Corporation and to allow Entergy to operate, manage and maintain the River Bend plant.³² Gulf States owned a 70% share of River Bend; another entity, Cajun Electric Power Cooperative, Inc. (Cajun), held a 30% interest in the River Bend facility. Cajun filed a petition to intervene seeking to have additional conditions imposed on the licensee to protect its financial interest in the plant. Cajun claimed that the license amendments sought by Gulf States could cause unsafe operation of the plant and “that unsafe operations can jeopardize Cajun’s ownership property interest in the plant and increase the potential for third-party liability resulting from accidents.”³³

The Board, in granting standing to Cajun, stated that “property interests can confer standing,” if the interest is to protect property “from radiological hazards arising from unsafe plant operation.”³⁴ The Board, however, indicated that those interests involving “economic interests of ratepayers and taxpayers or general concerns about a facility’s impact on local utility rates and the local economy”³⁵ are beyond the AEA’s coverage. The Board, in contrasting Cajun’s interest with those of other petitioners in prior cases whose economic interests were not in the AEA’s zone of interests, held that:

Cajun’s stated interest in this proceeding, on the other hand, is to protect its property, River Bend, from radiological hazards arising from unsafe plant operation. Cajun’s asserted interest *in avoiding damage to property* from nuclear-related accidents coincides with the Atomic Energy Act’s stated purpose of affording protection from radiological hazards. As Staff correctly points out, radiological protection under the Act is afforded for both human life and property. *In fact, the protection of property is specifically mentioned in the Atomic Energy Act in several places, including sections 103b and 161b which speak of minimizing “danger to life or property.”* 42 U.S.C.A. §§ 2133(b) and 2201(b) (West Supp. 1974-1993). *Cajun’s property interest in River Bend thus clearly meets the zone of interests requirement for standing.*³⁶

In upholding the Board’s determination that Cajun had standing to file its petition, the Commission stated that the AEA “expressly authorizes the Commission to accord protection from radiological injury to both health and property interests.”³⁷

³² *Id.* at 33.

³³ *Id.*

³⁴ *Id.* at 37-38.

³⁵ *Id.* at 37 (“There are a limited number of NRC cases involving standing that involve property interests. Most have held that the property interests involved were insufficient to confer standing since they were outside the zone of interests designed to be protected by the AEA—namely, interests related to health, safety, and radiological matters.”) (citations omitted).

³⁶ *Id.* at 38 (emphasis added).

³⁷ *Gulf States Utilities Company, et al*, CLI-94-10, 40 NRC at 48.

Both *Quivira* and *Gulf States* provide some insight into the potential limits of the NRC's statutory authority to regulate a licensee for the purpose of avoiding or mitigating a prospective harm to an offsite property interest. The same consideration may also arise in considering the cost-benefit methodology to be used in making such determinations. The NRC is well within its AEA authority in taking a regulatory action if the potential harm to the offsite property (e.g., land contamination; contaminated crops; loss of income because a workplace is contaminated; damage to property as a result of a mass evacuation) has a nexus to a potential radiological release. The further attenuated the link between radiological release and the harm to offsite property becomes, however, the more vulnerable the NRC position with respect to a challenge that the NRC has exceeded its statutory authority becomes. As discussed further below, within these broad boundaries, it is ultimately a Commission policy decision on how far the Commission should go in taking regulatory actions to protect offsite property.

2. Metropolitan Edison, the Three Mile Island (TMI) Restart Case

In *Metropolitan Edison Co. v. People Against Nuclear Energy*, the United States Court of Appeals for the D.C. Circuit evaluated the reach of the AEA in providing protection against radiological harm.³⁸ People Against Nuclear Energy (PANE), an intervenor in the TMI restart proceeding, raised two contentions that would ultimately be considered by the D.C. Circuit:

First, that restart of TMI-1 would cause severe psychological distress to persons living in the vicinity of the reactor, and second, that renewed operations would seriously damage the stability, cohesiveness, and well-being of the neighboring communities because it would perpetuate loss of citizen confidence in community institutions and *would discourage economic growth*.³⁹

The Commission denied the requests to admit the contentions. PANE then filed a petition for review with the D.C. Circuit, asserting that the Commission's denial violated the AEA and NEPA.⁴⁰ The D.C. Circuit on January 7, 1982, ordered the Commission to study the "alleged psychological health impacts arising from the proposed restart" under NEPA and, with respect to the AEA, "to submit to the court a statement of [the Commission's] reasons for concluding that the [AEA] did not require consideration of psychological health in the restart proceeding."⁴¹ On March 30, 1982, the Commission complied with the January 7, 1982 court order, by filing a "Memorandum and Order" with the D.C. Circuit.⁴²

In its March 30, 1982 Memorandum and Order, the Commission determined that consideration of psychological impacts was not intended under the AEA as there was no precedent in establishing a requirement that "health and safety" in sections 2 and 103 of the AEA be interpreted to include psychological health.⁴³ Moreover, even if consideration of psychological

³⁸ *Metropolitan Edison Co. v. People Against Nuclear Energy*, 678 F.2d 222 (D.C. Cir. 1982).

³⁹ *Id.* at 224.

⁴⁰ *Id.* at 226.

⁴¹ *Id.* (alterations added).

⁴² *Metropolitan Edison Co.*, CLI-82-6, 15 NRC 407 (1982).

⁴³ *Id.* at 408-415.

impacts were permitted, the Commission asserted that there were “strong policy reasons” against the consideration of psychological health effects in NRC licensing and enforcement proceedings, such as limitations on agency expertise and availability of resources.⁴⁴

While ultimately reversing the Commission on NEPA grounds, the D.C. Circuit upheld the Commission’s March 30, 1982 Memorandum and Order regarding the AEA, stating that it agreed with the Commission’s decision “not to consider psychological stress issues under the AEA.”⁴⁵ The D.C. Circuit also found “reasonable and in accord with the AEA”⁴⁶ the Commission’s interpretation that its AEA mandate to “protect the health and safety of the public”⁴⁷ did not include “the responsibility to consider psychological reactions to nuclear power”⁴⁸ and that:

[AEA] itself does not discuss psychological health, and the statute, its legislative history, and applicable caselaw all suggest strongly that Congress intended the Commission to exercise its regulatory authority to protect only against the physical risks associated with radioactivity.⁴⁹

The latter part of this statement is in accord with the principle that there should be a nexus to radiological harm for the NRC to exercise its discretionary authority to consider non-health and safety effects in deciding on regulatory action.

AEA—Conclusion

As discussed above, the Commission has the discretion to regulate for the purpose of avoiding or mitigating radiological harm to offsite property. The Commission’s authority under section 161 to “minimize danger . . . to property” provides discretionary authority to regulate above section 182’s safety “floor” of reasonable assurance of adequate protection of the public health and safety, however, such regulatory activity must be linked to avoiding or mitigating the impacts of an actual radiological harm or injury that could potentially result from licensed activities. If the Commission wishes to consider offsite property damage in its licensing or other regulatory activities differently from its current practice, there is wide discretion to do so under the AEA, so long as the prospective offsite property damage under consideration results from a radiological harm and that the NRC provides a “reasoned analysis” for any change from current practice.⁵⁰

⁴⁴ *Id.* at 416-17.

⁴⁵ *Metropolitan Edison Co.*, 678 F.2d at 250.

⁴⁶ *Id.*

⁴⁷ *Id.* quoting 42 U.S.C. § 2012(d) (1976).

⁴⁸ *Id.* citing *Metropolitan Edison Co.*, CLI-82-6, 15 NRC 407.

⁴⁹ *Id.* quoting *Metropolitan Edison Co.*, CLI-82-6, 15 NRC at 408.

⁵⁰ See *Motor Vehicle Manufacturers Association of the United States, Inc., et al v. State Farm*, 463 U.S. 29, 42, 103 S. Ct. 2856 (1983) (“an agency changing its course by rescinding a rule is obligated to supply a reasoned analysis for the change”).

NEPA

NEPA⁵¹ is a procedural statute which requires a federal agency to consider the environmental consequences of a proposed action prior to making a decision to approve or disapprove of that action.⁵² NEPA requires federal agencies to take a “hard look” at the environmental impacts of the proposed action as well as the impacts from any reasonable alternatives to that proposed action.⁵³ But, this “hard look” is tempered by a “rule of reason” that requires agencies to address only impacts that are reasonably foreseeable — not those that are remote and speculative.⁵⁴ Essentially, an agency is only *required* to analyze potential impacts to the physical environment that have a reasonably close causal connection to those effects arising from the proposed agency action.⁵⁵

Under NEPA, the NRC, in considering a proposed regulatory or licensing action, must consider the impacts of prospective damage to offsite property as a result of a potential radiological event at a NRC licensed facility. As a procedural statute, however, NEPA does not mandate any particular result nor can it serve as a basis for the NRC to require its licensees to take any measures that may avoid or mitigate radiological damage to offsite property; while the NRC has this authority, it derives from the AEA, not NEPA.⁵⁶

The NRC regulations in 10 CFR Part 51 require that an environmental impact statement (EIS), if prepared, shall include the environmental impacts of the proposal and reasonable alternatives, and where important to the comparative evaluation of alternatives, discussion of the appropriate mitigating measures of the alternatives.⁵⁷ The NRC’s 10 CFR Part 51 regulations are based upon, and voluntarily take account of, the government-wide NEPA regulations of the Council on Environmental Quality (CEQ).⁵⁸ As the NRC is an independent regulatory agency within the Executive branch of the Federal government, the NRC has long taken the position that CEQ’s regulations are not binding, unless expressly adopted by the NRC.⁵⁹ The NRC has specifically adopted certain CEQ definitions, including the definition of the terms “effects” and “human environment.”⁶⁰ The CEQ definition of “effects” includes direct effects which are caused by the

⁵¹ 42 USC § 4321 *et seq.*

⁵² *Limerick Ecology Action, Inc. v. NRC*, 869 F.2d 719.

⁵³ *See Louisiana Energy Servs., L.P.*, CLI-98-3, 47 NRC 77, 87-88 (1998).

⁵⁴ *See, e.g., Long Island Lighting Co.*, ALAB-156, 6 AEC 831, 836 (1973).

⁵⁵ *Metropolitan Edison Co.*, 460 U.S. at 772.

⁵⁶ *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989).

⁵⁷ 10 CFR 51.71.

⁵⁸ 10 CFR 51.10(a).

⁵⁹ NRC Proposed Rule, “Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions and Related Conforming Amendments,” 45 FR 13739 (March 3, 1980) (proposed rule’s statements of consideration describe NRC’s position that, as an independent regulatory agency, the NRC will “voluntarily” take account of CEQ regulations, subject to certain conditions, including “[t]he Commission reserves the right to examine future interpretations or changes to the regulations on a case-by-case basis;” and the “NRC reserves the right to make a final decision on all matters within its regulatory authority”).

⁶⁰ 10 CFR 51.14(b). The CEQ definitions section is at 40 CFR Part 1508.

action and occur at the same time and place, and indirect effects, which are caused by the action, but occur at a later time or are farther removed in distance, but are still reasonably foreseeable.⁶¹ The CEQ definition of “human environment”⁶² is defined, in pertinent part, as including “the natural and physical environment and relationship of people with that environment.”⁶³ When preparing an EIS, the NRC evaluates the effects of the proposed action, and any reasonable alternatives, on the human environment. The CEQ “human environment” definition expressly states that “economic or social effects are not intended *by themselves* to require preparation of an [EIS].”⁶⁴ According to the CEQ definition of “human environment,” economic or social effects are only analyzed in an EIS when “economic or social and natural or physical environmental effects are interrelated.”⁶⁵ The EIS will then “discuss all of these effects on the human environment.”⁶⁶ Essentially, there must be some physical impact upon the environment, directly or indirectly related to the agency’s proposed action, and a nexus between that impact and an economic or social effect,⁶⁷ before that economic or social effect is required to be considered in a NEPA document.⁶⁸

NEPA provides the NRC with authority to analyze potential offsite environmental consequences related to activities within its jurisdiction. The Commission has broad discretion to expand its current practice to encompass a broader range of economic impacts in its NEPA reviews. Most NEPA case law concerns what an agency must do; there are comparably few limitations on what an agency may consider if it so desires, so long as it is reasonably related to the action under consideration.

Conclusion

Under the AEA, the NRC has authority under sections 103, 161, and other sections to minimize damage to property from radiological harm as the Commission deems appropriate or desirable. This authority provides broad discretion to impose requirements that are based on the Commission’s consideration of potential radiological impacts to offsite property. Because this authority stems from the AEA authority to “minimize danger to . . . property” and not from the statutory directive to ensure “adequate protection to the health and safety of the public,” the Commission may include the consideration of cost or other factors in reaching a decision on whether to impose such requirements. There is very little case law that establishes the limits of Commission authority to take regulatory actions to minimize damage to property. Such a requirement faces an increased risk of successful legal challenge as the connection to radiological health and safety and common defense and security becomes more attenuated.

⁶¹ 40 CFR 1508.8.

⁶² 10 CFR 51.14(b).

⁶³ 40 CFR 1508.14.

⁶⁴ *Id.* (emphasis added).

⁶⁵ *Id.*

⁶⁶ *Id.*

⁶⁷ Typically referred to as a “socio-economic effect” in NEPA parlance.

⁶⁸ Mandelker, NEPA Law and Litigation, § 8:42.

However, the broad discretion provided by the AEA likely makes such decisions more a question of policy, rather than a question of limits on NRC authority.