FOR PUBLICATION

UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

NUCLEAR INFORMATION AND RESOURCE SERVICE; COMMITTEE TO BRIDGE THE GAP; PUBLIC CITIZEN, INC.; AND REDWOOD ALLIANCE, *Petitioners,* v. NUCLEAR REGULATORY COMMISSION, *Respondent.*	No. 04-71432 NRC No. RIN 3150-AG71 OPINION

Petition to Review a Decision of the
Nuclear Regulatory Commission

Argued and Submitted
May 16, 2006—San Francisco, California

Filed July 24, 2006

Before: Pamela Ann Rymer and Kim McLane Wardlaw,
Circuit Judges, and James V. Selna,* District Judge.

Opinion by Judge Rymer

*The Honorable James V. Selna, United States District Judge for the Central District of California, sitting by designation.

COUNSEL

John Farrow, San Francisco, California, for the petitioners.

Grace H. Kim, Office of the General Counsel, Washington, D.C., for the respondent.

OPINION

RYMER, Circuit Judge:

The Nuclear Information and Resource Service, Committee to Bridge the Gap, Public Citizen, Inc., and Redwood Alliance (collectively NIRS) challenge the Nuclear Regulatory Commission's (NRC) rulemaking, which revised regulations governing the exemption standards for the transportation of radioactive material. NIRS argues that NRC failed to comply with its obligations under the National Environmental Protection Act (NEPA), 42 U.S.C. § 4332, by not preparing an Environmental Impact Statement (EIS) and making a finding of no significant impact (FONSI) without basis. We are obligated before reaching the merits of NIRS's NEPA challenge to determine whether NIRS has standing to bring its complaint in federal court. We conclude that it does not, and we therefore dismiss NIRS's petition for review.

I

NRC and the Department of Transportation (DOT) co-regulate the transportation of radioactive material in the United States. NRC is authorized to regulate the use and pos-

session of nuclear materials, which it does by prescribing regulations for its licensees' packaging and transport of such materials. *See* 42 U.S.C. § 2201(b); 10 C.F.R. § 71.0. DOT is authorized to designate material as hazardous and to prescribe regulations for the safe transportation of such material. 49 U.S.C. §§ 5103(a), (b)(1). Under this authority, DOT has promulgated its Hazardous Materials Regulations (HMR), which regulate the shipment of radioactive materials, including packaging, labeling, and notification, and which apply in addition to NRC's requirements for the shipment of nuclear materials. 49 C.F.R. §§ 171-179. A Memorandum of Understanding (MOU) governs the respective responsibilities of NRC and DOT. Transportation of Radioactive Materials; Memorandum of Understanding, 44 Fed. Reg. 38,690 (July 2, 1979). As NRC summarizes the MOU, "DOT is responsible for regulating safety in transportation of all hazardous materials, including radioactive materials, whereas NRC is responsible for regulating safety in receipt, possession, use, and transfer of byproduct, source, and special nuclear materials." Thus, DOT adopts regulations for all shippers and carriers of hazardous materials, including safety standards for shipping and packaging radioactive material; NRC develops safety standards for packaging certain radioactive materials and regulates its licensees; and DOT "issue[s] complete and comprehensive Federal regulations for the packaging and transportation of all radioactive materials as part of its overall body of Federal regulations." *Id.*

The United States is a member of the International Atomic Energy Agency (IAEA),[1] which, in 1961, adopted international regulations for the safe transportation of radioactive material. The IAEA regulations were published in Regulations for the Safe Transport of Radioactive Materials, IAEA Safety Series No. 6 (SS-6). As a Member State, the United States harmonized its domestic regulations with the IAEA

[1]DOT is the "Competent Authority (the official U.S. representative organization)" to the IAEA. NRC Final Rule, 69 Fed. Reg. 3,698.

standards. The IAEA periodically has revised SS-6 with "substantial input" from DOT, and, following each revision, DOT and NRC have amended domestic regulations to make them compatible with the IAEA standards. The latest significant revision to the SS-6 was published in December 1996, and redesignated TS-R-1 in June 2000. The principal change from the prior IAEA regulations to TS-R-1 at issue in this case involves radionuclide exemption values.

Following the IAEA revisions, NRC and DOT began the rulemaking process for revising domestic regulations on exemption values to make them compatible with the new IAEA standards — DOT with its IAEA Compatibility Amendments and NRC with conforming amendments to its Part 71 Regulations. *See* Compatibility with IAEA Transportation Safety Standards (TS-R-1) and Other Transportation Safety Amendments; Final Rule, 69 Fed. Reg. 3,698 (Jan. 26, 2004) (to be codified at 10 C.F.R. pt. 71) ("NRC Final Rule"); Hazardous Materials Regulations; Compatibility With the Regulations of the International Atomic Energy Agency; Final Rule, 69 Fed. Reg. 3,632 (Jan. 26, 2004) (to be codified at 49 C.F.R. pts. 171-78) ("DOT Final Rule"). "Exemption values" are the standards adopted for determining whether nuclear material is subject to regulation during transport; if the radioactivity of the material is below the exemption value, then the material is "exempt" and not subject to regulation. NIRS here challenges NRC's change from an "activity concentration" to a "dose-based" standard for setting exemption values. NRC Final Rule, 69 Fed. Reg. at 3,711-20, 3,765, 3,791; *id.* at 3,807-13 (setting forth the exemption provisions); *see also* DOT Final Rule, 69 Fed. Reg. at 3,634-36, 3,656, 3,658.

Before adopting the regulation, NRC (and DOT) applied a uniform "activity concentration" standard to exempt transportation of low-radioactivity material from regulation. "Activity concentration" refers to the number of nuclear disintegrations per second in a gram of material and is commonly measured

in *Becquerels*. A *Becquerel* is one radioactive disintegration per second. This prior NRC/DOT standard, which was also the pre-1996 IAEA standard, established 70-*Becquerels* per gram (Bq/g) as the uniform activity concentration standard; radioactive material with fewer than 70 disintegrations per second in a gram was exempted from NRC regulation during transport.

In 1996, the IAEA determined that there was no technical justification for the single activity concentration value of 70 Bq/g and concluded that the technically sound approach was a dose-based standard, which it adopted. Dose depends not only on the number of disintegrations per second but also on the type and energy of the radiation emitted by a nuclear disintegration. Dose limits are expressed in "rems" or "millirems" (mrem). To develop the dose-based approach, the IAEA used safety standards from a 1996 IAEA study — the "BSS" study, Safety Series No. 115, International Basic Safety Standards for Protection against Ionizing Radiation and for the Safety of Radiation Sources. The BSS study used a dose-based approach in *fixed* facility exposure scenarios, as opposed to *transport* scenarios, and it calculated for each radionuclide an exemption threshold that would limit an effective annual dose to 1 mrem or less per year.[2] The IAEA researchers performed calculations on a subset of BSS scenarios and calculated the activity concentration for each of twenty radionuclides that would result in a dose of 1 mrem per year to transport workers in transportation scenarios. They concluded that "[d]ue to differences in radionuclide radiation emissions, exposure pathways, etc., the resulting radionuclide-specific activity concentrations varied widely." 69 Fed. Reg. at 3711. In other words, to obtain the 1 mrem per year dose level, the activity concentrations for radionu-

[2]Although there is significant variation, "it has been estimated that the average annual dose in the United States from natural background radiation is . . . around . . . 300 mrems . . . ." *In re TMI Litig.*, 193 F.3d 613, 644 n.50 (3rd Cir. 1999).

clides differ — some are less than 70 Bq/g, but others are much higher. Instead of an across-the-board 70 Bq/g standard, the new standard is set forth in a chart that states the allowable activity concentrations for various, commonly shipped radionuclides.

The IAEA found that the activity concentrations required in transportation scenarios to limit the effective annual dose to 1 mrem were less than the BSS fixed facility values but not by more than one to two orders of magnitude. This meant that to meet the 1 mrem criteria, the transportation specific levels would have to be more protective than the generic BSS levels. The IAEA determined that the difference in dose between fixed-facility and transport scenarios did not justify imposing a different set of standards for fixed facilities and transportation exemptions, so it adopted the BSS values for transport in TS-R-1. The IAEA's calculations showed that using the BSS exemption values for transport would yield a dose exceeding 1 mrem for some radionuclides and that the average annual dose using the BSS exemption values would be approximately 23 mrem per year, in excess of the 1 mrem per year target.[3] In comparison, the average annual dose for a transport worker under the 70 Bq/g value was about 50 mrem per year.

After the IAEA moved to dose-based regulations, NRC and DOT began the rulemaking process to harmonize domestic standards with the IAEA standards by adopting dose-based, radionuclide-specific radioactivity levels for each of about 380 radionuclides. In July 2000, NRC published an Issues Paper discussing its proposal to adopt the IAEA exemption standards and it solicited written comments and input at three public meetings. Major Revision to 10 CFR Part 71: Compatibility with ST-1—The IAEA Transportation Safety Standards —And Other Transportation Safety Issues, Issues Paper, and Notice of Public Meetings; Proposed Rule, 65 Fed. Reg.

[3]NRC reports the average as 25 mrem/yr in its Proposed Rule and 23 mrem/yr in its Final Rule.

44,360, 44,360-61 (July 17, 2000). Among other things, commenters responded that there was no safe radiation dose, that the scientific materials IAEA used as a basis for its decision were not publicly available, and that there was a growing scientific consensus that low-dose radiation may be more harmful than previously thought.

Following this preliminary public-participation process, in April 2002, NRC published a notice of proposed rulemaking and a draft environmental assessment (EA) as required by NEPA. NRC allowed 90 days for public comment on the proposed rule and held two public meetings. It received about twenty comment letters addressing the proposal to adopt the IAEA methodology for calculating exemption thresholds, most of which opposed the change. These commenters, including NIRS, objected to the dose levels in the proposed rule and to NRC's reliance on "unchallenged assumptions" from the International Commission on Radiological Protection (ICRP) on the health risks of exposure to low doses of radiation.

NRC received two comment letters regarding the draft EA, and comments from two speakers during the public meetings about the draft EA. One commenter objected to any exemption of radionuclides, and the others argued that the EA should have developed more quantitative data, particularly with respect to exempt shipping volumes.

NRC issued a final EA that found no significant environmental impact, and on January 26, 2004, NRC published a Final Rule adopting the IAEA exemption values. The final EA was substantially identical to the draft EA with respect to the radionuclide exemption values. The EA explained that "[t]he nature of the change makes it difficult to quantify the safety impacts or benefits." Because NRC lacked data on exempt shipments, the EA analyzed data pertaining to regulated shipments contained in a 1985 report by Sandia National Laboratories, which estimated the number of regulated (i.e.,

non-exempt) packages shipped for various nuclides. The EA concluded that of the six most commonly shipped nuclides, two would have a higher exemption level under the new rule and four would have a lower exemption level, meaning that the latter four would be more strictly regulated. The EA also addressed isotopes with exemption levels that were much higher under the new rule, and concluded that only two of those isotopes "contribute 0.01 percent or more of the total curie amount transported" and that those two were unlikely to be shipped in exempt packages. The EA addressed plutonium and neptunium — commonly transported isotopes affected by the rule change — and noted that the new exemption levels for both were 1 Bq/g or lower, making previously exempt packages subject to regulation. The EA summarized the projected effect of the new exemption values as follows:

> [C]hanging the existing 70 Bq/g [ ] level in 10 CFR 71.10(a) for exempting any radionuclide from the Part 71 requirements to radionuclide-specific activity limits would result in mixed, although overall minor, effects. For radionuclides with new exemption values that are lower than the current limit, there could be a decrease in the number of exempted shipments and a commensurate slight increase in the level of protection. For radionuclides with new exemption values that are higher than the current limit, there could be an increase in the number of exempted shipments and a commensurate slight increase in associated radiation exposures. However, IAEA has judged that this change would not significantly increase the risk to individuals.

In its Final Rule, NRC similarly concluded: "Because the annual doses estimated to result from the use of the radionuclide-specific exemption values are low, and on average are lower than the dose estimates for the current 70-Bq/g [ ] activity concentration, NRC staff believes that changing from the 70-Bq/g [ ] value to the radionuclide-specific exemp-

tion values will result in no adverse impact on public health and safety." 69 Fed. Reg. at 3719. Based on this FONSI, NRC did not prepare an EIS under NEPA. *See* 40 C.F.R. § 1501.4(e) (providing that the agency shall "[p]repare a finding of no significant impact (§ 1508.13), if the agency determines on the basis of the environmental assessment not to prepare a statement"); 40 C.F.R. § 1508.13 (defining a FONSI as a document "briefly presenting the reasons why an action . . . will not have a significant effect on the human environment").

On the same day, DOT issued a final ruling adopting Compatibility Amendments to the HMR to harmonize the regulations with the IAEA standards. *See* DOT Final Rule, 69 Fed. Reg. 3,632. As a result of the amendments, the HMR now defines "radioactive material" to mean "any material containing radionuclides where both the activity concentration and the total activity in the consignment exceed the values specified" in the new dose-based tables. 49 C.F.R. § 173.403. In preparing its final amendment to the HMR, DOT relied on the EA/FONSI issued by NRC. DOT Final Rule, 69 Fed. Reg. at 3,664; *see* 40 C.F.R. § 1501.5(a)(2) (permitting a lead agency to supervise preparation of an EIS if multiple agencies are involved in "a group of actions directly related to each other because of their functional interdependence").

On March 26, 2004, NIRS timely filed a petition for review of the NRC rulemaking in this court as permitted by the Hobbs Act. *See* 28 U.S.C. § 2342(4) (providing for direct review in the court of appeals).

On November 9, 2004, NIRS filed an action in the United States District Court for the Northern District of California seeking review of DOT's rulemaking. On November 10, 2004, NIRS sought transfer of the NRC review proceedings to the district court for consolidation with the DOT case. We denied that motion on April 13, 2005, without prejudice. On January 10, 2005, DOT filed a motion to dismiss under Fed.

R. Civ. P. 12(b)(1) for lack of subject matter jurisdiction pursuant to 49 U.S.C. § 20114(c), which the district court granted. NIRS's appeal from the district court's dismissal was consolidated with this case for purposes of oral argument and is resolved in a separate opinion, *Nuclear Information & Resource Service v. Department of Transportation*, ___ F.3d ___, No. 05-16327 (9th Cir. 2006).

II

As the Supreme Court recently reiterated, "[w]e have 'an obligation to assure ourselves' of litigants' standing under Article III." *DaimlerChrysler Corp. v. Cuno*, 126 S. Ct. 1854, 1860 (2006) (quoting *Friends of the Earth, Inc. v. Laidlaw Envtl. Servs. (TOC), Inc.*, 528 U.S. 167, 180 (2000)). Accordingly, we begin by addressing NIRS's claim that it has standing to challenge NRC's alleged non-compliance with NEPA.

A

[1] To determine whether a litigant has standing, we undertake two distinct inquiries. First, a plaintiff must meet Article III's case-or-controversy requirement, which provides a fundamental limitation on a federal court's authority to exercise jurisdiction. *See DaimlerChrysler*, 126 S. Ct. at 1860-61 (emphasizing the critical importance of the case-or-controversy requirement). The Court has recognized that "the core component of standing is an essential and unchanging part of the case-or-controversy requirement of Article III." *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 560 (1992). Put simply, "[i]f a dispute is not a proper case or controversy, the courts have no business deciding it, or expounding the law in the course of doing so." *DaimlerChrysler*, 126 S. Ct. at 1860-61; *see also Steel Co. v. Citizens for a Better Env't*, 523 U.S. 83, 101 (1998). Article III's standing requirements are familiar:

> a plaintiff must show (1) it has suffered an "injury in fact" that is (a) concrete and particularized and (b)

> actual or imminent, not conjectural or hypothetical; (2) the injury is fairly traceable to the challenged action of the defendant; and (3) it is likely, as opposed to merely speculative, that the injury will be redressed by a favorable decision.

Laidlaw, 528 U.S. at 180-81 (citing *Lujan*, 504 U.S. at 560-61); *see also Allen v. Wright*, 468 U.S. 737, 751 (1984).

The injury NIRS asserts is NRC's failure to comply with the requirements of NEPA. We have recognized that our analysis of Article III standing is "not fundamentally changed" by the fact that a petitioner asserts a "procedural," rather than a "substantive" injury. *City of Sausalito v. O'Neill*, 386 F.3d 1186, 1197 (9th Cir. 2004). In a "procedural injury" case:

> to show a cognizable injury in fact, [a plaintiff] must allege . . . that (1) the [agency] violated certain procedural rules; (2) these rules protect [a plaintiff's] concrete interests; and (3) it is reasonably probable that the challenged action will threaten their concrete interests.

Id. (quoting *Citizens for Better Forestry v. U.S. Dept. of Agric.*, 341 F.3d 961, 969-70 (9th Cir. 2003)) (alterations in original). "[A] cognizable procedural injury exists when a plaintiff alleges that a proper EIS has not been prepared under [NEPA] when the plaintiff also alleges a 'concrete' interest — such as an aesthetic or recreational interest — that is threatened by the proposed action." *Id.* (citing *Sierra Club v. Morton*, 405 U.S. 727, 738 (1972)). The "concrete interest" test has been described "as requiring a 'geographic nexus' between the individual asserting the claim and the location suffering an environmental impact." *Ashley Creek Phosphate Co. v. Norton*, 420 F.3d 934, 938 (9th Cir. 2005), *petition for cert. filed*, 74 U.S.L.W. 3545 (U.S. Jan. 19, 2006) (No. 05-1209) (quoting *Cantrell v. City of Long Beach*, 241 F.3d 674, 679 (9th Cir. 2001)).

To establish Article III standing, a plaintiff must also show causation and redressability; however, "[o]nce a plaintiff has established injury in fact under NEPA, the causation and redressability requirements are relaxed." *Cantrell*, 241 F.3d at 682; *see also Hall v. Norton*, 266 F.3d 969, 975 (9th Cir. 2001) (holding that "a plaintiff 'seeking to enforce a procedural requirement the disregard of which could impair a separate concrete interest of theirs,' . . . can establish standing 'without meeting all the normal standards for redressability and immediacy.' " (quoting *Lujan*, 504 U.S. at 572 & n.7)). Instead, they "need only establish 'the "reasonable probability" of the challenged action's threat to [their] concrete interest.' " *Id.* at 977 (quoting *Churchill County v. Babbitt*, 150 F.3d 1072, 1078 (9th Cir. 1998), *amended by* 158 F.3d 491 (9th Cir. 1998)).

If NIRS's members meet the three-part test for constitutional standing, NIRS has organizational standing to represent their interests. *Defenders of Wildlife v. EPA*, 420 F.3d 946, 956 (9th Cir. 2005). "An association has standing to bring suit on behalf of its members when its members would otherwise have standing to sue in their own right, the interests at stake are germane to the organization's purpose, and neither the claim asserted nor the relief requested requires the participation of individual members in the lawsuit." *Laidlaw*, 528 U.S. at 181 (citing *Hunt v. Wash. State Apple Adver. Comm'n*, 432 U.S. 333, 343 (1977)).

[2] The second inquiry, if a plaintiff meets the constitutional standing requirements, is whether the plaintiff meets the non-constitutional or prudential standing requirements; this inquiry is "whether a particular plaintiff has been granted a right to sue by the statute under which he or she brings suit." *City of Sausalito*, 386 F.3d at 1199. "Because NEPA does not provide for a private right of action, plaintiffs challenging an agency action based on NEPA must do so under the Administrative Procedure Act ('APA')." *Ashley Creek*, 420 F.3d at 939 (citation omitted). To meet the statutory requirements for

standing under the APA, a plaintiff "must establish (1) that there has been a final agency action adversely affecting [it], and (2) that, as a result, it suffers legal wrong or that its injury falls within the 'zone of interests' of the statutory provision the plaintiff claims was violated." *Churchill County*, 150 F.3d at 1078 (quoting *Lujan v. Nat'l Wildlife Fed'n*, 497 U.S. 871, 882-83 (1990)). It is well settled that the zone of interests protected by NEPA is environmental. *Ashley Creek*, 420 F.3d at 940.

B

NRC argues that NIRS fails to meet the injury-in-fact requirement of standing because NIRS complains in only the most general terms that NRC's new regulation may expose members of the public to excessive radiation, but it points to no concrete harm to particular persons. In response to NRC's challenge, NIRS addressed standing for the first time in its reply brief. *Nw. Envtl. Def. Ctr. v. Bonneville Power Admin.*, 117 F.3d 1520, 1528 (9th Cir. 1997) (holding that petitioners "were entitled to establish standing anytime during the briefing phase," where standing was not at issue in earlier proceedings). NIRS's members claim standing by virtue of their status as members of the public with a common interest in protecting public health from radioactive sources and practices. This interest, NIRS argues, gives rise to concerns that the public, including transport workers, will be exposed to excessive levels of radiation as a result of NRC's rulemaking proceeding, which relied upon NRC's faulty environmental investigation. NIRS contends that it asserts a cognizable procedural injury because NRC failed to adhere to its NEPA obligations. Further, NIRS asserts that it has established a geographic nexus because the exemption rules authorize unregulated transport of radioactive waste on public roads nationwide.

Lujan holds that "[t]he party invoking federal jurisdiction bears the burden of establishing [the standing] elements," 504

U.S. at 561, and that "each element must be supported . . . with the manner and degree of evidence required at the successive stages of the litigation," *id.* NIRS submitted five brief declarations in support of its standing. The first declaration states in full:

> 1. My name is Gary Brown. I am employed as a truck driver by Brown and Son Trucking, Inc., in San Francisco, California. I have been a truck driver since 1971.
>
> 2. I am a member of Nuclear Information and Resource Service.
>
> 3. In the course of my employment, I have regularly transported waste material from industrial sites to disposal sites by truck. I have transported hazardous materials during the past six years. I have transported hazardous materials, including radioactive materials, to disposal sites using public roads and highways in the States of California and Nevada.
>
> 4. I am concerned that allowing the unregulated transportation of radioactive material may expose me, as well as other members of the public, to adverse health consequences without knowledge or consent and without an ability to avoid or reduce these consequences.

The four remaining declarations were submitted by another member of NIRS, and a member of Public Citizen, Committee to Bridge the Gap, and Redwood Alliance. Each of these declarations contains four initial paragraphs stating the declarant's name, membership in one of the organizations, the organization's purpose, and the fact that the organization participated in the rulemaking at issue. The next paragraph of each states something substantially similar to "I regularly use public streets and highways in the State of California." The

final paragraphs are nearly identical: "I am concerned that allowing the unregulated transportation of radioactive material may expose me to adverse health consequences without my knowledge and without my ability to avoid or reduce these consequences." These five declarations are the only evidence NIRS offers in support of its standing.

C

[3] We turn first to the injury-in-fact inquiry, which is dispositive of this appeal. NIRS claims that NRC failed to follow NEPA procedural rules that required it to prepare an EIS. This type of procedural injury can form the basis of standing. *Ashley Creek*, 420 F.3d at 938 (recognizing that allegations that an agency failed to comply with NEPA's procedural requirement that an EIS consider alternatives could suffice as procedural injury); *Citizens for Better Forestry*, 341 F.3d at 971 (holding that standing may hinge on the failure of an agency to allow public input into the EA/FONSI process) (citing *West v. Sec'y of Dep't of Transp.*, 206 F.3d 920, 930 n.14 (9th Cir. 2000)); *see also Lujan*, 504 U.S. at 573 n.8 (noting that a plaintiff "assuredly can" enforce procedural rights).

[4] In addition to a procedural violation, for Article III purposes, the plaintiff must assert "a 'concrete' interest — such as an aesthetic or recreational interest — that is threatened by the proposed action." *City of Sausalito*, 386 F.3d at 1197; *see also Lujan*, 504 U.S. at 562-63 (requiring not only a threat to a listed species but also affidavits or evidence "showing, through specific facts" that one of the organizations' members would be " 'directly' affected apart from their special interest in th[e] subject" (alteration in original) (internal quotation marks omitted) (quoting *Sierra Club*, 405 U.S. at 735, 739). "A free-floating assertion of a procedural violation, without a concrete link to the interest protected by the procedural rules, does not constitute an injury in fact." *Ashley Creek*, 420 F.3d at 938; *see also Lujan*, 504 U.S. at 572-73 nn.7 8. As we explained in *Citizens for Better Forestry*, "environmental

plaintiffs must allege that they *will suffer harm* by virtue of their geographic proximity to and use of areas that will be affected by the [agency's] policy." 341 F.3d at 971 (emphasis added). For example, in a case where the plaintiff averred that his respiratory discomfort would be aggravated by emissions from developments on former Bureau of Land Management lands, we held that "evidence of a credible threat to the plaintiff's physical well-being from airborne pollutants falls well within the range of injuries to cognizable interests that may confer standing." *Hall*, 266 F.3d at 976 & n.6 (noting that "credible threats" included "increased traffic, pollution, and noise," as well as "increased auto emissions" (internal quotation marks omitted)).

[5] To show a "geographic nexus," petitioners claiming a violation of NEPA must allege that they will suffer harm as a result of their proximity to the area where the alleged environmental impact will occur. We have defined the geographic nexus requirement broadly to permit challenges to actions with wide-reaching geographic effects where the petitioners properly allege, and support with affidavits, that they use the impacted area, even if the impacted area is vast. *See Citizens for Better Forestry*, 341 F.3d at 971 (holding that "Citizens need not assert that any specific injury will occur in any specific national forest that their members visit," where they "properly alleged, and supported with numerous affidavits" their members' use and enjoyment of a "vast range of national forests"); *see also Defenders of Wildlife*, 420 F.3d at 957 (holding that the injury-in-fact requirements were met in a Clean Water Act case affecting the state of Arizona where petitioners mentioned "specific subareas within the state" and noting that "alleging an injury-in-fact covering large areas within the state simply reflects the relatively broad nature of the potential harm"); *Res. Ltd., Inc. v. Robertson*, 35 F.3d 1300, 1303 (9th Cir. 1993) (holding that the plaintiffs had standing to sue to challenge a "forest-wide" plan, despite their "inability to point to the precise area of the park where their injury will occur").

[6] None of declarations submitted by members of NIRS, Committee to Bridge the Gap, Public Citizen, or Redwood Alliance explain *in any way* how their health may be affected by this regulation.[4] They have not alleged with any specificity what geographic areas are most likely to be affected, other than to assert that the regulations impact highways nationwide. Nor have they alleged that they will be exposed to increases in radiation or that they will curtail their use of public highways as a result of the regulation. *Compare Laidlaw*, 528 U.S. at 181-83 (holding that evidence that the plaintiff avoided a river because of concerns about discharges established injury in fact); *Public Citizen v. Dep't of Transp.*, 316 F.3d 1002, 1015-16 (9th Cir. 2003), *rev'd on other grounds*, 541 U.S. 752 (2004) (holding that Public Citizen had established injury in fact where it alleged that its members lived and worked in geographic areas most affected by increased

[4]Apart from the members' declarations, which we do consider, NIRS presented extra-record evidence in support of its position on the merits consisting of expert declarations, notices of proposals by other federal agencies to deregulate radioactive materials, and radiation dose standards of independent organizations. To the extent that it seeks to rely on this evidence to show that radiation doses allowed under the rule are adverse to public health and thus, that permitting these doses demonstrates injury in fact, we decline to consider it because it was not presented to the agency. In its brief on the merits NIRS relies on cases that address whether *district courts* may properly consider extra-record evidence. Unlike a district court, we cannot hold a hearing on new evidence or assess the credibility of the experts. *Cf. INS v. Ventura*, 537 U.S. 12, 17 (2002) (per curiam) (holding that remand to allow the agency to decide changed circumstances in the first instance was required in part because the agency "can evaluate the evidence" in light of its expertise); *Kamara v. Attorney General*, 420 F.3d 202, 218 (3rd Cir. 2005) (noting that taking judicial notice of new country conditions not in the administrative record " 'not only carries with it the potential for wholesale relitigation of many immigration-law claims, but the Courts of Appeals are ill-equipped to receive supplementary evidence' " (quoting *Berishaj v. Ashcroft*, 378 F.3d 314, 330 (3d Cir. 2004))); *Johnson v. United States*, 426 F.2d 651, 656 n.8 (D.C. Cir. 1970) (en banc) (per curiam), *cert. granted*, 400 U.S. 864 (1970), *dismissed*, 401 U.S. 846 (1971) (striking portion of appellate brief that included matter outside the record).

emissions, that they "will be exposed to such emissions, and as a result may suffer adverse health effects," and one member stated that he monitored smog levels and "limit[ed] his family's outdoor recreational activity when such alerts occur" (internal quotation marks omitted)); *Hall*, 266 F.3d at 976 (noting that Hall "averr[ed] that his respiratory discomfort will be aggravated by emissions from developments on former BLM lands"), *and Natural Res. Def. Council v. Sw. Marine, Inc.*, 236 F.3d 985, 994 (9th Cir. 2000) (holding that the plaintiffs had established injury in fact where they testified that their "use has been curtailed because of their concerns about pollution, contaminated fish, and the like").

This is not a case like *Public Citizen* or *Hall* where the petitioner has shown that the regulation will lead to increased exposure to pollutants and an adverse effect on health. NIRS fails to explain why the new, on average more protective, regulation presents a credible threat to its members' health. The NIRS member who comes closest to establishing a concrete injury is the truck driver who states that he transports waste material from industrial sites to disposal sites and that he has transported radioactive material in the past. We recognize the possibility that this transport worker may be required to transport "unregulated" radioactive material, but he may have been required to do the same under the old regulation. Further, he does not specify the threat to his health from the change in exemption standards at issue here; he simply states his generalized concern that "the unregulated transportation of radioactive materials may expose [him], as well as other members of the public, to adverse health consequences."

[7] NIRS fails to show that its members' concrete interest is threatened by *the challenged regulation*, rather than by "unregulated transportation of radioactive material" in the abstract. The declarations simply express undifferentiated "concerns" — the same concerns about nuclear hazards shared by the public at large — and speculate that unregulated transportation of radioactive material in general — *not this*

regulation in particular — may present unspecified threats to their health. This is quite unlike the interest shown in cases such as *Salmon River Concerned Citizens v. Robertson*, 32 F.3d 1346, 1352-53 (9th Cir. 1994), where the affidavits of Salmon River Concerned Citizens (SRCC) members stated in great detail how their health and ability to use national forests would be adversely affected by pesticide use, and *Citizens for Better Forestry*, 341 F.3d at 971, where Citizens had alleged that they would suffer harm and properly supported the allegation "with numerous affidavits covering a vast range of national forests around the country." As the members here have not shown that their interests are directly affected or threatened, they are in the same position as plaintiffs "raising only a generally available grievance about the government" and "seeking relief that no more directly and tangibly benefits [them] than it does the public at large" that *Lujan* indicates do not satisfy Article III's case or controversy requirement. *See Lujan*, 504 U.S. at 573-74. In short, NIRS fails to meet the constitutional minimum that a concrete interest — in its members' health or freedom from increased exposure to radiation — is threatened by the exemption regulations.

NIRS's interest (even if sufficiently concrete) in the health of its members also appears to be served, not harmed, by the enactment of the new regulations. Average radiation doses under the new regulations are less than they were under the prior 70 Bq/g scheme. In contrast, in cases where we have found a "reasonable probability" of harm, the challenged rule has been less protective of the environment than the regime it replaced. *See, e.g., Citizens for Better Forestry*, 341 F.3d at 972 (holding that environmental plaintiffs had established reasonable probability where "the 2000 Plan Development Rule decreases substantive environmental requirements (thus injuring their concrete interest in enjoying the national forests) as compared to the 1982 Plan Development Rule"); *Salmon River*, 32 F.3d at 1349-51 (explaining that the challenged policy permitted use of herbicides in regional forests for the first time).

NIRS's argument that it need not show the rule causes *more* injury than the previous rule, because environmental impacts may be significant even when an action is on balance beneficial, is unavailing. Regardless whether NEPA defines "significant" as including actions with a beneficial impact, 40 C.F.R. §§ 1508.8(b), 1508.27(b)(1), the constitutional standing requirement mandates that a petitioner show at least reasonable probability of *a threat* to a concrete interest. NIRS points to no authority, and we have found none, holding that there was a reasonable probability that government action would harm a concrete interest when the action led to a result that was *beneficial* to the petitioners.

NIRS's contention that some discrete radioactive isotopes will expose the public to higher risk under the new regulations would have more force if NIRS had alleged, and submitted affidavits demonstrating, that some of its members might be exposed to those isotopes. But the fact that unidentified members of the public may be exposed to a higher risk from the few isotopes that are now less regulated does not establish an injury to NIRS members where they have neither alleged nor shown that they are at risk of being exposed to those isotopes.

[8] Having not shown a concrete and particularized injury, NIRS has failed to establish its standing to challenge NRC's alleged NEPA violation.

D

NRC contends that NIRS's standing also fails on the redressability prong of *Lujan* because both the NRC and DOT rules implement the IAEA standards, and the DOT rule is not properly before us. NIRS counters that it need only show that if NRC is required to conduct an appropriate environmental analysis, such analysis could result in a different exemption rule or no exemption. Further, NIRS contends that DOT's rulemaking activity is before the court in the consolidated appeal and, because NRC's environmental analysis was the

basis for both NRC and DOT's rulemakings, setting aside NRC's NEPA investigation would remedy NIRS's substantive challenge to the DOT rule.

[9] Redressability depends on whether the court has the ability to remedy the alleged harm. *Hall*, 266 F.3d at 975. In most NEPA cases, a petitioner "who asserts inadequacy of a government agency's environmental studies . . . need not show that further analysis by the government would result in a different conclusion. It suffices that . . . the [agency's] decision *could be influenced* by the environmental considerations that [the relevant statute] requires an agency to study." *Id.* at 977 (emphasis added) (citation omitted).

[10] However, this is not the usual NEPA case. The parties agreed at oral argument that NRC licensees are required to follow DOT's regulations for the transportation of nuclear material. 10 C.F.R. § 71.5(a) ("Each licensee who transports licensed material outside the site of usage, as specified in the NRC license, or where transport is on public highways, or who delivers licensed material to a carrier for transport, shall comply with the applicable requirements of the DOT regulations in 49 CFR parts 107, 171 through 180, and 390 through 397, appropriate to the mode of transport."). Thus, even if we were to set aside the current NRC rule and remand to NRC with instructions that it prepare an EIS, nothing requires DOT to revisit its identical exemption standards, which govern the universe of NRC licensees. *See Lujan*, 504 U.S. at 568 (holding there was no redressability because the Secretary could be ordered to revise his regulation "[b]ut this would not remedy respondents' alleged injury unless the funding agencies were bound by the Secretary's regulation, which is very much an open question"). As NRC pointed out at oral argument, the DOT rule would control even if the NRC rule was wiped off the books. And the DOT regulation is not before us. We cannot see how an order remanding to NRC would remedy the asserted injury from the IAEA exemption standards because

DOT would be under no obligation to reconsider its own, identical rule.

[11] As neither injury in fact nor redressability has been established, we dismiss NIRS's petition for lack of standing.

PETITION DISMISSED.