NOT YET CALENDARED FOR ORAL ARGUMENT

No. 04-71432

IN THE
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.

UNITED STATES NUCLEAR REGULATORY COMMISSION and the UNITED STATES OF AMERICA,

Respondents.

On Petition for Review of a Decision of the Nuclear Regulatory Commission

PETITIONER'S REPLY BRIEF

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8/25/05

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I. INTRODUCTION

This case is about the failure of the NRC to fulfill its duty under the National Environmental Protection Act ("NEPA") to evaluate the risks of exempting millions of cubic yards of radioactive waste from regulations that protect the public when radioactive material is transported on the nation's streets, highways, and rail lines.

This case is not a challenge to NRC's substantive rulemaking. It is a challenge to the NRC's failure to comply with NEPA in evaluating these risks.

NRC's Finding of No Significant Impact was arbitrary and capricious. The record demonstrates that impacts *were* significant, and an EIS was required, because radiation doses exceed all relevant criteria, because comments raised a substantial scientific controversy about low-dose radiation, and because uncertain risks were presented that NRC should have evaluated. Further, NRC did not explain why impacts were not significant. Finally, NRC did not consider all relevant factors.

NRC did not fulfill its responsibility under NEPA. Instead, it issued a perfunctory and misleading Environmental Assessment and then summarily dismissed public comments that objected to its failure to evaluate impacts.

Why does this matter? Radiation causes cancer, birth defects, genetic mutations, impaired gestation, and a number of other pathologies. The average levels of acknowledged radiation from activities at issue here will cause eight additional cancers per 10,000 persons exposed, six of them fatal.

Radiation from unregulated transportation affects two distinct classes of the public. Transport workers receive the largest doses because they are regularly and closely exposed. Impact to these "maximally exposed individuals" is evaluated in terms of the individual doses and the consequent increased individual risk of radiation-caused pathologies. The rest of the public are subject to smaller individual doses, which, however, can be significant because this group is so numerous. Impact to the rest of the public is evaluated in terms of the collective dose, which translates into increased numbers of pathologies in the population. Evaluation of impacts to both of these classes of the public should take into account cumulative exposures to other preventable sources of radiation.

In deciding to permit unregulated transportation of radioactive material, NRC relied on a paper written by International Atomic Energy Agency ("IAEA") contractors. Although NRC and IAEA's contractors consistently referenced IAEA's 1 mrem dose standard for deregulated activities, they failed to meet it. NRC failed to explain why doses up to 42

times higher than this standard – doses that *average* 23 times higher – are not significant. These doses *are* significant because they exceed the 1 mrem standard for deregulated activities recommended by IAEA and other scientific organizations, and because they exceed seven out of eight domestic regulatory standards.

The dosage criterion used by NRC and IAEA was based on consideration of only one type of pathology, fatal cancers, and only one type of subject, the standard man. Commenters argued that the radiation dose criterion should be based on the emerging scientific consensus that low-dose radiation causes numerous other pathologies, and that sensitive populations other than the standard man experience higher risks and graver consequences. These commenters identified peer-reviewed scientific literature and asked NRC to consider it. NRC ignored its responsibility to address this controversy and simply dismissed these comments as "beyond the scope" of the rulemaking.

Commenters pointed out that NRC had not evaluated the number and volume of exempt shipments affected by the rule, data that is essential to evaluate collective and maximally exposed individual doses. Despite evidence that exemption permits unregulated transportation of millions of cubic yards of radioactive waste, NRC failed to make any effort to estimate

affected shipments or to evaluate collective doses. NRC's Environmental Assessment even implied that radioactive waste is never exempt.

As commenters pointed out, NRC also failed to consider cumulative effects, to evaluate accidents, and to consider the precedent of adopting IAEA's exemption scheme for other pending deregulation proposals. In short, NRC simply failed to take the "hard look" that NEPA requires.

II. STANDING

Federal Respondents, Nuclear Regulatory Commission et al., (NRC) challenge Petitioners standing to seek judicial review arguing that it implicates this Court's jurisdiction.[1]

Petitioners Nuclear Information and Resource Service, Committee to Bridge the Gap, Public Citizen, Inc. and Redwood Alliance are non-profit organizations comprised of individual members of the public having a common interest in protecting public health from radioactive sources and practices, including those related to nuclear energy. Here, those interests give rise to concerns that the public, including transport workers, will be exposed to excessive levels of radiation resulting from the exemption rules adopted by the NRC and the Department of Transportation Research and

[1] NRC Brief, p. 34.

Special Administration (DOT/RSPA) in coordinated rulemaking proceedings, each of which relied upon the NRC environmental investigation required under the National Environmental Protection Act ("NEPA").[2]

Petitioners and individual members participated in the rulemaking proceedings leading up to NRC's final rule here at issue. The right to seek judicial review is statutorily protected under Section 10(a) of the Administrative Procedure Act.[3] This Court should examine its jurisdiction in the context of standing.[4]

Contrary to NRC's assertions, however, Petitioners standing is neither "problematic" nor "well short of established standards" under applicable

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[2] 42 U.S.C. §§4321 *et seq.*

[3] 5 U.S.C. §702.

[4] *Public Citizen v. Department of Transportation*, 316 F.3d 1002, 1014 (9th Cir. 2003), *reversed on other grounds Department of Transp. v. Public Citizen*, 541 U.S. 752 (2004), on remand *Public Citizen v. DOT*, 378 F.3d 958 (2004).

[5] *Public Citizen, supra,* 316 F.3d at 1015-1020; *Citizens for Better Forestry v. U.S. Dept. of Agriculture,* 341 F.3d 961, 969-974 (9th Cir. 2003); *Cetacean Community v. Bush*, 386 F.3d 1169, 1174-1177 (9th Cir. 2004); *City of Sausalito v. O'Neill*, 386 F.3d. 1186, 1197-1200 (9th Cir. 2004); *Ocean Advocates v. U.S. Army Corps of Engineers*, 402 F.3d 846, 859-860 (9th Cir. 2005) *amending prior opinion* at 361 F.3d 1108 (9th Cir. 2004); *Ashley Creek Phosphate Co. v. Norton,* ___F. 3d ___, 2005 U.S. App. LEXIS 17985 (9th Cir. Aug. 22, 2005).

Constitutional and non-Constitutional criteria of this Court.[5] Moreover, establishing standing for any one Petitioner provides standing for all.[6]

Because standing was raised by the NRC for the first time on brief, Petitioners attach declarations of mission statements and member activity to this Reply as factual support for standing.

A. Constitutional Standing

To satisfy Article III's standing requirements one alleging substantative or procedural violation 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 addressed by a favorable decision.[7]

Standing may hinge on an injury based on a NEPA procedural violation.[8] Petitioners here challenge the adequacy of NRC's environmental investigation and documentation procedures required under NEPA that

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[6] *Public Citizen, supra,* 316 F.3d at 1015; *Cetacean, supra,* 386 F.3d at 1174.

[7] *Public Citizen, supra,* 316 F.3d at 1015; *Citizens for Better Forestry, supra,* 341 F.3d at 969; *Cetacean, supra,* 386 F.3d at 1174; *City of Sausalito, supra,* 386 F.3d at 1197; *Ocean Advocates, supra,* 402 F. 3d at 859; *Ashley Creek, supra,* 2005 U.S. App. LEXIS 17985, -.

[8] *Citizens for Better Forestry, supra,* 341 F.3d at 971; *Ashley Creek, supra,* 2005 U.S. App. LEXIS 17985, -.

resulted in an Environmental Assessment ("EA") with a Finding of No Significant Impact ("FONSI"). Unquestionably, the Petitioners assert a cognizable "procedural injury." [9]

1. Injury in Fact

To satisfy the "injury in fact" requirement, Petitioners' assertion of a procedural injury must be supported by a showing that the "procedures in question" are designed to protect some threatened "concrete interest" that is the ultimate basis of standing.[10] The NEPA "procedures in question" here are those that require Federal agencies such as NRC to perform certain types of environmental analysis before promulgating regulations. Petitioners assert that NRC failed to properly adhere to NEPA requirements.

Broadly interpreting NEPA, this Court has recognized standing for individuals or groups of individuals that sue to require preparation of adequate environmental documentation when contending the challenged federal action will adversely affect the environment.[11] In addition, Petitioners must satisfy the "concrete interest" test by establishing a

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[9] *City of Sausalito, supra,* 386 F.3d at 1197; *Ashley Creek, supra,* 2005 U.S. App. LEXIS 17985, -.

[10] *Public Citizen, supra,* 316 F.3d at 1015; *Citizens for Better Forestry, supra,* 341 F.3d at 969-970; *City of Sausalito, supra,* 386 F.3d at 1197; *Ocean Advocates, supra,* 402 F.3d at 859-860; *Ashley Creek, supra,* 2005 U.S. App. LEXIS 17985, -.

[11] *Cetacean, supra,* 386 F.3d at 1179.

"geographic nexus" between their claim and the location suffering the environmental impact.[12] Petitioners have demonstrated that the exemption rules authorize unregulated transportation of radioactive waste materials on the nation's roads, highways, and rail lines.

Petitioners have submitted declarations by their members and have identified harm from radiation that evidence the impact of NRC action. This evidence credibly informs the Court that members will live, travel, and work in impacted areas exposed to radiation levels that fall within a range of risk adverse to public health. Petitioners have demonstrated a "credible threat" to the public physical well-being from radioactive materials that falls within the range of injuries to cognizable interests that confer standing.[13]

2. Causation

Once Petitioners establish an injury in fact under NEPA, causation and redressability requirements are relaxed. Petitoners "need only establish the reasonable probability of the challenged action's threat to [their] interests."[14]

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[12] *Public Citizen, supra,* 316 F.3d at 1015; *Ashley Creek, supra,* 2005 U.S. App. LEXIS 17985, -.

[13] *Public Citizen, supra,* 316 F.3d at 1016; *Citizens for Better Forestry, supra,* 341 F.3d at 970-71; *City of Sausalito, supra,* 386 F.3d at 1198-99; *Ocean Advocates, supra,* 402 F.3d at 859.

[14] *Public Citizen, supra,* 316 F.3d at 1016; *Citizens for Better Forestry, supra,* 341 F.3d at 972.

Petitioners have identified record evidence and submitted additional evidence that radiation doses allowed under the rule are adverse to public health and, thus, that permitting these doses causes injury. Petitioners 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.[15] Further, NRC concedes throughout that some of the radioactive materials exempted by the rule will have a higher radiation level, dosage potential, and range of risk.[16]

3. Redressability

In "procedural injury" cases challenging environmental analysis, Petitioners that assert "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 consideration that [the relevant statute] requires an agency to study."[17]

Petitioners have satisfied this "relatively easy burden." If NRC had conducted the NEPA analysis Petitioners suggest, there is little doubt its decision could be influenced since it was required to "insure that . . .

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[15] 40 CFR §§ 1508.8(b), 1508.27(b)(1) (2004).
[16] *E.g.* NRC Br. 6, 12, 13, 17.
[17] *Public Citizen, supra,* 316 F.3d at 1019.

environmental amenities and values . . . be given appropriate consideration in [administrative] decision making."[18] NEPA is designed to protect the environment by "fulfilling the responsibilities of each generation as trustees of the environment for succeeding generations" and "attaining the widest range of beneficial uses without degradation."[19]

If Petitioners requested relief is granted, the NRC will have to conduct an appropriate environmental analysis of radiation impact which could result in a different exemption rule or no exemption – precisely the constitutional remedy contemplated.

NRC argues redressability is not available because DOT/RSPA and its coordinated rulemaking are not before the Court. NRC is wrong. DOT/RSPA and its rulemaking activity are before the Court and so noticed.[20] Importantly, NRC's flawed environmental investigation and documentation here at issue represents the sole NEPA undertaking for two contemporaneous rulemakings purposely coordinated between the NRC and DOT/RSPA rulemakings. Should this Court grant Petitioners' request to set

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[18] *Id.*, quoting 42 U.S.C. § 4332(2)(B).
[19] 42 U.S.C. §4331(b); *Ocean Advocates, supra,* 402 F. 3d at 861.
[20] See Petitioners' Notices of Pending Related Appeal filed August 12, 2005 in this Case No. 04-71432 and in Case No. 05-16327(*NIRS et al. v. Dept. of Transportation Research and Special Programs Administration*).

aside NRC's NEPA investigation and documentation, that would also remedy Petitioners' substantive challenge to the DOT/RSPA rulemaking.[21]

B. Non-Constitutional (Prudential and Statutory) Standing

In addition to Constitutional standing, Petitioners bringing a NEPA enforcement action under the APA, such as here, must meet statutory requirements for standing by establishing (1) that there has been final agency action adversely affecting them and (2) that, as a result, they suffer legal wrong or that their injury arguably falls within the "zone of interests" protected by the substantive statutory provisions whose duties they seek to enforce or claim was violated.[22] While NEPA grants no *statutory* standing directly to Petitioners, they have standing to seek enforcement of NEPA requirements imposed on NRC action through the APA, Section 10(a).[23]

Under the "arguably within" construction, Courts are "fairly

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[21] Petitioners' complaint for judicial review of the DOT/RSPA rulemaking was dismissed by the District Court for want of appellate jurisdiction, a decision now on appeal. See Case No. 05-16327 appeal of decision of U.S. District Court, N.D. CA, San Francisco, in Case No. CV-0-04740 MHP. Should this Court grant Petitioners' appeal, it may consider jurisdiction for review concurrent, apply its decision in the NRC case, and remand directly to the respective agencies.

[22] *Public Citizen, supra,* 316 F.3d at 1019; *Cetacean, supra,* 386 F.3d at 1175; *City of Sausalito, supra,* 386 F.3d at 1199-1200; *Ocean Advocates, supra,* 402 F.3d at 861; *Ashley Creek, supra,* 2005 U.S. App. LEXIS 17985, -.

[23] 5 U.S.C. § 702; *Cetacean, supra,* 386 F.3d at 1177; *Ashley Creek, supra,* 2005 U.S. App. LEXIS 17985, -.

generous" with grants of standing under the APA since the "zone of interests" test is "not meant to be especially demanding," and only marginally related or inconsistent interests that cannot reasonably be assumed to be those Congress intended to protect should result in denial of standing.[24]

C. Organizational Standing

Finally, Petitioners' are entitled to bring suit on behalf of its members. "An association has standing to bring suit 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."[25] Petitioners have alleged radiation injury to members. The interests at stake - the potential adverse health consequences from radiation- are pertinent to the interests of the organizations. There is no indication that resolution of this case would require or be assisted by the participation of individual members.[26]

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[24] *Cetacean, supra,* 386 F.3d at 1177; *Ocean Advocates, supra,* 402 F.3d at 861.

[25] *Public Citizen, supra,* 316 F.3d at 1019; *Ocean Advocates, supra,* 402 F. 3d at 861.

[26] *Id.*

The requirement for associational standing that Petitioners' members would otherwise have standing to sue in their own right has been met under NEPA and the APA.[27]

III. OVERARCHING POINTS

A. Petitioners Challenge NRC's NEPA Compliance, Not Its Substantive Rule.

NRC repeatedly mischaracterizes Petitioners claims as a challenge to its substantive rule. While Petitioners *oppose* the rule, their action *challenges* only NRC's failure to comply with NEPA. Petitioners believe that the NRC would not have adopted this rule if it had complied with NEPA, and will not re-adopt it when required to comply.

Petitioners demonstrate that NRC's failure to prepare an EIS was arbitrary and capricious based on the presence of three of the CEQ's "intensity factors" that required NRC to find that its action significantly affects human health and the environment: public health impacts, controversy, and uncertainty.[28] Petitioners also demonstrate that NRC's adoption of a FONSI was arbitrary and capricious because NRC failed to

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[27] *Cf. Cetacean, supra,* 386 F.d at 1179.

[28] *National Parks & Conservation Ass'n v. Babbitt*, 241 F.3d 722, 731 (9th Cir. 2001), *cert. denied, Holland America Line-Westours, Inc. v. National Parks and Conservation Ass'n*, 534 U.S. 1104 (2002); 40 CFR § 1508.27 (2004).

consider all relevant factors in its EA or elsewhere, including collective and cumulative radiation effects, impacts from accidents, and the effect of the rulemaking as precedent.[29] These are failures to comply with a duty under NEPA to develop and provide information, not disagreements with a substantive rule.

B. Deference Is Not Due To NRC's View Of NEPA Compliance.

Mischaracterizing this action as a challenge to its substantive rule, NRC repeatedly invokes its expert agency status to argue that Petitioners and this court must defer to its judgment. For example, NRC repeatedly argues that Petitioners merely object to NRC's and IAEA's "methodology" for determining exemption levels and then claims that deference is due to agency choices about scientific methodology.[30] But Petitioners do not challenge the adoption of a dose-based, radionuclide-specific methodology for exemption to replace the old fixed-value system.

Petitioners do challenge NRC's view of its obligations under NEPA. NEPA required NRC to develop and present information to explain the health consequences of its decision, but it did not do so. Despite clear evidence that the rule would result in significant health impacts to transport workers, NRC did not meet its duty to provide a convincing statement of

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[29] *Id.*

[30] *E.g.*, NRC Br. 32, 42.

reasons why those impacts are insignificant.[31] Instead, by citing irrelevant facts and obscuring the relevant criteria, NRC failed to articulate a rational connection between facts found and the choices it made.[32] Despite comments identifying serious scientific concern with low dose radiation effects, NRC did not provide a convincing and well reasoned explanation demonstrating why those comments did not suffice to create a public controversy.[33] And NRC did not provide a reasoned evaluation of all relevant factors, including cumulative and collective doses, accidents, and the effect of the rule as precedent.[34]

C. NRC Was On Notice Of Its Failure To Comply With NEPA

NRC claims that it was not alerted to its obligation under NEPA to address the issues that Petitioners have raised. NRC argues that, in complying with NEPA, it was not required to consider comments that did

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[31] *National Parks, supra,* 241 F.3d at 730; *Save the Yaak Committee v. Block*, 840 F.2d 714, 717 (9th Cir.1988).

[32] *Environmental Defense Center, Inc. v. U.S. E.P.A.*, 319 F.3d 398, 428, n. 46; *Midwaters Trawler Co-op v. Department of Commerce*, 282 F.3d 710, 716 (9th Cir. 2002).

[33] *National Parks, supra*, 241 F.3d at 736.

[34] *Price Rd. Neighborhood Assn. v. U.S. Dept. of Transp.*, 113 F.3d 1505, 1511 (9th Cir. 1997); *Bicycle Trails Council v. Babbitt*, 82 F.3d 1445, 1466 (9th Cir. 1996).

not expressly reference the EA, because these comments merely "concerned the substantive rule itself."[35] This is absurd.

First, comments objecting that NRC failed to explain why impacts were not significant, failed to conduct critical analyses, and failed to address a substantial controversy clearly put the NRC on notice of the defects in its EA.[36] These comments go directly to the sufficiency of the EA and the FONSI because they address whether NRC's action will affect public health and safety, whether there is public controversy, whether the action has uncertain and unknown risks, whether the action serves as a precedent, and whether the action is related to other actions with cumulatively significant impacts. These are precisely the "intensity factors" that NRC was obligated to consider, and which determined that an EIS was required.[37]

Second, in an effort to excuse its failure to prepare an adequate EA, NRC notes that both its statutory mission and NEPA require it to assess environmental consequences.[38] NRC then argues that discussion of the basis for the substantive rule in rulemaking notices provided a sufficient Environmental Assessment. But if NRC is excused from observing the

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[35] NRC Br. 44.
[36] *See* Pet. Br. 14-16, citations to comments.
[37] *National Parks*, *supra*, 241 F.3d at 731; 40 CFR § 1508.27 (2004).
[38] NRC Br. 46.

distinction between environmental evaluation under NEPA and under its substantive mandate, the public should not be held to it.

Third, it is disingenuous to claim that comments received prior to the draft EA did not alert NRC to NEPA issues.[39] NRC stated that it *had* considered these comments in preparing the draft EA.[40]

Fourth, NRC is simply incorrect that only two comments referenced the EA and that "[p]etitioners themselves filed *no* comments whatsoever on the EA."[41] In just those comment letters Petitioners cited, NRC overlooks three letters expressly referencing the EA, including Petitioner Public Citizens' comments on "Draft NUREG/CR-6711," the draft EA.[42]

D. Extra-record Evidence Is Admissible

Petitioners properly offer extra-record evidence to demonstrate NRC's failure to consider all relevant factors, to explain its decision, and to articulate opposing views of a controversy.[43] NRC admits that this circuit allows such evidence, but objects that NRC did not fail its NEPA duties.[44]

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[39] NRC Br. 44-45.
[40] EUR 2:296.
[41] NRC Br. 16, 43.
[42] EUR 2:445, 449, 502.
[43] *National Audubon Society v. U.S. Forest Service,* 46 F.3d 1437 (9th Cir. 1993); *County of Suffolk v. Secretary of Interior*, 562 F.2d 1368, 1384-1385 (2d Cir. 1977).
[44] NRC Br. 38-39.

Petitioners' evidence disproves this; and NRC's objection goes to weight, not admissibility.

NRC objects that Petitioners did not offer these declarations as comments. However, the obligation to conduct NEPA analysis was NRC's; and Petitioners offer declarations now to demonstrate that NRC did not respond to comments that *were* made. For example, numerous comments objected that NRC should evaluate exempt shipment data and collective impacts.[45] Petitioners' declarations counter NRC's erroneous claims that radioactive waste is never exempt and that shipment data was not available, and demonstrate that NRC's failure even to consider collective impacts was arbitrary and capricious.

NRC argues that Petitioners could have submitted this evidence in support of a petition to modify the rulemaking. However, Petitioners have chosen to avail themselves of their right to challenge NRC's failure to comply with NEPA without further ado.

NRC claims it was not responsible to evaluate comments submitted to DOT. But NRC and DOT committed to coordinate rulemakings and

[45] See notes 89-92, below.

consider all comments, and NRC could not have fulfilled the NEPA responsibility it undertook on behalf of both agencies without doing so.[46]

IV. NRC's FONSI WAS ARBITRARY AND CAPRICIOUS

A. NRC Failed To Acknowledge That Radiation Doses To Transport Workers Are Significant Or To Explain Why They Were Not

NRC had a duty either to prepare an EIS to address significant public health impacts, or to provide "a convincing statement of reasons" to explain why these impacts are insignificant.[47] NRC did neither. Instead, NRC released two EAs that misled the public as to actual doses and did not respond to comments asking why it found doses insignificant.

As Petitioners set forth in their opening brief, the IAEA had developed generic exemption levels for each radionuclide to protect the public from activities at *fixed* facilities.[48] These generic exemption levels were based on the IAEA's expressly adopted deregulation criterion of a maximum individual dose of 1 mrem. The generic exemption levels were *not* developed to meet this 1 mrem dose standard for transportation

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[46] EUR 1:156, 159, 167-168, 169.1, 206, 214-215, 217; EUR 2:316; EUR 3:634-635.

[47] *National Parks, supra,* 241 F.3d at 730; *Save the Yaak Committee, supra,* 840 F.2d at 717; 40 CFR § 1508.27(b)(2) (2004).

[48] Pet. Br. 12-13.

activities, and in fact, they are not restrictive enough to meet it for transportation.[49] Actual doses to transport workers using the generic exemption levels will range up to 42 times this standard, and will be on average 23 times higher.[50] NRC chose to use them anyway.

1. NRC's Draft And Final EAs Were Misleading And Conclusory

In the draft EA, NRC recited IAEA's general principles for exempting radioactive material from regulation and then recited IAEA's dose criteria, including the 1 mrem (10 uSv) criterion for individuals under normal (non-accident) conditions.[51] The draft EA does not disclose that IAEA's generic exemption values result in doses two orders of magnitude higher than the 1 mrem criterion when used in transportation. Instead, it states that "the results were found similar" for transportation and non-transportation scenarios.[52] The draft EA contained *no* discussion of the health effects of radiation doses or how NRC determined what doses would be significant; it merely reported that "IAEA has judged that this change would not significantly increase risk to individuals."[53]

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[49] EDR 1:697.
[50] *Id.*; EUR 3:655.
[51] EUR 2:300.
[52] Draft EA, p. 14, EUR 2:301.
[53] EUR 2:300-301, 306-308, 292.

Comments objected that the draft EA was misleading: "[t]he statement 'results were found to be similar' is misleading" in view of the fact that some of the exemption values were "too high (by up to a factor of one hundred) to meet IAEA's own safety goals" and that average doses would exceed the 1 mrem goal 25-fold.[54] Referencing the draft EA, the New York State Attorney General's office objected that the average dose would exceed IAEA's own exemption criterion by a factor of 25.[55] Other commenters objected to the failure to meet the IAEA criterion as well.[56]

Dr. Judy Johnsrud objected that the statement in the draft EA that "IAEA has judged that this change would not significantly increase risk to individuals" was an insufficient explanation of the impacts.[57] She asked that NRC explain how the level of acceptable risk was determined and what it meant by "significantly."

The final EA did not respond to these comments and continued to obscure the actual doses. Once again, the EA claimed that "results were found to be similar" to the 1 mrem exemption criterion and simply asserted the borrowed conclusion that "IAEA has judged that this change would not

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[54] EUR 2:445-446.
[55] EUR 2:449.
[56] EUR 2:513.
[57] EUR 2:427.

significantly increase risk to individuals."[58] The final EA further misled the public by implying that the maximum doses would be less than *2 mrem* by reporting a comment to that effect.[59] No effort was made in the final EA to define acceptable risk, discuss health consequences in real terms, or explain what NRC or IAEA meant by "significantly."

2. Other Material In The Record Could Not, And Did Not, Correct The EAs

This Court has held that an agency must support its decision to issue a FONSI in the EA, not elsewhere in the administrative record:

> "We do not find adequate support for the Forest Service's decision in its argument that the 3,000 page administrative record contains supporting data. The EA contains virtually no references to any material in support of or in opposition to its conclusions. That is where the Forest Service's defense of its position must be found."[60]

Citing *Ocean Advocates*, NRC claims it could meet its NEPA obligations through material in the record other than the EA. But *Ocean Advocates* did *not* so hold. It did not reach the issue because it found that the other material was factually inaccurate and insufficient.[61] The record here is similar.

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[58] EUR 3:527, 540.
[59] EUR 3:549.
[60] *Blue Mountains Biodiversity Project v. Blackwood,* 161 F.3d 1208, 1213-1214 (1998); *see also* Pet. Br. 32, n. 111.
[61] *Ocean Advocates, supra*, 402 F.3d at 866.

Rulemaking notices contained no substantive response to Dr. Johnsrud's request that the NRC explain what it meant by "significantly." The Final Rule simply referred her to the "background" section.[62] But the background section does not discuss any criterion of significance other than to recite the IAEA's 1 mrem dose standard.[63] And the background section repeats the EA's erroneous claim that the 1 mrem standard *will be* met. After referencing the development of generic exemption levels for fixed facilities to meet the 1 mrem standard, it states that "*the calculated dose to transport workers that would result from repetitive transport of each radionuclide at its exempt activity concentration was the same* ((10 uSv)(*1 mrem*)) *per year.*"[64] As the court held in *Ocean Advocates*, an inaccurate factual contention can never support an agency's determination that a project will have no significant impact.[65]

NRC's claim in its brief that it merely "referenced" but never adopted the 1 mrem standard must be judged by the record. The record shows that NRC repeatedly cited the 1 mrem standard in support of its contention that

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[62] EUR 3:647.
[63] EUR 3:647.
[64] *Id.*, emphasis added. While IAEA researchers did calculate levels for transportation that *would* ensure that this 1 mrem criterion would be met, those were not the levels adopted. EUR 1:1-8.
[65] *Ocean Advocates, supra,* 402 F.3d at 866.

impacts would not be significant and repeatedly stated or implied that the rule would in fact meet the 1 mrem standard.[66]

In response to comments that objected that doses that average 23 mrem and range up to 42 mrem would not meet the 1 mrem standard, the Final Rule offered irrelevant comparisons to unpreventable background radiation and the inaccurate claim that the doses are "well below regulatory limits."[67] NRC identifies these "regulatory limits" now for the first time in its brief, citing an extraordinary limit applicable only to nuclear workers at licensed facilities.[68] But the only regulatory standards relevant to unprotected and unknowing transport workers are the standards for *members of the public*. Why else did NRC reference IAEA's exemption dose criterion and not its occupational dose standards?

NRC now also cites the *only* regulatory limit for doses to members of the public that is not exceeded by the acknowledged doses, the 100 mrem limit for public doses from licensed activities at 10 C.F.R. § 20.1301(a)(1).

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[66] EUR 1:160-161, 171-172, 174-175, 182, 233-234; 2: 300-301, 3:540, 647.

[67] EUR 3:650, 655.

[68] NRC Br. 49. Unlike transport workers who may be unknowingly exposed to exempt *materials* with no regulatory protections, nuclear workers knowingly assume this risk and are protected by regulatory requirements, including the regulations at 10 C.F.R. Part 71 for transportation of radioactive material. NRC does not treat transport workers exposed to unregulated materials as nuclear workers when evaluating deregulation impacts in other contexts. ERE 1004.

But NRC failed to acknowledge in its rulemaking or its brief that transport worker doses exceed the allowable public doses in at least seven other regulatory standards, including those promulgated by NRC itself.[69] So, contrary to NRC's claim, allowed doses *do* exceed essentially all public dose standards, a fact that should have weighed heavily toward finding them to be significant.

The fact that doses also exceed the 1 mrem threshold promulgated by numerous other organizations should also have weighed heavily toward a finding of significance.[70] So too should the fact that the average levels of acknowledged radiation from activities at issue here will cause eight additional cancers per 10,000 persons exposed, six of them fatal.[71]

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[69] 40 CFR § 141.66, 61.92, 197.20, 190.10, 191.15, 191.03 (2004); 10 CFR §§ 61.41, 20.1402 (2004); *see also* ERE 1:836-837, 899.

[70] *See* Pet. Br. 26-28. NRC now argues for the first time in its brief that the 1 mrem exemption criterion only applies to complete deregulation of radioactive *materials* (sources) under all circumstances. NRC Br. 50. Not so. IAEA's 1 mrem exemption criterion applies to sources and *practices*. Petitioners' Supplemental Excerpts of Record ("PSER") 2. Transportation is a "practice" under IAEA's definition: "any human *activity* that . . . extends exposure to additional people or modifies the network of exposures from existing sources, so as to increase the exposure or the likelihood of exposure of people or the number of people exposed." PSER 4. And NRC cited this definition in response to comments asking it to define "practice" in the context of ensuring that doses from practices would not exceed the 1 mrem criterion. EUR 3:654-655.

[71] Pet. Br. 28.

NRC's brief also offers an irrelevant comparison to the previous rule, arguing that the new rule would reduce the average exposure to transport workers. But even if an agency believes an action is beneficial on balance, an EIS is required if the action permits significant effects.[72] The question that NRC never addressed is why still allowing doses in excess of the stated criterion is not significant. As the State of New York's Attorney General's Office objected in comments on the draft EA, "[i]f a major regulatory revision is being carried out, thereby offering an opportunity to remedy an existing section of 10 CFR Part 71 that allowed a 50-fold exceedance of a recommended dose, then the major regulatory revision should ensure a 50-fold dose reduction."[73]

By offering irrelevant comparisons to defend its significance determination, and by omitting any discussion of the significance of radiation impacts in real terms, NRC failed its duty to "articulate a rational connection between the facts found and the conclusions made."[74]

NRC offered only one other response to comments objecting to its failure to meet the 1 mrem standard. NRC stated that the doses it had previously identified as "average" were actually "very unlikely," claiming

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[72] 40 CFR §§ 1508.8(b), 1508.27(b)(1) (2004).
[73] EUR 2:449.
[74] *Environmental Defense Center, Inc., supra,* 319 F.3d at 428; *Midwater Trawler Co-op, supra,* 282 F3d. at 716.

that IAEA's assumptions were unduly conservative, and backing away from the IAEA calculations on which it had previously relied.[75] NRC now claims that it did not "repudiate" the IAEA's calculations.[76] NRC misses the point. Because this response was not based on *any evidence at all*, NRC once again failed to articulate a rational connection between any *facts* found and the conclusions made.

B. NRC Failed To Address The Public Controversy Raised By Comments

Because comments raised substantial questions about the significance of the low dose radiation effects under the rule, NRC was obliged to prepare an EIS or to explain why these comments did not suffice to require one.[77] NRC now disputes that comments raised a controversy, and then, inconsistently, argues that it addressed it.

Comments did raise the controversy by:

- disputing the accuracy of the dose-response model for cancers;
- disputing use of radiation standards that do not incorporate non-cancer effects, citing scientific studies showing that low-level doses cause numerous other effects, including birth defects, heritable genetic mutations, genomic instability, bystander effects, impaired gestational growth, childhood cancers from exposure to pregnant women and pre-conception fathers, and synergistic effects with other toxics;

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[75] Pet. Br. 33-34.
[76] NRC Br. 50-51.
[77] *National Parks, supra*, 241 F.3d at 736; *see also Public Citizen, supra*, 316 F.3d at 1027.

- objecting to NRC's reliance on IAEA and International Commission on Radiological Protection ("ICRP") standards that do not reflect this research;
- noting research that sensitive populations are affected more severely than is the standard reference man; and
- citing Congressional and public opposition to deregulation proposal to demonstrate the depth of this controversy.[78]

These comments cited peer-reviewed scientific studies and studies by other agencies.[79]

NRC did not address the controversy by providing a "convincing" and "well-reasoned explanation demonstrating why those responses disputing the EA's conclusions [did] not suffice to create a public controversy based on potential environmental consequences."[80] The fact that NRC did not address any of the comments substantively is illustrated by its citation of only a single conclusory paragraph in the Final Rule in support of its contention to the contrary.[81] *Nothing* in the EA addressed it.

NRC's brief repeats the red herring that fundamental research was beyond the scope of the rulemaking, and then irrelevantly claims that this Court must defer to its technical expertise and its reliance on other organizations' standards.[82] NRC entirely misses the point that its obligation

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[78] Pet. Br. 15-16, 36-38.
[79] EDR 1:691-692; EUR 2: 395-396, 417, 419, 428, 479.
[80] *National Parks, supra*, 241 F.3d at 736.
[81] NRC Br. 53.
[82] NRC Br. at 54-57, EUR 3:635-636, 636-637, 653-654.

was to develop and present information in response to the controversy raised, not necessarily to resolve it.[83] NRC was obliged to provide a reasoned discussion of the issues comments had raised, and, at minimum, to explain why the comments did not suffice to create a controversy.[84] NRC's claim that the controversy "played no part in the NRC's rulemaking" simply asserts that NRC chose not to do what NEPA says it must do: respond to the controversy.[85]

Cases cited by NRC do not support the proposition that an agency, no mater how expert, need not document its conclusions and respond to the controversy raised. Most of NRC's "expertise" cases do not address the agency's responsibility when controversy is raised, merely stating the commonplace that deference is due to agency expertise in a battle of the experts.[86] In other cases cited, the court held only that the controversy had

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[83] *LaFlamme v. F.E.R.C.*, 852 F.2d 389, 401 (9th Cir. 1988); *Jones v. Gordon,* 792 F.2d 821, 828-829 (9th Cir. 1986). And even absent a "controversy," NRC was obliged to provide reasoned responses to comments directly challenging the scientific basis of NRC's NEPA document. *Center for Biological Diversity v. U.S. Forest Service*, 349 F.3d 1157, 1167 (9th Cir. 2003).

[84] *National Parks, supra*, 241 F.3d at 736.

[85] NRC Br. 53-54.

[86] *See e.g., Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 378 (1989); *Morongo Band of Mission Indians v. FAA*, 161 F.3d 569, 577 (9th Cir. 1998); *Inland Empire Pub. Lands Council v. Schultz,* 992 F.2d 977, 981 (9th Cir. 1993); *Baltimore Gas & Elec. Co. v. Natural Resources Defense Council, Inc.*, 462 U.S. 87, 103 (1983)

not been raised by comments.[87]

The only case cited by NRC discussing expertise in the context of a controversy *supports* Petitoners' argument that the agency has an obligation to consider, develop, and present opposing views when controversy is raised. *Cellular Phone Taskforce v. FCC*, 205 F.3d 82, 88, 90-93 (2d Cir. 2000) held that the FCC could borrow a standard from expert agencies, but only because *the record included* extensive consultation with three other federal agencies, consideration and discussion of the conflicting evidence about new theories of harm by both the expert agencies in setting standards and by the FCC, reasoned responses to comments, and consideration of "all of the evidence." None of this happened here.

C. NRC Failed To Evaluate Shipment Data

An EIS is required when uncertain or unknown risks can be resolved by further collection of data.[88] Because it did not evaluate available data on the volume of exempt shipments, NRC failed to resolve uncertain and unknown risks. As comments pointed out, shipment data was essential to

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[87] *Greenpeace Action v. Franklin*, 14 F.3d 1324, 1335 (9th Cir. 1993); *Friends of Endangered Species, Inc. v. Jantzen*, 760 F.2d 976, 986 (9th Cir. 1985)(no controversy where consensus on impacts); *Seattle Comty. Council Fed'n v. FAA*, 961 F.2d 829, 831, 833 (9th Cir. 1992).

[88] 40 CFR § 1508.27(b)(5) (2004); *National Parks, supra*, 241 F.3d at 731-732; *Blue Mountains Biodiversity Project, supra,* 161 F.3d 1at 1213-1214; *Anderson v. Evans*, 350 F.3d 815, 835 (9th Cir. 2003).

evaluate the frequency with which transport workers would be exposed.[89] Shipment data is also essential to evaluate collective population doses to other members of the public.[90] Comments by the State of Nevada on the EA pointed out that NRC should have calculated collective doses and should have obtained shipment data.[91] Numerous other comments objected to NRC's failure to collect shipment data and to evaluate collective dose impacts.[92]

NRC now claims that it used the best data available to extrapolate information about likely exempt shipments. Not so. NRC neither collected nor considered *any* data on waste shipments. The only shipment data that NRC even referenced was for *non-exempt* shipments and shipments of small quantity commercial isotopes, data that is entirely irrelevant to determining volumes of exempt *waste.*[93] Indeed, the EA erroneously implied that radioactive waste would *not* be shipped under exemption,[94] despite evidence

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[89] EUR 2:514.
[90] EUR 1:139-141; ERE 1:897, 983.
[91] EUR 2:381-382, 407-410, 483.
[92] EDR 684; EUR 1:177, 271-272; EUR 2:368-371, 397-399, 420, 452, 457, 461, 473, 485, 503, 508-509, 514.
[93] EUR 3:549-550.
[94] 3:550 (EA states that because DOE mentions no exempt waste shipments, exemption will not affect site clean ups).

in the record that millions of cubic yards of waste would in fact be shipped as exempt.[95]

NRC now backs away from its claim in the EA that "there are no data on the number and frequency of exempt packages shipped in the U.S." and claims that it was too difficult to collect this data.[96] But NRC offers no evidence whatsoever to support this claim, whereas Petitioners have demonstrated that waste shipment data is available and that the NRC is able to develop this information when it wants to.[97]

NRC now claims that shipment data was unnecessary because there was no uncertainty about collective doses. NRC argues that "[i]t is *implicit* in the NRC's analysis that members of the public not actually involved in transportation would receive much lower doses."[98] As "implicit" implies,

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[95] EUR 1:274 (Army to excavate 1.6 million cubic yards of exempt contaminated soil); EDR 1:708 (example shipment of 98 railcars of exempt soil); EDR 1:701 (same); EUR 1:254, 265-266 (high cost to determine exempt status implies substantial exempt waste shipments).

[96] EUR 3:549.

[97] ERE 1:875-897. NRC incorrectly argues that DOE's comments demonstrate that shipment data is difficult to obtain. NRC Br. 63. Not so. DOE merely said that the data was not yet available. EUR 1:265. The significant costs DOE referenced were *not* the expense of estimating shipment volumes, but the expense of determining whether a particular shipment is exempt after the rule change. NRC also disingenuously argues that there is no reporting requirement for exempt shipments. NRC Br. at 62. But Petitioners demonstrated that shipments can be determined from numerous available sources. ERE 895-896.

[98] NRC Br. 88, emphasis added.

NRC never made or supported this claim in the record. NRC also argues for the first time in its brief that "because collective doses . . . likely would be higher under the pre-existing rule, shipment data were not essential . . .."[99] NRC's decision can be upheld only on the basis of reasoning in the record.[100]

Furthermore, as Petitioners have demonstrated, these arguments are wrong in principle because collective doses are a function of both the size and the number of individual doses. Numerous small exposures to large populations may cause more cancers and adverse health impacts than relatively larger doses to a smaller cohort of maximally exposed individuals.[101]

NRC now claims that shipment data was not necessary to evaluate transport worker doses either.[102] But its only support is its claim that IAEA's assumptions about the duration of transport worker exposures were conservative, for which it offered no evidence at all.[103] NRC cannot articulate a rational connection between facts and conclusions when it offers no facts.

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[99] NRC Br. at 58, emphasis added.
[100] *Anaheim Memorial Hosp. v. Shalala,* 130 F.3d 845, 849 (9th Cir. 1997).
[101] ERE 1:983-984.
[102] NRC Br. 58-59, 65.
[103] EUR 3:652; Pet. Br. 33-34.

NRC argues that a 1977 EIS for *regulated* transportation of the much smaller volumes of *non-exempt materials* supports its litigation position that collective doses from millions of cubic yards of *exempt* shipments could be determined to be insignificant without further analysis.[104] NRCs admits that "these results do not apply directly to unregulated transportation" but claims that "there is no reason to believe that impacts of transporting exempt materials would differ significantly."[105] This simply wishes the problem away by ignoring the fact that collective doses are a function of exposures *and* volume. And, because NRC never cited the 1977 EIS to support a conclusion about collective impacts of exempt shipments, NRC makes this argument for the first time in its brief.

D. NRC Did Not Evaluate All Relevant Factors In The EA Or Elsewhere

Petitioners have demonstrated that NRC's EA was woefully inadequate because NRC omitted numerous critical analyses.

NRC now claims that comments did not identify the need to evaluate cumulative effects, accidents, changes to the LSA-1 regulations, and precedential effects, but each of these issues was raised in comments.[106] NRC had a duty to provide reasoned responses to concerns raised by

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[104] NRC Br. 60-61, 69-70.
[105] NRC Br. 61.
[106] Pet. Br. 15-16.

comments, and this Court should be skeptical of its conclusions in the absence of these responses.[107]

NRC also argues that no one has demonstrated that the evaluation of collective, accident, and cumulative impacts would have changed NRC decision.[108] But it was NRC, not the public, who was required to conduct the NEPA analysis; and Petitioners are entitled to demonstrate now that this analysis was inadequate.[109]

NRC argues that this Court must defer to its choice of analyses. But this Court should not defer to NRC's conclusory statement that impacts are insignificant when evidence shows NRC made clear errors of judgment, failed to take the requisite hard look, failed to consider all relevant factors, and failed to explain why impacts are insignificant.[110]

1. LSA-1

Deference to NRC's choice of analyses is not warranted where it entirely omits to analyze its action. Commenters objected that NRC had provided no analysis of changes to the regulation of LSA-1, which Petitioners have shown may cause significant impacts under both normal

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[107] *Center for Biological Diversity, supra,* 349 F.3d at 1167; *County of Suffolk, supra*, 562 F.2d at 1383.
[108] NRC Br. 76.
[109] *County of Suffolk, supra*, 562 F.2d at 1383.
[110] *Blue Mountains Biodiversity Project, supra,* 161 F.3d at 121; *Save the Yaak Committee, supra*, 840 F.2d at 717.

and accident conditions.[111] Despite this, LSA-1 was not even discussed in the EA. NRC argues for the first time in its brief that, because the new definition of LSA-1 was more restrictive than the old definition, there is no basis to claim that it may have significant impacts.[112] But an agency is responsible to evaluate impacts even if it believes its action is environmentally beneficial.[113] And it will not suffice for NRC to say *now* that "NRC had no reason to expect" adverse impacts.[114] NRC had an obligation under NEPA to evaluate and explain the effect of the changes.

2. Collective Doses

Deference to NRC's choice of analyses is not warranted where NRC identifies a standard of significance and then fails to conduct any analysis to determine if it is met. NRC identified a collective dose standard in the EA,

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[111] EUR 2:462-463, 469, 466, 511-512; EDR 686; Pet. Br. 47-49.
[112] NRC Br. at 66-67.
[113] 40 CFR §§ 1508.8(b), 1508.27(b)(1) (2004). Further, NRC is just wrong that the new rules require use of industrial packaging and do not permit unpackaged transportation of LSA-1 material. DOT's rule at 40 C.F.R. § 173.427*(b)* does permit industrial packaging for more radioactive LSA material (LSA-2, and 3), as well as LSA-1; but DOT's rule at 40 C.F.R. § 173.427*(c)* states that LSA-1 material "may be transported unpackaged" if contents do not escape under normal (non-accident) conditions. EDR 735. DOT's Final Rule states that "LSA-I and SCO-I *may be shipped unpackaged*" and "an LSA-I or SCO-I shipment *no longer is required to be in a DOT Specification 7A, an industrial packaging, or a strong tight packaging*, as is currently required by regulation." EDR 720. Thus, NRC should have evaluated the effects of increased dispersion in accidents.
[114] NRC Br. 66.

but provided absolutely no analysis in the EA or elsewhere to determine whether that standard would be met.[115] As discussed above, NRC did not evaluate potentially significant collective doses because it failed to collect shipment data or even to acknowledge that collective doses could be significant.[116] NRC failed to respond to comments or to explain why collective doses are insignificant.

3. Accidents

Deference to NRC's choice of analyses is not warranted when NRC *admits* that its methodology is wrong. Comments objected that the EA had not evaluated the risks of accidents involving exempt materials.[117] NRC now claims that accidents *were* considered, citing IAEA's contractors' use of the "Q-system" methodology to take accidents into account in calculating exemption values.[118] As Petitioners explained, the Q-system was designed to determine the maximum quantities of radionuclides permitted in certain types of packages (A1 and A2 packages) for *regulated* transport.[119] The Q-system is not appropriate to determine *exempt* activity concentrations, because its assumptions about exposure scenarios do not apply where

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[115] EUR 3:540 (EA stating collective dose criterion); *see also* EDR 696.
[116] See section C, above.
[117] EUR 2:449.
[118] NRC Br. 70.
[119] ERE 1:904-907.

material is not packaged, an accident clean up is not supervised, and exposure durations are not limited.[120] Although NRC admitted *exactly this point* in the Final Rule, it now calls this admission a "narrowly-targeted statement" that does not repudiate the "entire IAEA exemption value analysis."[121] Agreed. It merely repudiates IAEA's evaluation of *accidents* in that analysis.

4. Cumulative Impacts

Deference is not due to NRC's decision not to evaluate cumulative impacts. NRC now argues that it did not need to evaluate cumulative impacts from several agency proposals that would cause additional low-level radiation exposure to members of the public, including transport workers. This issue was raised by Dr. Johnsrud's comments objecting that the rulemaking failed to consider multiple sources of small exposures and that none of the federal agencies or states permitting these small doses were calculating their cumulative impacts.[122] Comments objected that NRC and other agencies were considering three other specific proposals to deregulate recycling, disposal, and release of radioactive materials.[123]

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[120] Pet. Br. 52.
[121] EUR 3:651; NRC Br. 71.
[122] EDR 684, 691; EUR 2:423.
[123] EUR 2:462, 416, 473, 475.

NRC now argues for the first time in its brief that low doses of radiation *have* no cumulative impacts. First, NRC cites *NRDC v. Hodel* to argue that no cumulative impact analysis is required unless there is a "synergistic impact."[124] But *NRDC* did not consider whether, or hold that, cumulative impact analysis is only necessary when "synergism" is present; it merely accepted petitioners' argument that impacts in that case were in fact synergistic.[125] Then NRC argues as a factual matter that radiation dose effects are linear, that increased doses have no synergistic effect, and, thus, that low doses "in combination with other sources of radioactivity [] have no 'cumulative' impact in a meaningful sense."[126] This argument is flatly contradicted by NRC's own practice: NRC evaluated the cumulative effects from the *same* pending deregulation proposals identified by comments in another EIS.[127] Regardless, however, the place for NRC to have argued that there are no cumulative effects was on the rulemaking record. Its decision can only be upheld on the basis of reasoning within the decision.[128]

NRC also argues that it should not have had to consider cumulative effects of pending deregulation proposals by *other* agencies. This argument

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[124] NRC Br. 75.
[125] *Natural Resources Defense Council, Inc. v. Hodel,* 865 F.2d 288, 297 (D.C. Cir. 1988)("NRDC").
[126] NRC BR. 73-75.
[127] ERE 1:1013-1016.
[128] *Anaheim Memorial Hosp., supra,* 130 F.3d at 849.

is both wrong and, as noted, contradicted by its own practice. Cumulative impact analysis requires consideration of other "past, present, and reasonably foreseeable future actions *regardless of what agency . . . undertakes such other actions.*"[129]

Thus, NRC should have evaluated the pending deregulation proposals under consideration by EPA, DOE, and NRC itself, because NRC is responsible to evaluate reasonably foreseeable similar actions with a common basis for evaluating impacts, such as common timing and geography.[130] These pending deregulation proposals were similar, simultaneous, identical in geographic scope, and would impact the same individuals.[131]

5. Precedent

NRC failed to evaluate the effect of adopting the IAEA's generic exemption levels as precedent for future deregulation proposals, including the three pending deregulation proposals.[132] NRC now argues that this evaluation was not required because its action had no "binding" consequences, citing *Anderson v. Evans*. NRC misreads *Anderson*. While

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[129] 40 C.F.R. § 1508.7 (2004).
[130] *NRDC, supra*, 865 F.2d at 298 , citing 40 CFR § 1508.25.
[131] Pet. Br. 55-56.
[132] The relevant precedent is adoption of IAEA's generic exemption levels for other deregulation proposals, not merely adopting some basis for regulatory exemption, as NRC suggests.

Anderson states that agency action which does not bind *itself* need not be evaluated for precedential effect, it holds that an agency *must* treat as a precedential effect the possible decision by *another entity* to rely on its decision as precedent for actions which would cause additional impacts.[133] Here, agencies including DOE and EPA are actively considering proposals for which the NRC action is in fact being considered as precedent.[134]

In sum, NRC's failure to prepare an EIS was arbitrary and capricious in view of clearly significant public health impacts, controversy raised, and uncertainty as to the impacts from radioactive waste shipments. Furthermore, NRC's FONSI was arbitrary and capricious because NRC failed to consider all relevant factors and to articulate a rational connection between facts found and choices made.

V. Conclusion

For the foregoing reasons, Petitioners respectfully request that this Court set aside NRC's FONSI and the regulations adopted on the basis of FONSI.

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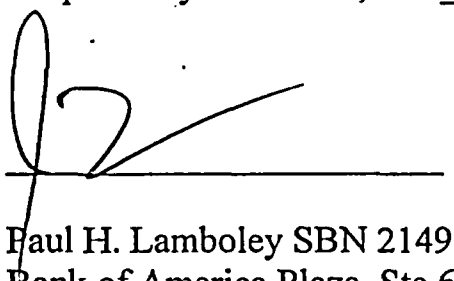
[133] *Anderson, supra,* 350 F.3d at 835-836.
[134] Pet. Br. 58-59.

Respectfully submitted, this ____ day of August, 2005.



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Dated: AUG. 24, 2005

I HEREBY CERTIFY that true and correct copies of the forgoing PETITIONERS' REPLY BRIEF and its accompanying PETITIONERS' SUPPLEMENTAL EXCERPTS OF THE RECORD and PETITIONERS' DECLARATIONS IN SUPPORT OF STANDING were dispatched to the Respondent indicated below via a commercial courier service for delivery within three calendar days this 25th day of August, 2005:

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