

RAS 3974

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

DOCKETED 02/27/02

BEFORE THE COMMISSION

In the Matter of

DUKE COGEMA STONE & WEBSTER

Mixed Oxide Fuel Fabrication Facility
(Construction Authorization Request)

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Docket No. 70-03098-ML

NRC STAFF'S BRIEF RESPONDING TO CLI-02-04

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February 27, 2002

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NRC STAFF'S BRIEF RESPONDING TO CLI-02-04

INTRODUCTION

On February 6, 2002, the Commission partially granted a petition filed by Duke Cogema Stone & Webster (DCS), in this proceeding on the DCS construction authorization request (CAR) to build a mixed oxide fuel fabrication facility (MOX Facility). CLI-02-04, 55 NRC __ (Feb. 6, 2002). The Commission decided to take review of a recent Atomic Safety and Licensing Board ruling which admitted into the CAR proceeding a terrorism-based contention filed by Georgians Against Nuclear Energy (GANE). *See Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), LBP-01-35, 54 NRC __ (Dec. 6, 2001) (December 6 Ruling), slip op. at 50-55,¹

¹ The GANE contention at issue here (contention 12) asserts that the December 2000 environmental report submitted by DCS improperly failed to analyze potential impacts of malevolent acts of terrorism and insider sabotage at the proposed MOX Facility; that such acts are reasonably foreseeable and could result in a beyond design basis accident; and that since the National Environmental Policy Act (NEPA) requires the analysis of foreseeable environmental impacts, DCS improperly failed to analyze the environmental impacts of foreseeable terrorist acts. *See* December 6 Ruling, slip op. at 50-51 (summarizing GANE contention 12). In admitting contention 12, the Board found that the accidents analyzed in the DCS environmental report "are not similar to a beyond design basis accident caused by terrorist acts of the type recently witnessed" (referring to the September 11, 2001 terrorist attacks on New York City and the Pentagon). December 6 Ruling, slip op. at 54.

reconsideration denied, unpublished Memorandum and Order (Jan. 16, 2002), *petition for Commission review granted in part*, CLI-02-04, *supra*.

As discussed more fully below in its responses to questions posed by the Commission in CLI-02-04, the Staff of the Nuclear Regulatory Commission concludes that: (1) federal agencies are not required by NEPA to consider intentional malevolent acts -- such as the attacks of September 11, 2001 -- in performing environmental evaluations of proposed federal actions; (2) the Atomic Safety and Licensing Board (Board) in the CAR proceeding erred in admitting GANE's contention 12; and (3) the policies underlying 10 C.F.R. § 50.13 apply in this proceeding.

ARGUMENT

The Commission directed the parties in this proceeding to file briefs addressing the following question:

What is an agency's responsibility under NEPA to consider intentional malevolent acts, such as those directed at the United States on September 11, 2001? The parties should cite all relevant cases, legislative history or regulatory analysis.

CLI-02-04, slip op. at 3. Additionally, the Commission directed the parties to address all other issues the parties determine are relevant to the following questions: whether the Board erred in basing its admission of GANE contention 12 on the September 11 terrorist attacks (see CLI-02-04, slip op. at 1-2, *citing* December 6 Ruling, slip op. at 53-54); and whether the Board correctly found that the rationale supporting 10 C.F.R. § 50.13 does not apply to the proposed MOX Facility. See CLI-02-04, slip op. at 2 and n.2, *citing* December 6 Ruling, slip op. at 52.

Below, in Section I. A-C, the Staff addresses the Commission's specific question about an agency's responsibility under NEPA to consider intentional malevolent acts. Section II. A discusses the related case-specific NEPA issue of whether GANE's contention 12 was properly admitted into the CAR proceeding. In Section II. B, the Staff addresses the 10 C.F.R. § 50.13 issue.

I. Consideration of Intentional Malevolent Acts Is Not Required in an Environmental Evaluation Under NEPA

In this proceeding, as well as in certain other proceedings now pending before the Commission, the Commission requested the parties to submit legal briefs on the following issue:

What is an agency's responsibility under NEPA to consider intentional malevolent acts, such as those directed at the United States on September 11, 2001? The parties should cite all relevant cases, legislative history or regulatory analysis.

In response to the Commission's request, the Staff submits that:

(a) Where a federal agency prepares an environmental impact statement, NEPA requires that the agency consider those impacts that are reasonably foreseeable as a consequence of the agency's action (or alternatives thereto), subject to a rule of reason, in order to assure that the agency considers those impacts in making an informed decision; and

(b) intentional malevolent acts, such as those directed at the United States on September 11, 2001, do not constitute "reasonably foreseeable" impacts resulting from the agency's action in licensing a nuclear facility -- notwithstanding the fact that those attacks occurred on September 11 -- and are not amenable to the type of "meaningful analysis" and evaluation that were contemplated by Congress under NEPA -- in that there is no quantitative, qualitative, or otherwise rational means by which an agency decision-maker can reasonably predict that such attacks will be targeted against a facility, or that they will involve any particular mode of execution, magnitude, or consequences.

Accordingly, in the absence of any means to reasonably predict or evaluate the occurrence, magnitude, or consequences of such intentional, malevolent acts, NEPA does not require that such events be evaluated in an environmental impact statement (EIS) or other form of environmental analysis.

A. The Statutory and Regulatory Framework: NEPA and 10 C.F.R. Part 51

The National Environmental Policy Act of 1969, 42 U.S.C. § 4321, *et seq.* (“NEPA”) establishes, in part, the following requirements:

The Congress authorizes and directs that, to the fullest extent possible:

(2) all agencies of the Federal Government shall -

* * * *

(C) include in every recommendation or report on proposals for . . . major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on -

(i) the environmental impact of the proposed action,

(ii) any adverse environmental effects which cannot be avoided should the proposal be implemented,

(iii) alternatives to the proposed action,

(iv) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and

(v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

Id., § 102(2)(C), 42 U.S.C. § 4332(2)(C). Thus, where an EIS is prepared, NEPA requires that it address, *inter alia*, “the environmental impact of the proposed action” as well as “alternatives” to that action. Further, Congress has directed that in implementing this statute, federal agencies are to “utilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and in decisionmaking which may have an impact on man's environment.” *Id.*, § 4332(A).

The Commission has adopted regulations that implement the requirements of NEPA, as set forth in 10 C.F.R. Part 51, Subpart A (“[NEPA] - Regulations Implementing Section 102(2)”). In

10 C.F.R. § 51.20, the Commission has identified the types of actions that require preparation of an EIS;² included among such actions are those relating to the issuance of a license for a fuel fabrication facility pursuant to 10 C.F.R. Part 70. See 10 C.F.R. § 51.20(b)(7). Where an EIS is prepared, the regulations require publication of both a Draft EIS (“DEIS”) and Final EIS (“FEIS”); and they describe the required contents of these two documents. See 10 C.F.R. §§ 51.70 - 51.71 (DEIS), and 51.90 - 51.91 (FEIS).³

B. Under NEPA, an Agency is Required to Provide a Detailed Evaluation of “Reasonably Foreseeable” Effects or Impacts, Subject to a Rule of Reason.

It is well established that an agency is required to take a “hard look” at the environmental impacts of its actions under NEPA. See, e.g., *Baltimore Gas & Electric Co. v. Natural Resources Defense Council, Inc.*, 462 U.S. 87, 97 (1983); *Natural Resources Defense Council, Inc. v. Morton*, 458 F. 2d 827, 838 (D.C. Cir. 1972). Further, the Supreme Court has stated that one of the “twin aims” of NEPA (along with ensuring that federal agencies inform the public that they have considered environmental concerns in their decision making processes), is to ensure that such agencies will “consider every significant aspect of the environmental impact of a proposed action.” *Baltimore Gas & Electric Co.*, 462 U.S. at 97, citing *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.*, 435 U.S. 519, 553 (1978).

While it is clear that an agency must consider the environmental impacts of its proposed actions, the type and scope of the environmental impacts that must be considered in an EIS is

² This threshold determination is guided by NEPA, Council on Environmental Quality (CEQ) regulations, and the agency’s procedures or regulations. See, e.g., 10 C.F.R. §§ 51.20, 51.21, 51.22, 51.23, 51.25, and 51.53(c) (classification of NRC licensing and regulatory actions under NEPA).

³ The regulations further describe the role and timing of the FEIS in the agency’s decision-making process. See, e.g., 10 C.F.R. §§ 51.100 - 51.104.

not defined in NEPA or the Commission's regulations in 10 C.F.R. Part 51 for most actions.⁴ However, the courts have clearly held that an agency's responsibility to consider the environmental impacts of an action under NEPA is subject to a "rule of reason." See, e.g., *New York v. Kleppe*, 429 U.S. 1307, 1311 and n.1 (1976). Thus, the courts have recognized that while agencies are required by NEPA to evaluate the "reasonably foreseeable significant adverse impacts" of a proposed action, that evaluation is governed by the "rule of reason." See, e.g., *Limerick Ecology Action, Inc. v. NRC*, 869 F.2d 719, 745 (3d Cir. 1989) ("consideration of impacts must be guided by a rule of reasonableness," citing *Natural Resources Defense Council, Inc. v. Morton*, 458 F.2d 827, 837 (D.C. Cir. 1972)).

Further, only impacts which are "reasonably foreseeable" to result from the agency's action must be evaluated; remote and speculative impacts need not be evaluated. See, e.g., *Scientists' Institute for Public Information, Inc. v. Atomic Energy Commission ("SIPI")*, 481 F.2d 1079, 1092 (D.C. Cir. 1973). In *SIPI*, the Court of Appeals held as follows:

Section 102(C)'s requirement that the agency describe the anticipated environmental effects of [a] proposed action is subject to a rule of reason. The agency need not foresee the unforeseeable, but by the same token neither can it avoid drafting an impact statement simply because describing the environmental effects of and alternatives to particular agency action involves some degree of forecasting. . . . "The statute must be construed in the light of reason if it is not to demand what is, fairly speaking, not meaningfully possible * * *."

Accordingly, . . . if the Commission makes a good faith effort in the [environmental] survey to describe the reasonably foreseeable environmental impact of the program, alternatives to the program and their reasonably foreseeable environmental impact, . . . we see no reason why the survey will not fully satisfy the requirements of Section 102(C).

⁴ In contrast, for nuclear power plant license renewals, the regulations describe the scope of the impacts to be considered. See, e.g., 10 C.F.R. §§ 51.23, 51.53(c), 51.95, and Part 51, Appendix B.

Id. at 1092 (footnotes omitted).⁵ See also, *Natural Resources Defense Council, Inc. v. Morton*, 458 F.2d 827, 834, 837 (D.C. Cir. 1972) (NEPA requires consideration of the environmental impacts of reasonable alternatives, subject to a rule of reason; the discussion of reasonable alternatives does not require either "crystal ball" inquiry or consideration of the effects of alternatives that "cannot be readily ascertained" where "the alternatives are deemed only remote and speculative possibilities").

Commission case law similarly has recognized that the agency's responsibility under NEPA is subject to a rule of reason, and that NEPA does not require an evaluation of impacts that are not reasonably foreseeable. See, e.g., *Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), ALAB-919, 30 NRC 29, 49-50 (1989), *rev'd and remanded on other grounds*, CLI-90-4, 31 NRC 333 (1990) (*citing Limerick Ecology Action, Inc. v. NRC*, 869 F.2d 719 (3d Cir. 1989)). As one Licensing Board observed:

We must judge the adequacy of the Staff's treatment of the various impacts in the FEIS by the rule of reason. See, e.g., *Maine Yankee Atomic Power Co.* (Maine Yankee Atomic Power Station), ALAB-161, 6 AEC 1003, 1011-012 (1973). That standard is not one of perfection; rather, it is a question of reasonableness. As the Appeal Board long ago recognized, "absolute perfection in a FES [Final Environmental Statement] being unattainable, it is enough that there is 'a good faith effort . . . to describe the reasonably foreseeable environmental impact' of a proposed action." *Id.* at 1012 (citations omitted).

⁵ The Court of Appeals in *SIFI* further concluded that NEPA requires full disclosure "of all environmental effects likely to stem from agency action." *Id.* at 1099 (emphasis added). Similarly, the D.C. Circuit Court elsewhere stated:

NEPA does not require federal agencies to examine every possible environmental consequence. Detailed analysis is required only where impacts are likely. . . So long as the environmental impact statement identifies areas of uncertainty the agency has fulfilled its mission under NEPA.

Izaak Walton League of America v. Marsh, 655 F.2d 346, 377 (D.C. Cir. 1981) (emphasis added).

Louisiana Energy Services, L.P. (Claiborne Enrichment Center), LBP-97-8, 45 NRC 367, 399 (1997), *aff'd in part and rev'd in part on other grounds*, CLI-98-3, 47 NRC 77 (1998). Similarly, it has been held that "NEPA's requirement that environmental effects of a proposed agency action be described is subject to a rule of reason. An agency need not foresee the unforeseeable." *Louisiana Power and Light Co.* (Waterford Steam Electric Station), LBP-82-100, 16 NRC 1550, 1571 (1982), *aff'd*, ALAB-732, 17 NRC 1076 (1983) (*citing SIPI*, 481 F.2d at 1092).

This limitation on the scope of an agency's responsibilities under NEPA, whereby only "reasonably foreseeable" impacts of an action need to be evaluated in an EIS, based on scientific evaluation, is manifested as well in CEQ regulations.⁶ Thus, the CEQ regulations provide that where an EIS is prepared, it must include a "scientific and analytic" comparison of the environmental impacts of the proposed action and alternatives considered, including both direct and indirect effects. 40 C.F.R. § 1502.16(a)-(b).⁷ Further, where an agency evaluates "reasonably foreseeable significant adverse effects on the human environment" in an EIS, and there is "incomplete or unavailable information," the evaluation is to be "based upon theoretical approaches or research methods generally accepted in the scientific community, . . . provided that the analysis

⁶ The Commission has stated that because it is an independent regulatory agency, it does not consider substantive CEQ regulations as legally binding on the NRC. *See, e.g.*, Statement of Consideration, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions and Related Conforming Amendments," 49 Fed. Reg. 9352, 9356 (1984). *See also Limerick Ecology Action v. NRC*, 869 F.2d 719, 743 (3d. Cir. 1989) (CEQ regulations are not binding on an agency unless they have been expressly adopted). Nonetheless, while the Commission is not bound by CEQ regulations which it has not expressly adopted, the Commission has indicated that those regulations are entitled to "substantial deference." *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), CLI-91-2, 33 NRC 61, 72 n.2 (1991).

⁷ "Direct" effects or impacts are defined as those "which are caused by the action and occur at the same time and place." 40 C.F.R. § 1508.8(a). "Indirect" effects or impacts are defined as those "which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable." 40 C.F.R. § 1508.08(b) (emphasis added).

of the impacts is supported by credible scientific evidence, is not based on pure conjecture, and is within the rule of reason. . . .” 40 C.F.R. § 1502.22(b)(4) (emphasis added).⁸

C. Intentional, Malevolent Acts, Such as the September 11 Attacks, Do Not Constitute “Reasonably Foreseeable” Impacts Resulting From the Licensing of A Nuclear Facility and Are Not Amenable to “Meaningful Analysis” under NEPA.

As discussed above, the Commission is required to consider in an EIS only “reasonably foreseeable” consequences of the proposed action and alternatives thereto, subject to a rule of reason. In the following discussion, the Staff provides its view that intentional, malevolent acts, such as the attacks of September 11, do not constitute the “reasonably foreseeable” impacts of an

⁸ In a 1986 amendment to its NEPA regulations (requiring, *inter alia*, a detailed analysis of “reasonably foreseeable” adverse impacts and eliminating the need to perform a worst case analysis), the CEQ explained the “rule of reason” as follows:

The regulation also requires that analysis of impacts in the face of unavailable information be grounded in the “rule of reason”. The “rule of reason” is basically a judicial device to ensure that common sense and reason are not lost in the rubric of regulation. The rule of reason has been cited in numerous NEPA cases for the proposition that, “An EIS need not discuss remote and highly speculative consequences. . . . This is consistent with the (CEQ) Council on Environmental Quality Guidelines and the frequently expressed view that adequacy of the content of the EIS should be determined through use of a rule of reason.” *Trout Unlimited v. Morton*, 509 F.2d 1276, 1283 (9th Cir. 1974). In the seminal case which applied the rule of reason to the problem of unavailable information, the court stated that, “[NEPA’s] requirement that the agency describe the anticipated environmental effects of a proposed action is subject to a rule of reason. The agency need not foresee the unforeseeable, but by the same token, neither can it avoid drafting an impact statement simply because describing the environmental effects of alternatives to particular agency action involves some degree of forecasting” The statute must be construed in the light of reason if it is not to demand what is, fairly speaking, not meaningfully possible” *Scientists’ Institute for Public Information, Inc. v. Atomic Energy Commission*, 481 F.2d 1079, 1092 (D.C. Cir. 1973), *citing Calvert Cliffs’ Coordinating Committee v. Atomic Energy Commission*, 499 F. 2d 1109, 1114 (D.C. Cir. 1971).

NRC licensing action and therefore need not be evaluated in an EIS. Further, there does not appear to be any credible scientific information or analysis that would support a determination that such an attack or any particular consequence thereof is a “reasonably foreseeable” consequence of the agency’s action.

First, the CEQ has stated (upon amending its regulations in 40 C.F.R. § 1502.22 to require consideration of reasonably foreseeable impacts in lieu of the “worst case” analysis which the regulation had previously required)⁹ that the term “reasonably foreseeable” includes “low probability/severe consequence impacts, provided that the analysis of such impacts is supported by credible scientific evidence, is not based on pure conjecture, and is within the rule of reason.” 51 Fed. Reg. at 15,622; emphasis added. The CEQ further explained that an agency’s “evaluation must be carefully conducted, based upon credible scientific evidence, and must consider those reasonably foreseeable significant adverse impacts which are based upon scientific evidence.” *Id.* at 15,621. Further, the CEQ indicated that the requirement that the impact analysis be based on “credible scientific evidence” is a specific component of the “rule of reason.” *Id.* at 15,624.¹⁰

⁹ Prior to the 1986 amendments, the CEQ regulation had provided that if certain information relevant to an agency’s evaluation of a proposed action is either unavailable or too costly to obtain, the agency must include in its EIS a “worst case analysis and an indication of the probability or improbability of its occurrence.” 40 C.F.R. § 1502.22 (1985). The Commission has indicated that it did not consider itself to be bound by this former “substantive” requirement that a worst case analysis be performed. See *Philadelphia Electric Co.* (Limerick Generating Station, Units 1 and 2), ALAB-819, 22 NRC 681, 700 (1985) (*citing* Statement of Consideration, “Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions and Related Conforming Amendments,” 49 Fed. Reg. 9352, 9356-58 (1984)), *review declined*, CLI-86-5, 23 NRC 125 (1986), *aff’d sub nom Limerick Ecology Action, Inc. v. NRC*, 869 F.2d 719 (3d Cir. 1989).

¹⁰ In abolishing the requirement that a worst case analysis be prepared, the CEQ explained that it “does not maintain that a worst case analysis is impossible to prepare”; rather, the CEQ explained that it “view[s] the worst case analysis requirement as a flawed technique to analyze impacts in the face of incomplete or unavailable information. The new requirement will provide more accurate and relevant information about reasonably foreseeable significant adverse impacts.” 51 Fed. Reg. at 15,624. Further, the CEQ noted that NEPA requires federal agencies to make a “good faith effort . . . to describe the reasonably foreseeable environmental impact(s)” of the proposal and alternatives thereto -- even “in the face of incomplete or unavailable information,
(continued...)

The CEQ's adoption of this standard was explicitly approved by the Supreme Court in *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332 (1989) (*Methow Valley*). As the Court observed, the amended regulation does not necessarily exclude an agency's duty to consider remote but potentially severe impacts, but it "grounds the duty in evaluation of scientific opinion rather than in the framework of a conjectural 'worst case analysis.'" *Id.* at 354-55. The Court's decision further establishes that the threshold determination as to whether an impact is "reasonably foreseeable" under NEPA must be supported by "credible scientific evidence" if it is to be "meaningfully" evaluated in an EIS. *Id.*¹¹

This focus on the need for credible scientific evidence or analysis to support a determination that an impact is reasonably foreseeable supports the view that intentional malevolent acts such as the attacks of September 11 need not be evaluated in an EIS.¹² Based on currently available information and analytical techniques, the probability that such an act may be directed against a nuclear facility or other structure cannot reasonably be determined through scientific analysis, and is not amenable to meaningful prediction or forecasting. Rather, such events may at best be described as random and unpredictable, in that they result not from the licensing or construction

¹⁰(...continued)
consistent with the 'rule of reason.'" *Id.* at 15,625, *citing SIPI*, 481 F.2d at 1092.

¹¹ The Court further found that the CEQ's determination to eliminate the need for a "worst case" analysis was not inconsistent with prior NEPA case law and was a permissible interpretation of NEPA. *Robertson v. Methow Valley Citizens Council*, 490 U.S. at 354-55. See also, Note, *Federal Agency Treatment of Uncertainty in Environmental Impact Statements Under the CEQ's Amended NEPA Regulation § 1502.22: Worst Case Analysis or Risk Threshold?*, 86 Mich. L. Rev. 777, 798 (1988). Thus, subsequent to *Methow Valley*, federal agencies that are bound by the CEQ regulations are not required to conduct a worst case analysis.

¹² As the Supreme Court has explained, the CEQ's decision to eliminate the need for federal agencies to conduct a worst case analysis under 40 C.F.R. § 1502.22 was based upon a determination that, by requiring an EIS "to focus on reasonably foreseeable impacts," the amended rule "will generate information and discussion on those consequences of greatest concern to the public and of greatest relevance to the agency's decision . . . rather than distorting the decisionmaking process by overemphasizing highly speculative harms." *Methow Valley*, 490 U.S. at 356 (citations omitted).

of a particular facility but, instead, from the independent decision by another person or entity to perform that malevolent act. Further, there is no existing data base to which a decision-maker may turn, to estimate either (a) the probability that such an attack will occur, (b) that the attack would be directed against a particular facility, (c) the nature and magnitude of the attack, and (d) the "success" or consequences of the attack. Rather, any attempt to predict the occurrence or consequences of such an event at a particular nuclear facility would cause the agency to stray "beyond reasonable forecasting" into "the realm of pure speculation." See *North Dakota v. Andrus*, 483 F. Supp. 255, 260 (D. N.Dak. 1980).

This conclusion is further supported by the Supreme Court's decision in *Metropolitan Edison Co. v. People Against Nuclear Energy*, 460 U.S. 766 (1983) ("PANE"). There, in determining that an EIS need not consider potential psychological health effects that might occur as a result of an agency's action (allowing restart of the Three Mile Island Unit 1 nuclear plant), the Court found, *inter alia*, that the "reasonable foreseeability" determination requires consideration of "the closeness of the relationship between the change in the environment and the 'effect' at issue." *Id.* at 772. Further, the Court observed that NEPA requires consideration of the element of "causation" and whether the impact is "proximately related" to the agency's action -- and, although "some effects may result from the agency's action 'in the sense of 'but for' causation, [they] will nonetheless not fall within § 102 because the causal chain is too attenuated." *Id.* at 773-74. The Court further stated:

Our understanding of the congressional concerns that led to the enactment of NEPA suggests that the terms "environmental effect" and "environmental impact" in § 102 be read to include a requirement of a reasonably close causal relationship between a change in the physical environment and the effect at issue. This requirement is like the familiar doctrine of proximate cause from tort law. See generally W. Prosser, *Law of Torts*, ch. 7 (4th ed. 1971).ⁿ⁷ The issue before us, then, is how to give content to this requirement. This is a question of first impression in this Court.

n7 In drawing this analogy, we do not mean to suggest that any cause-effect relation too attenuated to merit damages in a tort suit would also be too attenuated to merit notice in an EIS; nor do we mean to suggest the converse. In the context of both tort law and NEPA, courts must look to the underlying policies or legislative intent in order to draw a manageable line between those causal changes that may make an actor responsible for an effect and those that do not.

Id. at 774 (emphasis added). Further, the Court held as follows:

PANE argues that the psychological health damage it alleges "will flow directly from the risk of [a nuclear] accident." In a causal chain from renewed operation of TMI-1 to psychological health damage, the element of risk and its perception by PANE's members are necessary middle links. We believe that the element of risk lengthens the causal chain beyond the reach of NEPA.

Id. at 775 (footnote omitted).

Thus, under the Court's reasoning in *PANE*, it is clear that a potential effect must be "proximately related" to the agency's action. Further, at some point, the causal link between an agency's proposed action and the alleged effect of that action becomes too attenuated to permit reasonable or meaningful analysis, *i.e.*, the effects or impacts become too remote and speculative to permit reasonable evaluation.

The conclusion that NEPA does not require consideration of intentional malevolent acts is also supported by the decision in *Limerick Ecology Action, Inc. v. NRC*, 869 F.2d 719 (3d Cir. 1989). There, the court found, *inter alia*, that the Commission had not acted in an arbitrary and capricious manner in determining not to evaluate the risk of sabotage in an EIS, based on its conclusion that "sabotage risk analysis is beyond current probabilistic risk assessment methods and that there is no current basis by which to measure such risk." *Id.* at 743. The court found that the Commission had taken the requisite "hard look" at the environmental consequences of its proposed action (issuance of a full power license) by basing its conclusion on "its contemporary evaluation of risk assessment techniques." *Id.* Further, the court found that the intervenor had not

advanced any method or theory by which the Commission could have “entered into a meaningful analysis of the risk of sabotage despite its asserted inability to quantify the risks.” *Id.* at 744.

Additional support for this conclusion appears in the Appeal Board’s decision in *Philadelphia Electric Co.* (Limerick Generating Station, Units 1 and 2), ALAB-819, 22 NRC 681, 701 (1985), *review declined*, CLI-86-5, 23 NRC 125 (1986), which was affirmed in *Limerick Ecology Action*. The Appeal Board observed that the Staff’s environmental evaluation did not consider the effects of sabotage, on the grounds that “such an analysis is considered to be beyond the state of the art of probabilistic risk assessment.” See ALAB-819, 22 NRC at 697.¹³ The Appeal Board found that the Staff’s rationale was acceptable, affirming the Licensing Board’s rejection of a contention which had challenged the Staff’s omission as contrary to NEPA:

[T]he unknown information in [*Sierra Club v. Sigler*, 695 F.2d 957 (5th Cir. 1983)] could reasonably be estimated from long-known, fundamental physical principles (tides and currents). We are aware of no similar principles (and LEA identifies none) that would permit reasonable prediction of -- like the next high tide -- the kind of stochastic human behavior displayed in an act of sabotage.

In sum, the risk of sabotage is simply not yet amenable to a degree of quantification that could be meaningfully used in the decision making process. . . .

¹³ It should be noted that in *Limerick*, the issue of sabotage was considered within the context of severe accidents, *i.e.*, as an initiator of an event of low probability but potentially catastrophic consequences. The Appeal Board observed that the Staff’s FEIS had considered a range of design-basis and severe accident scenarios, that the intervenor had not explained “what separate consideration of sabotage as an initiator of a severe accident would add, from a qualitative standpoint,” and that such consideration would “add nothing of real quantitative significance.” ALAB-819, 22 NRC at 698-99. In addition, the Appeal Board found that “although the risk of sabotage cannot be quantified in a way that would permit its litigation per se, the Commission’s regulations nonetheless require each plant to have a detailed security plan to protect against internal and external sabotage.” *Id.* at 699. These determinations were noted by the court in *Limerick Ecology Action*, 869 F.2d at 742.

Id. at 701; emphasis added.¹⁴ *Accord, Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), ALAB-875, 26 NRC 251 269 (1987); *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-98-10, 47 NRC 288, 296 (1998); *PFS*, LBP-98-7, 47 NRC 142, 179, 186, 199, 201 (1998).

Other courts have similarly recognized that the risk of an event must be amenable to meaningful (albeit not necessarily quantitative) analysis if it is to be included in an EIS. For example, the Second Circuit Court of Appeals recognized the importance of risk considerations based on scientific data under statutes such as NEPA, in which the courts are “obliged to review agency consideration of sophisticated data concerning the potential gravity of adverse consequences and the probability of their occurrence.” *City of New York v. U.S. Dept. of Transportation*, 715 F.2d 732, 736 (2d Cir. 1983). There, the court declined to invalidate a rule published by the Department of Transportation designed to reduce the risk of highway transportation of radioactive materials, where the agency had determined that its rulemaking action would not “significantly affect” the environment and that it therefore need not prepare an EIS. *Id.*, 715 F.2d at 745-49. With respect to the risk of sabotage, the court reversed the District Court’s finding that “[DOT] was obliged to state its view on the probability of such an event, even if that view was only that no estimate could reasonably be made.” *Id.* at 750. The court further stated as follows (*Id.*):

With respect to environmental consequences that are only remote possibilities, an agency must be given some latitude to decide what sorts of risks it will assess. . . . Here, DOT simply concluded that the risks of sabotage were too far afield for consideration. To a large degree, this judgment was justified by the record. Substantial evidence indicated that sabotage added nothing to the risk of high-consequence accidents. Even the least sanguine commentators

¹⁴ As the court in *Limerick Ecology Action* explained, it did not hold that “the mere assertion of unquantifiability immunizes the NRC from consideration of the issue [sabotage] under NEPA”; rather, the court held that the intervenor had “failed to carry its burden to rebut the NRC’s claim that it [could not] meaningfully consider the issue.” *Id.*, 869 F.2d at 744 n.31 (emphasis added).

could say only that sabotage added an unascertainable risk. In light of these conflicting points of view, it was within DOT's discretion not to discuss the matter further beyond adopting the NRC security requirements.

Id. But see *id.* at 757 (Oakes, J., dissenting).

In sum, to fall within the proper scope of an agency's environmental evaluation under NEPA, intentional malevolent acts such as the September 11 attacks must be determined to constitute "reasonably foreseeable" effects of the proposed licensing action. However, in the absence of any "credible scientific evidence" to support that determination, an evaluation of the probability or consequences of such an attack can only be based on "pure conjecture" and is therefore outside the "rule of reason." That these random acts occurred on September 11, 2001, does not make them now susceptible of meaningful evaluation or provide a reasonable basis to predict that such acts are likely or foreseeable in the future at any particular facility.

While, in theory, the Commission could attempt to develop a "worst case" estimate of the consequences of an intentional malevolent act like the September 11 attacks if it is assumed those acts are directed against a particular facility, any such evaluation would not contribute meaningfully to a determination as to whether those acts constitute "reasonably foreseeable" effects of the agency's licensing action under NEPA.¹⁵ Rather, one can only speculate that such intentional malevolent acts might be directed against a particular structure or facility; moreover, no rational means appears to exist whereby a decision-maker could reasonably predict or foresee that such an attack will be targeted against a given facility, nor could there be any meaningful prediction of

¹⁵ Significantly, GANE in this CAR proceeding has not demonstrated that such data exist with respect to the types of attacks directed against the United States on September 11, 2001, nor has GANE advanced any "method or theory" which would allow the Commission to conduct a "meaningful analysis of the risk" posed by such attacks.

the likelihood that any particular consequences would ensue from those events.¹⁶ Any such prediction would necessarily be based upon mere speculation and conjecture, in contrast to the reasoned consideration and scientifically-informed analysis that is contemplated by NEPA.¹⁷ Further, because the precise nature, magnitude, timing, target, and actual consequences of such acts cannot be foreseen based on any “credible scientific evidence,” any meaningful environmental evaluation of such acts under NEPA is precluded. Rather, the agency would be able to do no more

¹⁶ In deciding that NEPA does not require preparation of an EIS based on the possibility that a “worst case” event could occur, the majority in *City of New York v. U.S. Dept. of Transportation* reasoned as follows:

Our dissenting colleague appears to take the view that the very existence of the “worst case” possibility would be sufficient to require preparation of an EIS, regardless of the infinitesimal probability that the “worst case” accident will happen. We do not doubt the general proposition that “worst cases” do occur. Planes crash, and the Titanic sank. What we reject is an automatic rule requiring preparation of an EIS for every action that has any possibility, however remote, of causing serious accidental injury. Such a rule would routinely require an EIS for federal actions, since it is hard to imagine any agency action involving people or equipment that is not subject to some estimatable risk of causing serious accidental injury.

Id., 715 F.2d at 752 n.20; emphasis added. This same reasoning supports a conclusion here that, even where an agency decides to prepare an EIS, worst case events need not be considered if there is no reasonable basis upon which an agency can fairly estimate the probability that the event may occur, despite the recognition that it “could” occur. *But see Natural Resources Defense Council v. NRC*, 685 F.2d 459, (D.C. Cir. 1982).

¹⁷ See also Statement of Consideration, “Changes to Requirements for Environmental Review for Renewal of Power Plant Operating Licenses,” 64 Fed. Reg. 48,496, 49,505 (1999) (stating, in part, that “the NRC has not quantified the likelihood of the occurrence of sabotage in this analysis because the likelihood of an individual attack cannot be determined with any degree of certainty.”). Similarly, the Department of Energy has concluded that the probability of occurrence of intentional acts of sabotage or terrorism is not amenable to quantification or estimation. See, e.g., *Hirt v. Richardson*, 127 F. Supp. 2d 833, 839-40 (W.D. Mich. 1999); *Contra Costa County v. Pena*, 1998 U.S. Dist. LEXIS 3711 (N.D. Cal. 1998) (“it is impossible to determine with certainty the probability of a deliberate act of sabotage or terrorist attack”). Cf. *City of New York*, *supra*, 715 F.2d at 750 (citing a Sandia National Laboratory report stating that “sabotage involves human motivations and the probability of human actions which are unquantifiable with our present knowledge”). This characterization would appear to apply as well today, to intentional malevolent acts, such as the attacks of September 11.

than provide something akin to a worst case analysis -- which is not required by the courts, CEQ, or the Commission's regulations.¹⁸

Finally, the risk that an intentional malevolent act of any particular type or magnitude may be directed at any particular facility and may result in any particular consequence, is not proximately related to the agency's decision to license the facility, inasmuch as the necessary causal link is broken by the intervention of the person or entity which independently decides to carry out the intentional malevolent act. Because the risk that such an act would occur is dependent upon some individual's malevolent determination to perform that act -- wholly independent of the Commission's consideration as to whether to grant a license for a particular facility -- that person's independent conduct and involvement in the chain of causation would appear to constitute a "necessary middle link" that "lengthens the causal chain beyond the reach of NEPA." *PANE, supra*, 460 U.S. at 775. Intentional malevolent acts such as the attacks of September 11, 2001, like the risk of sabotage considered in *Limerick Ecology Action*, involve the

¹⁸ The difficulty in relying upon a worst case analysis to support a finding that an impact is reasonably foreseeable under NEPA, has been described by one commentator as follows:

Even assuming it is possible to identify the worst potential consequence of a proposed federal action, this consequence may or may not be within the range of reasonably foreseeable effects. For instance, the worst potential consequence of a proposed action may be based on a lengthy series of purely conjectural assumptions. In such a case, the worst potential consequence of the proposed action is possible, yet it is so hypothetical as to be outside of the range of reasonably foreseeable effects.

O'Meara Masterman, Vicki, *Worst Case Analysis: The Final Chapter?*, 19 Env'tl. L. Rep. 10026 (1989).

element of “stochastic human behavior” -- which was found by Court of Appeals to preclude any “meaningful” or “scientifically credible” analysis of the risk of sabotage.¹⁹

For these reasons, as more fully set forth above, the Staff submits that the Commission is not required to consider intentional malevolent acts such as the attacks of September 11, 2001, in its environmental evaluations under NEPA. While the Commission could, in theory, consider intentional malevolent acts like the attacks of September 11 in a manner similar to a worst case analysis -- whereby the consequences of such an attack are described, without any estimate of the probability that the event or its consequences would occur -- the Staff believes that such an evaluation would not constitute a meaningful evaluation that could contribute to the agency’s consideration of a proposed action. Rather, the Staff believes that the approach followed by the CEQ, which now eschews the performance of a worst case analysis, is appropriate.²⁰

II. Case Specific Issues

A. The September 11 Attacks Did Not Make the Impacts of Terrorist Acts and Sabotage Reasonably Foreseeable Consequences of NRC Licensing Actions Pertaining to the Proposed MOX Facility

Related to the issue discussed above is a case-specific issue identified by the Commission in this proceeding: whether the Board, in focusing on the September 11 attacks, misconstrued NEPA in concluding that the effects of terrorist-caused events at the proposed MOX Facility should have been addressed by DCS in its environmental report. See CLI-02-04, slip op. at 1-2, *citing* December 6 Ruling, slip op. at 53-54.

¹⁹ Probability considerations are inherently an important component in assessing whether an impact is reasonably foreseeable. See, e.g., *City of New York v. Dep’t of Transportation*, 715 F.2d 732, 746 n.14 (2d Cir. 1983) (an agency must estimate “both the consequences that might occur and the probability of their occurrence The fact that effects are only a possibility does not insulate the proposed action from consideration under NEPA, but it does accord an agency some latitude in determining whether the risk is sufficient to require preparation of an EIS”).

²⁰ See, e.g., 40 C.F.R. § 1502.22; *Methow Valley*, *supra*, 490 U.S. at 344-45; and *Limerick Ecology Action, Inc. v. NRC*, 869 F.2d at 744.

GANE postulated in its contention 12 that the proposed MOX Facility, if built and operated, would be subject to malevolent acts of terrorism and insider sabotage, and that the consequences of such acts could result in a beyond design basis accident at the facility producing environmental impacts that must be analyzed pursuant to NEPA.²¹ In admitting contention 12, the Board found that the accidents analyzed in the DCS environmental report “are not similar to a beyond design basis accident caused by terrorist acts of the type recently witnessed” (referring to the September 11 terrorist attacks). December 6 Ruling, slip op. at 54. As indicated in Section I (C), *supra*, there does not appear to be any credible scientific information or analysis that would support a determination, pursuant to NEPA and the NRC’s implementing regulations, that terrorist acts and the resultant consequences are reasonably foreseeable events that must be considered in deciding whether to authorize the construction and operation of the proposed MOX Facility. If the NRC is not required to consider the effects of intentional malevolent acts -- such as the attacks of September 11, 2001 -- in its environmental evaluations under NEPA, DCS would have no legal obligation in its supporting environmental report to consider such effects. Additionally, as further indicated in Section I.C, *supra*, while hypothetical consequences of suicidal airplane attacks on the proposed MOX Facility could be posited -- in a manner similar to a worst case analysis -- such a discussion, based largely on conjectural hypotheses, would not provide a meaningful evaluation that could contribute to the NRC’s NEPA analysis of whether to authorize the construction of the proposed MOX Facility.

For the reasons discussed above, the Board erred in relying on the September 11 attacks as its justification for admitting GANE contention 12. Since GANE did not proffer sufficient evidence to support its terrorism-based NEPA contention, the Commission should reverse the Board’s admission of GANE contention 12.

²¹ See n. 1, *supra*.

B. 10 C.F.R. § 50.13's Underlying Policy Applies to the Proposed MOX Facility

The Staff addresses here another case-specific issue: whether the Board correctly found that 10 C.F.R. § 50.13 does not apply in this CAR proceeding. See CLI-02-04, slip op. at 2 and n.2.²² The Board based its finding on the fact that the proposed MOX Facility is subject to 10 C.F.R. Part 70 licensing requirements, and that to apply 10 C.F.R. § 50.13 here would thus require “a leap that is tantamount to writing a comparable regulation for Part 70 facilities,” and would further require applying the “new regulation” to the NRC’s NEPA responsibilities. December 6 Ruling, slip op. at 52.

The Staff views the salient point not to be whether 10 C.F.R. § 50.13's provisions have been codified in 10 C.F.R. Part 70 -- they have not been -- but whether the policy considerations underlying 10 C.F.R. § 50.13 are applicable to all licensed activities, or just those falling within the scope of 10 C.F.R. Part 50. The Staff concludes, as discussed below, that the policy considerations underlying 10 C.F.R. § 50.13 are applicable to all licensed activities, and would be applicable to the proposed MOX Facility if it is eventually licensed to operate.

The regulation at issue states as follows:

An applicant for a license to construct and operate a production or utilization facility, or for an amendment to such license, is not required to provide for design features or other measures for the specific purpose of protection against the effects of (a) attacks and destructive acts, including sabotage, directed against the facility by

²² The Staff notes that while the Commission referred to the Board as having “rejected arguments” that 10 C.F.R. § 50.13 barred GANE’s contention 12 (CLI-02-04, slip op. at 2 and n.2), none of the parties had explicitly cited this regulation in their filings prior to the issuance of the Board’s December 6 Ruling. In opposing the admission of GANE’s contention 12, DCS had cited a case (*Long Island Lighting Co. (Shoreham Nuclear Power Station)*, ALAB-156, 6 AEC 831, 851 (1973)) which discussed 10 C.F.R. § 50.13, and the Board then cited to the Appeal Board’s discussion. See December 6 Ruling, slip op. at 52.

an enemy of the United States, whether a foreign government or other person,^[23] or (b) use or deployment of weapons incident to U.S. defense activities.

10 C.F.R. § 50.13 (footnote added). The Atomic Energy Commission (AEC) promulgated 10 C.F.R. § 50.13 in 1967, during the pendency of the licensing proceeding on whether to authorize construction of the Turkey Point nuclear power plant near Miami, Florida, despite the site's proximity to Cuba. One of the issues raised was whether the proposed reactor should be constructed to withstand a missile attack. See *Florida Power & Light Company* (Turkey Point Nuclear Generating Units No. 3 and No. 4), 3 AEC 173 (1967). In later affirming the licensing board's refusal to consider the missile attack issue, the AEC made the following points: (1) reactor designs "to protect against the full range of the modern arsenal of weapons are simply not practicable"; and (2) whether, at some point during a facility's life, (a) "another nation actually would use force" against that facility; (b) "the nature of such force"; and (c) "whether that enemy nation would be capable of [effectively] employing the postulated force ... are matters which are speculative in the extreme," and would involve inquiry into sensitive information pertaining to issues of national defense and diplomacy. *Florida Power & Light Company* (Turkey Point Nuclear

²³ Notwithstanding the possibly broader reach of § 50.13, given its use of the word "person" (see Atomic Energy Act, sec. 11.s), after "foreign government," the scope of 10 C.F.R. § 50.13, over the years, has been seen as applying only to attacks by a foreign state or government. For example, in a 1994 rulemaking modifying the design-basis threat of radiological sabotage (set forth in 10 C.F.R. § 73.1(a)(1)(i)) in reaction to the vehicle bomb attack on the World Trade Center, the Commission had occasion to contrast 10 C.F.R. § 50.13's focus on guarding against foreign government attack with 10 C.F.R. § 73.1(a)(1)(i)'s focus on countering domestic threats: "There is a significant difference in the practicality of defending against a missile attack and constructing a vehicle barrier at a safe standoff distance from vital areas." 59 Fed. Reg. 38,889, at 38,894 (Aug. 1, 1994). The provisions set forth in Part 73 constitute the core requirements for physical protection of all NRC-licensed facilities and materials from those events determined appropriate -- acts encompassed by 10 C.F.R. § 50.13 are not included for any licensed facility or materials. The Commission concluded that the policies embodied in 10 C.F.R. § 50.13 did not constrain its action to amend the radiological sabotage design basis threat described in 10 C.F.R. § 73.1(a)(1). See 59 Fed. Reg., *supra*, at 38,894.

Generating Units No. 3 and No. 4), 4 AEC 9, 13-14 (1967),²⁴ *aff'd. sub nom Siegel v. A.E.C.*, 400 F.2d 778 (D.C. Cir. 1968).²⁵ There is nothing of which the Staff is aware that would undermine the applicability of these determinations in the context of the proposed MOX Facility.

The Licensing Board in the ongoing *Private Fuel Storage* proceeding recently discussed the scope of 10 C.F.R. § 50.13, and the Staff views its comments to be relevant here. *See Private Fuel Storage, LLC* (Independent Spent Fuel Storage Installation), LBP-01-37, 54 NRC __ (Dec. 13, 2001) (*PFS*), (denying admission of terrorism contention and referring issue to the Commission), *referral accepted*, CLI-02-03, 55 NRC __ (Feb. 6, 2002). After discussing the background of 10 C.F.R. § 50.13's promulgation (*see PFS*, slip op. at 11-12) and other relevant matters, the *PFS* board stated that it found "little doubt that the terrorist attacks of September 11, 2001, constituted acts by an enemy or enemies of the United States," and that the Commission's policy, embodied in 10 C.F.R. § 50.13, of "excluding such acts from licensing determinations," is "applicable and controlling relative to any safety-related considerations." *PFS*, slip op. at 12-13 (citations and footnote omitted). The *PFS* board further found that "the rationale for 10 C.F.R. § 50.13 [is] as applicable to the Commission's NEPA responsibilities as it is to its health and safety responsibilities." *PFS*, slip op. at 13, *citing Shoreham, supra*, ALAB-156, 6 AEC at 851; and *Limerick, supra*, 869 F.2d at 743-44.²⁶

²⁴ In publishing 10 C.F.R. § 50.13 in its final form later that year, the AEC similarly stated in its Statement of Considerations (SOC) that "protection of the United States against hostile enemy acts is a responsibility of the nation's defense establishment and of the various agencies having internal security functions," and that the risk of enemy attack against nuclear reactors "is a risk that is shared by the nation as a whole." 32 Fed. Reg. 13,445 (Sept. 26, 1967).

²⁵ As indicated, 10 C.F.R. § 50.13 was upheld on judicial challenge, the court stating that it found nothing in the Atomic Energy Act requiring the nuclear industry to have the burden of protecting its facilities "against the various kinds of attacks which might be made upon it by foreign enemies of the United States." *Siegel, supra*, 400 F.2d at 783.

²⁶ In *PFS*, the Licensing Board recognized that "the Commission currently is considering whether, and to what degree, the agency's regulatory regime, including facility physical security
(continued...)

Accordingly, the Staff concludes that the policy considerations underlying the adoption of 10 C.F.R. § 50.13 are equally applicable to Part 70 facilities, and would thus be applicable to the proposed MOX Facility.

CONCLUSION

Based on the above discussion, the Staff requests the Commission to (1) find that federal agencies are not required by NEPA to consider intentional malevolent acts -- such as the attacks of September 11, 2001 -- in performing environmental evaluations of proposed federal actions; (2) reverse the Board's admission of GANE's contention 12 in the CAR proceeding; and (3) reject the Board's finding that 10 C.F.R. § 50.13 considerations do not apply in this proceeding.

Respectfully submitted,

/RA/

John T. Hull
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Dated at Rockville, Maryland
this 27th day of February, 2002

²⁶(...continued)
requirements, should be changed to reflect what transpired on [September 11, 2001]." *PFS*, slip op. at 14. In this regard, the *PFS* Board cited the Statement of NRC Chairman Dr. Richard A. Meserve before the Subcommittee on Oversight and Investigations of the House Committee on Energy and Commerce Concerning Nuclear Power Plant Security, at 2-5 (Dec. 5, 2001) (noting that "as part of top-to-bottom physical security review in wake of September 11, 2001 events, [the] Commission is reexamining design basis threat and will modify it, as appropriate"). *PFS*, slip op. at 14. Indeed, the Commission has recently issued orders to all operating nuclear power plants, setting forth interim measures with respect to the physical protection of facilities licensed under 10 C.F.R. Part 50. See Press Release No. 02-025, "NRC Orders Nuclear Power Plants to Enhance Security" (Feb. 26, 2002). This is entirely appropriate. The nature of the Commission's actions of February 26, 2002, pertaining to physical protection at operating nuclear power plants, does not affect the conclusion that sabotage and terrorism are not required to be evaluated in an EIS under NEPA -- in that the underlying rationale for that conclusion has not changed. Rather, just as an evaluation of such acts is not required under NEPA as a result of the Commission's previous adoption of regulatory requirements governing physical protection, a NEPA review is not required as a result of the Commission's recent adoption of these interim physical protection measures.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE COMMISSION

In the Matter of)	
)	
DUKE COGEMA STONE & WEBSTER)	Docket No. 70-03098-ML
)	
Mixed Oxide Fuel Fabrication Facility)	
(Construction Authorization Request))	

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing "NRC STAFF'S BRIEF RESPONDING TO CLI-02-04" have been served upon the following persons this 27th day of February, 2002, by electronic mail, and by U.S. mail, first class (or as indicated by an asterisk (*)) through the Nuclear Regulatory Commission's internal distribution system).

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