

RAS 3708

DOCKETED
USNRC

December 27, 2001 (4:00PM)

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
ATOMIC SAFETY AND LICENSING BOARD

OFFICE OF SECRETARY
RULEMAKINGS AND
ADJUDICATIONS STAFF

Before Administrative Judges:
Thomas S. Moore, Chairman
Charles N. Kelber
Peter S. Lam

_____)	
In the Matter of)	
)	
DUKE COGEMA STONE & WEBSTER)	Docket No. 070-03098-ML
)	
(Savannah River Mixed Oxide Fuel)	ASLBP No. 01-790-01-ML
Fabrication Facility))	
_____)	

**DUKE COGEMA STONE & WEBSTER
MOTION FOR RECONSIDERATION OR, IN THE ALTERNATIVE,
FOR CERTIFICATION TO THE COMMISSION**

I. INTRODUCTION

In its December 6, 2001 Memorandum and Order (Ruling on Standing and Admissibility of Contentions)¹ ("Memorandum and Order"), the Atomic Safety and Licensing Board ("Board") ruled on standing and admissibility of proposed contentions submitted by several hearing petitioners in the above-captioned proceeding. In its Memorandum and Order, the Board, among other things, admitted the following proposed contentions submitted by Georgians Against Nuclear Energy ("GANE") and the Blue Ridge Environmental Defense League ("BREDL"):

- GANE Contentions 1 and 2, relating to consideration of material control and accounting ("MC&A") and physical security issues at the Construction Authorization Request ("CAR") stage;

¹ *Duke, Cogema, Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), LBP-01-35, slip op. (2001). The page numbers cited herein correspond to the electronically filed version.

Template = SECY-041

SECY-02

- GANE Contentions 5 and 8, and BREDL Contention 9A, relating to the appropriate definition of the “controlled area” for the Mixed Oxide Fuel Fabrication Facility (“MOX Facility”); and
- GANE Contention 12, regarding analysis of the impacts of terrorist acts under the National Environmental Policy Act (“NEPA”).

For the reasons discussed below, Duke Cogema Stone & Webster (“DCS”) respectfully requests that the Board either: (1) reconsider and modify its rulings related to the above contentions; or (2) certify those rulings to the Commission for its consideration pursuant to 10 CFR § 2.1209(d).

II. APPLICABLE LEGAL STANDARDS

A. The Standards Governing Reconsideration

In accordance with 10 CFR §§ 2.1259(b) and 2.771, a litigant in a Subpart L proceeding may seek reconsideration of a board decision. Although the express regulatory provisions contemplate the reconsideration of a final board decision, motions for reconsideration may also be entertained in interlocutory situations.²

To prevail on a motion for reconsideration, the movant must identify the aspects of the licensing board’s decision demonstrating that “the questioned ruling overlooked or misapprehended (1) some legal principle or decision that should have controlling effect; or (2) some critical factual information.”³ While a reconsideration motion should not be based on a

² See, e.g., *Georgia Power Co.* (Vogtle Electric Generating Plant, Units 1 and 2), LBP-94-31, 40 NRC 137,139 (1994); *In the Matter of Ralph L. Tetric* (Denial of Application for Reactor Operator License), LBP-97-11, 45 NRC 441, 447 (1997) (noting that “motions for reconsideration are frequently filed before presiding officers, both at the end of cases and after interim orders”).

³ *Private Fuel Storage, LLC* (Independent Spent Fuel Storage Installation), LBP-00-31, 52 NRC 340, 342 (2000); see also *Private Fuel Storage* (Private Fuel Storage Facility), CLI-00-21, 52 NRC 261, 264 (2000) (affirming Licensing Board’s holding that “reconsideration motions are an opportunity to request correction of a Board error by refining an argument, or by pointing out a factual misapprehension or a controlling

new thesis,⁴ “a request to reexamine existing record material that may have been misunderstood or overlooked, or to clarify a matter that the party believes is unclear, is appropriate.”⁵

B. The Standards Governing Certification

The Board has express regulatory authority to certify questions to the Commission for its determination,⁶ and, in this case, the Commission has invited the Board to do so. In its referral order, the Commission directed:

if rulings on the admission of contentions, or the admitted contentions themselves, raise novel legal or policy questions, the presiding officer should readily refer or certify such rulings or questions to the Commission on an interlocutory basis. The Commission is amenable to such early involvement and will evaluate any matter put before it to ensure that substantive interlocutory review is warranted.⁷

This directive is in line with the Commission’s general admonition that “boards are encouraged to certify novel legal or policy questions relating to admitted issues to the Commission as early as possible in the proceeding.”⁸

In addition, under 10 CFR § 2.786(g), a certified question merits Commission review if it either: (1) “Threatens the party adversely affected by it with immediate and serious irreparable impact which, as a practical matter, could not be alleviated through a petition for review of the

decision or law that was overlooked”); *Georgia Power Co.*, 40 NRC at 140.

⁴ See, e.g., *Central Electric Power Cooperative, Inc.* (Virgil C. Summer Nuclear Station, Unit No. 1), CLI-81-26, 14 NRC 787, 790 (1981) (“Motions to reconsider should be associated with requests for re-evaluation of an order in light of an elaboration upon, or refinement of, arguments previously advanced. They are not the occasion for an ‘entirely new thesis’”).

⁵ *Private Fuel Storage* (Independent Spent Fuel Storage Installation), LBP-99-39, 50 NRC 232, 237 (1999).
⁶ 10 CFR § 2.1209(d).

⁷ *Duke, Cogema, Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), CLI-01-13, 53 NRC 478, 483 (2001) (emphasis added).

⁸ Statement of Policy on Conduct of Adjudicatory Proceedings, CLI-98-12, 48 NRC 18, 23 (1998); see also *Private Fuel Storage, LLC* (Independent Spent Fuel Storage Installation), CLI-01-15, 53 NRC 563 (2001) (stating a “policy of accept[ing] Board certifications and referrals where ‘early resolution’ of issues is desirable”).

presiding officer's final decision; or (2) affects the basic structure of the proceeding in a pervasive or unusual manner."⁹

III. THE BOARD'S RULING ON GANE CONTENTIONS 1 AND 2 – MC&A AND PHYSICAL SECURITY

GANE Contentions 1 and 2 allege that the CAR does not contain sufficient information regarding design features of the MC&A and physical security measures for the MOX Facility.¹⁰ DCS and the NRC Staff both opposed the admission of these two contentions on the grounds that they are outside the scope of the proceeding.¹¹ DCS, in particular, argued that the standard established in 10 CFR § 70.23(b) for approval of the CAR limits the scope of the proceeding to whether “the design bases of principal structures, systems, and components and the quality assurance program provide reasonable assurance of protection against natural phenomena and the consequences of potential accidents.”¹² As the Board points out, DCS stated that MC&A and physical security measures “are intended to prevent the loss, theft, or sabotage of special nuclear materials so they fall outside the scope of section 70.23(b) and, hence, there is no requirement to describe the design bases for the MC&A and physical protection function in its CAR.”¹³ The Board ruled that section 70.23(b) “is not nearly as narrow as DCS argues,”¹⁴ apparently based upon two separate rationales:

⁹ 10 CFR § 2.786(g).

¹⁰ *Memorandum and Order* at 22-23.

¹¹ *Id.* at 26.; *see also* DCS' Answer to Proposed Contentions Filed by GANE at 17-20 (Sept. 13, 2001) and NRC Staff's Response to Contentions Submitted by GANE at 8-13 (Sept. 12, 2001).

¹² *Id.* at 26 (emphasis added). Environmental issues under NEPA are also within the scope of the proceeding pursuant to 10 CFR § 70.23(a)(7).

¹³ *Id.*

¹⁴ *Id.*

A. Characterization of MC&A and Physical Security as Principal Systems

First, the Board concluded that the term “principal structures, systems, or components” is not defined in any NRC regulation and that there is no dispute that MC&A and physical protection systems are “systems.”¹⁵ The Board then referred to the “ordinary and common meaning” of the term “principal” as the “most important, consequential, or influential...,” and stated that “it would appear axiomatic that the MC&A and physical protection systems are most important systems and systems of first rank so as to qualify as principal systems within the meaning of section 70.23(b).”¹⁶ The Board rejected the arguments by DCS and the NRC Staff that there is a common understanding in the nuclear industry of the term “principal structures, systems, and components,” and held that “there is no industry from which to draw a common understanding.”¹⁷

The following references demonstrate that there is, in fact, a common understanding that security and MC&A systems are not principal structures, systems, or components (SSCs) in plutonium facilities:

- Regulatory Guide 3.14, *Seismic Design Classification for Plutonium Processing and Fuel Fabrication Plants*, identifies those structures, systems and components (SSCs) that are needed to provide protection against natural phenomena for plutonium processing and fuel fabrication facilities. This regulatory guide has a lengthy list of such SSCs. Security and MC&A systems are not identified within the list of SSCs as being needed to provide protection against natural phenomena.

¹⁵ *Id.* at 27.

¹⁶ *Id.*

¹⁷ *Id.*

- Regulatory Guide 3.26, *Standard Format and Content of Safety Analysis Reports for Fuel Reprocessing Plants*, identifies those SSCs that are needed to ensure adequate protection against natural phenomena and accidents in fuel reprocessing plants. This regulatory guide has a lengthy discussion of such SSCs. Security and MC&A systems are not identified as being needed to provide protection against natural phenomena or accidents.
- Regulatory Guide 3.39, *Standard Format and Content of License Applications for Plutonium Processing and Fuel Fabrication Plants*, identifies those SSCs that are needed to ensure adequate protection against natural phenomena and accidents in plutonium processing and fuel reprocessing plants. This regulatory guide has a lengthy discussion of such SSCs. Security and MC&A systems are not identified as being needed to provide protection against natural phenomena or accidents.
- The *Standard Review Plan for the Review of an Application for a Mixed Oxide (MOX) Fuel Fabrication Facility*,¹⁸ contains a definition for principal SSCs. This definition states that principal SSCs are:

[s]afety controls that are identified in the design bases as providing protection against the consequences of accidents or natural phenomena. Designating a control as a principal SSC is effectively synonymous with designating that control as an IROFS [item relied on for safety].

In turn, 10 CFR § 70.4 defines IROFS as “structures, systems, equipment, components, and activities of personnel that are relied on to prevent potential accidents at a facility that could exceed the performance requirements in § 70.61 or to mitigate their potential consequences.” As explained below, security and MC&A systems are not relied on to

¹⁸ NUREG-1718, p. xix

prevent accidents or protect against natural phenomena and, therefore, are not appropriately characterized as either IROFS or principal SSCs.

B. Protection Against Natural Phenomena Hazards and Accidents

The second rationale upon which the Board based its decision on GANE Contentions 1 and 2 was that:

the design bases of the MC&A and physical protection systems must retain their functionality to make a reasonable assurance determination of protection against natural phenomena and the consequences of potential accidents. Accordingly, the design bases of the MC&A and physical protection systems of the MFFF are not precluded from consideration under section 70.23(b), and GANE contentions 1 and 2 are within the scope of the proceeding.¹⁹

The Board does not explain how or why MC&A and physical security systems must continue to function in order to protect against natural phenomena hazards or potential accidents. Such systems are neither designed nor intended to provide such protection as contemplated by 10 CFR § 70.23(b). The “purpose and scope” of 10 CFR Parts 73 and 74, respectively, are to protect against “acts of radiological sabotage and to prevent the theft of special nuclear material,” and to control and account for special nuclear material and avoid loss or theft of such material.²⁰

In addition, none of the numerous other Commission rules designed to ensure adequate protection against natural phenomena and potential accidents require any demonstration of the adequacy of MC&A or physical security arrangements. For example, 10 CFR § 70.61 establishes “performance requirements” to be met in order to protect workers and the public in the event of an accident. Section 70.62 requires applicants to develop a “safety program” to

¹⁹ Memorandum and Order at 28-29.

²⁰ 10 CFR §§ 73.1, 74.1, 74.2.

meet those performance requirements. This safety program is comprised of certain elements – process safety information, integrated safety analysis, and management measures – that are clearly distinct and separate from the NRC’s MC&A and physical security requirements. Furthermore, new facilities, such as the MOX Facility, will be required to meet certain “baseline design criteria” pursuant to section 70.64, in order to meet the section 70.61 performance requirements. None of these baseline design criteria refers to MC&A or physical security arrangements. Nor does DCS credit any MC&A or physical security systems in its safety analysis submitted as part of the CAR.

Section 70.23(b) establishes a specific standard against which DCS’ CAR must be judged. That standard focuses on protection against natural phenomena and the consequences of accidents. Aspects of MOX Facility systems designed for purposes other than prevention or mitigation of natural phenomena hazards or potential accidents are, under a plain reading of the regulation, beyond the scope of section 70.23(b). Therefore, they are also beyond the scope of this proceeding. DCS will, of course, be required to develop effective MC&A and physical security programs before it can obtain a possession and use license for the MOX Facility.²¹

Accordingly, DCS continues to believe that issues related to the adequacy of DCS’ MC&A and physical security programs are beyond the scope of this proceeding on the CAR and therefore respectfully requests reconsideration of the Board’s ruling. Furthermore, if the Board does not choose to reconsider and reverse its prior determination, there are adequate grounds for the Board to certify this issue to the Commission. This is a novel legal question of first

²¹ While the Board states that “DCS’ argument would effectively read out of the regulation the requirement of a reasonable assurance determination for the quality assurance program” (*id.* at 28), that is not the case. The regulation, of course, explicitly calls for a determination of DCS’ quality assurance program (which has been submitted to the NRC for review and approval), but says nothing about MC&A or physical security. DCS’ position is simply that, in addition to examination of the quality assurance program, the only other non-NEPA determination to be made at the CAR stage is that relating to protection against natural phenomena and potential accidents.

impression that should be certified to the Commission in accordance with 10 CFR § 2.109(d) and the Commission's directive in its referral order. In its certification, the Board should request direction on the following questions:

- (1) Are MC&A and physical security systems "principal structures, systems or components" within the meaning of 10 CFR § 70.23(b); and
- (2) If so, is DCS required to describe the design bases of such MC&A and physical security systems in order for the NRC to determine, under 10 CFR § 70.23(b), whether the "design bases of the principal structures, systems, and components, and the quality assurance program provide reasonable assurance of protection against natural phenomena and the consequences of potential accidents"?

IV. THE BOARD'S RULING ON GANE CONTENTIONS 5 AND 8 AND BREDL CONTENTION 9A – THE CONTROLLED AREA BOUNDARY

GANE Contentions 5 and 8 and BREDL Contention 9A ("Consolidated Contention 5") allege that DCS incorrectly designated the Savannah River Site ("SRS") boundary as the controlled area boundary for purposes of 10 CFR § 70.61, in part because "DCS does not have control over the entire" SRS.²² This allegation appears to be premised upon the petitioners' assumption that 10 CFR § 20.1003, which defines controlled area as that area to which access can be limited by the licensee "for any reason," requires the licensee to be able to assert such control for reasons unrelated to radiological safety.

Both DCS and the NRC Staff opposed the admission of Consolidated Contention 5. DCS argued that it was based upon an incorrect legal interpretation of controlled area, and the NRC Staff argued that the petitioners had failed to state an adequate basis for their claims and instead merely relied upon Staff Requests for Additional Information ("RAIs").²³ DCS also argued that its ability to limit site access in the event of an emergency pursuant to an agreement or

²² *Memorandum and Order* at 35.

²³ *Id.* at 36; see also DCS' Answer to Proposed Contentions Filed by GANE at 28-30 and NRC Staff's Response to Contentions Submitted by GANE at 15-16, 18-19.

“protocol” with the Department of Energy (“DOE”) complied with the requirements of Part 70.²⁴

In admitting Consolidated Contention 5, the Board stated:

Most simply put, DCS’ purported “control” of access to the SRS by way of an agreement with DOE limiting SRS site access in the event of an emergency arguably is not coextensive with the “for any reason” language of the regulation. DCS has not argued, nor can it reasonably do so, that DOE will cede to DCS the authority to close the entire SRS “for any reason,” given that the site includes a major state highway, CSX railroad tracks, and a public trash dump.²⁵

It is unclear to DCS whether the Board has interpreted 10 CFR §§ 20.1003 and 70.61 as absolutely precluding use of the SRS boundary as the controlled area boundary, or whether instead the Board has simply admitted for litigation the question of whether the SRS boundary should be designated as the controlled area boundary. In either case, DCS believes that issues related to the proper legal interpretation of these regulations can, and should, be resolved now.

As described in Section 1.1.2.1 of the CAR, the restricted area for the MOX Facility is coincident with the protected area, and the controlled area boundary for the MOX Facility – for the purposes of 10 CFR § 70.61 – is largely coincident with the boundary of the SRS. As the SRS is owned and controlled by the DOE, the CAR further states that DCS will establish an agreement or protocol with the DOE to allow DCS to limit access to the SRS in the event of a radiological emergency at the MOX Facility, to ensure that SRS workers receive radiation protection training pursuant to 10 CFR § 19.12(a)(1)-(5), and to arrange for the posting and maintenance of notices required by 10 CFR § 19.11(a).

²⁴ DCS’ Answer to Proposed Contentions Filed by GANE at 28-29.

²⁵ *Memorandum and Order* at 38.

As clarified in DCS' response to the NRC's CAR RAI Question 1,²⁶ DCS will maintain doses from normal operation at the restricted area boundary at levels that comply with the limits for doses to members of the public in 10 CFR § 20.1301. Furthermore, as clarified in DCS' Response to CAR RAI Question 2, DOE either directly controls access to areas of the SRS via fences and checkpoints, or indirectly through procedures for those limited situations where access is provided to non-badged personnel.

DCS respectfully requests that the Board reconsider its interpretation of 10 CFR §§ 20.1003 and 70.61 in light of relevant information in the record, the legislative history of Section 70.61, and relevant precedents, and dismiss Consolidated Contention 5. In particular, DCS requests that the Board reconsider the distinction between the controlled area as used in Part 20, and the controlled area as used in 10 CFR § 70.61. The purpose of 10 CFR Part 20 (including Section 20.1003) is to control exposure to radiation during normal operation of a facility. Part 20 is not intended to control exposures during accidents.²⁷ In contrast, the purpose of Section 70.61 is to control the risks of accidents.²⁸ As discussed below, this distinction between normal operation and accidents is important in evaluating the acceptability of DCS' proposed designation of the controlled area boundary for the MOX Facility.

²⁶ *Responses to Request for Additional Information for the Duke Cogema Stone & Webster (DCS) Mixed Oxide (MOX) Fuel Fabrication Facility (MFFF) Construction Authorization Request (CAR)* (August 31, 2001) (DCS Response to CAR RAIs”).

²⁷ *See* Respiratory Protection & Controls to Restrict Internal Exposures, 10 CFR Part 20, Final Rule, 64 *Fed. Reg.* 54543, 54545 (Oct. 7, 1999) (“10 CFR Part 20 does not directly address emergency situations but provides programmatic requirements for normal operations”); *see also* Proposed Rule, Standards for Protection Against Radiation, 51 *Fed. Reg.* 1092 (Jan. 9, 1986); *Louisiana Energy Services, LP* (Claiborne Enrichment Center), LBP-91-41, 34 NRC 332, 350 (1991).

²⁸ *See* 10 CFR § 70.61(b) and (c).

A. Control of Exposures to the Public During Normal Operation

10 CFR § 20.1003 defines controlled area as “an area, outside of a restricted area but inside the site boundary, access to which can be limited by the licensee for any reason.” Section 20.1301(a) states that each licensee shall conduct operations so that the total effective dose equivalent to a member of the public does not exceed 0.1 rem, and that the dose in any unrestricted area does not exceed 0.002 rem per hour. Additionally, 10 CFR § 20.1302 states that if the licensee permits members of the public to have access to controlled areas, the limits in Section 20.1301 shall continue to apply to such individuals.

Thus, under Part 20, a licensee may simply establish a restricted area and show that doses comply with the limits in Section 20.1301 for a person located continuously at the restricted area boundary. Similarly, Part 20 does not impose any dose limits for members of the public at the controlled area boundary. Instead, Part 20 imposes dose limits at the restricted area boundary, and states that these limits apply to members of the public that are inside the controlled area boundary but outside the restricted area.

Consolidated Contention 5 does not argue that doses to members of the public as a result of normal operation of the MOX Facility will exceed the limits in 10 CFR § 20.1301, nor is there any basis for such an allegation. As provided in DCS’ Response to CAR RAI Question 1, even if a member of the public were continuously present within the controlled area (i.e., inside the SRS) but outside the restricted area for the MOX Facility, doses to that person as a result of normal operation of the MOX Facility would comply with the limits in Section 20.1301.

In summary, given DCS’ designation of the controlled area boundary and restricted area boundary for the MOX Facility, there is no dispute that doses to members of the public during normal operation will comply with the limits in 10 CFR § 20.1301. DCS does not need any

authority to control access to the SRS in order to comply with these limits, because these limits would be satisfied even if it were conservatively assumed that a member of the public will be continuously present at the restricted area boundary.

B. Control of Exposures to the Public During Accidents

10 CFR § 70.61(a) requires an applicant to perform an integrated safety analysis (“ISA”) to determine the risk of accidents at the proposed MOX Facility. 10 CFR §§ 70.61(b) and (c) restrict dose consequences to members of the public as a result of high consequence and intermediate consequence events. These restrictions are based upon the likelihood of the events in question (*i.e.*, higher consequence events must have a lower likelihood of occurrence). As a result, Section 70.61 is one of the few NRC regulations that is explicitly based upon risk (rather than consequences alone).

For members of the public, these risk determinations are to be made at the controlled area boundary as defined in 10 CFR § 70.61(f). Section 70.61(f) states:

Each licensee must establish a controlled area, as defined in § 20.1003. In addition, the licensee must retain the authority to exclude or remove personnel and property from the area. For the purpose of complying with the performance requirements of this section, individuals who are not workers, as defined in § 70.4, may be permitted to perform ongoing activities (*e.g.*, at a facility not related to the licensed activities) in the controlled area, if the licensee:

- (1) Demonstrates and documents, in the integrated safety analysis, that the risk for those individuals at the location of their activities does not exceed the performance requirements of paragraphs (b)(2), (b)(3), (b)(4)(ii), (c)(2), and (c)(4)(ii) of this section; or
- (2) Provides training that satisfies 10 CFR 19.12(a)(1)-(5) to these individuals and ensures that they are aware of the risks associated with accidents involving the licensed activities as determined by the integrated safety analysis, and conspicuously posts and maintains notices stating where the information in 10 CFR 19.11(a) may be examined by these individuals. Under these conditions, the

performance requirements for workers specified in paragraphs (b) and (c) of this section may be applied to these individuals.

Based upon the provisions in Section 70.61(f), several points are undisputed:

- *Members of the Public May Have Access to the Controlled Area*

It is clear from the wording of Section 70.61(f) that members of the public need not be excluded from the controlled area at all times. In fact, Section 70.61(f) explicitly recognizes that individuals who are not workers may be inside the controlled area. Similarly, 10 CFR § 20.1301(b) explicitly recognizes that a licensee may permit “members of the public to have access to controlled areas.” Thus, the fact that members of the public have access to the SRS for some purposes does not *per se* disqualify the SRS boundary from being the controlled area boundary.

- *Non-Licensed Facilities May Be Present Within the Controlled Area*

It is also clear from the language of Section 70.61(f) that a “facility not related to the licensed activities” may be present within the controlled area. Furthermore, it is evident that such non-licensed facilities may be owned and controlled by a person who is not the licensee. For example, the statements of consideration for Section 70.61 explicitly recognize that DOE facilities may be within the controlled area boundary.²⁹

- *Section 70.61(f) Establishes Risk Limits for Non-Workers Who Perform Ongoing Activities in the Controlled Area Boundary*

Individuals who do not work at the licensed facility but perform “ongoing” activities within the controlled area (often called “co-located workers”) are subject to risk limits as

²⁹ See 65 Fed. Reg. 56211, 56212 (Sept. 18, 2000) (“If the controlled area included the nearby Department of Energy (DOE) facilities, then the NRC would consider the personnel working at those facilities to be ‘workers’ for the purposes of the performance requirements of § 70.61”).

specified in Section 70.61(f). That is, they must abide by either the risk limits applicable to workers at the licensed facility if the co-located workers have received the training required by 10 CFR § 19.12(a)(1)-(5), or the risk limits for members of the public based on doses calculated at the location of the co-located worker.

- *Section 70.61(f) Does Not Establish Any Risk Limits for Members of the Public Who Perform Infrequent Activities in the Controlled Area*

As indicated above, Section 70.61 establishes risk limits for members of the public located at the controlled area boundary, and for individuals who perform *ongoing* activities within the controlled area. It does not establish any risk limits for members of the public who infrequently visit the controlled area. The Commission explained the reason for this regulatory structure in the statements of consideration for proposed Section 70.61:

The Commission's intent is that the ISA does not evaluate compliance with the accident standards for individuals who make infrequent visits to the controlled area and restricted area (*e.g.*, visitors). Use of the ISA to determine the risks to these individuals would need to consider second-order effects such as the probability of the individual being present at the time that the unlikely (or highly unlikely) accident occurred....Application of the Part 20 regulations provides adequate protection for these individuals. In addition, the provisions (*i.e.*, performance requirements) to protect workers and non-workers during accidents should, implicitly, provide a degree of protection to the infrequently present individuals.³⁰

These undisputed principles provide a foundation for addressing the following questions raised by the Board in its Memorandum and Order and at the September 21, 2001 prehearing conference.

³⁰ 64 *Fed. Reg.* 41338, 41345 (July 30, 1999).

Under Section 70.61, Must a Licensee Have the Authority to Exclude Individuals from the Controlled Area For Reasons Unrelated to Protection Against Radiological Accidents?

As indicated above, 10 CFR § 20.1003 defines controlled area as that area to which access can be limited by the licensee “for any reason.” Based upon this language, the Board’s Memorandum and Order implies that Section 70.61 requires DCS to have the authority to exclude individuals from the controlled area for reasons unrelated to protection of these individuals against radiological accidents at the MOX Facility. Such a broad reading is inconsistent with the intent of the regulation.

Within the context of Section 70.61, it is apparent that a licensee must be able to limit access to the controlled area “for any reason” necessary to achieve compliance with the risk limits contained therein. A licensee does not need the authority to exclude members of the public from the controlled area for reasons unrelated to the purposes of Section 70.61. For example, there would be no basis for finding a licensee to be in violation of Section 70.61 merely because the licensee does not have the authority to exclude members of the public from the controlled area for reasons related to environmental protection (*e.g.*, to protect sensitive ecological areas from degradation by contact with the public). As long as the licensee can exclude members of the public from the controlled area as necessary to satisfy the risk limits in Section 70.61, the “for any reason” provision is satisfied.

Although the definition of controlled area boundary in Section 20.1003 does use the term “for any reason,” if read unqualifiedly this term would require DCS’ authority over the public – and DOE employees – to be limitless. Such a result is unreasonable; accordingly, the basic rules of statutory construction require that the term be interpreted based upon its context as referenced

in Section 70.61.³¹ As the U.S. Supreme Court recently stated in *Tyler v. Cain*, “[w]e do not construe the meaning of statutory terms in a vacuum. Rather, we interpret the words in their context and with a view to their place in the overall statutory scheme.”³²

The relevant legislative history of Section 70.61(f) is instructive. The proposed Section 70.61(f) stated that the licensee shall “retain[] the authority to determine all activities” in the controlled area.³³ Comments on proposed section 70.61(f) expressed concern that it could adversely impact the MOX Facility and nearby DOE facilities, because it would require individuals working at the nearby facilities to be treated as members of the public for purposes of the accident analysis in Section 70.61 (*i.e.*, these individuals would be treated as being outside the controlled area). In response, the Commission modified the language in proposed Section 70.61(f). Furthermore, the statements of consideration for final Section 70.61³⁴ explicitly recognize that a controlled area may include “nearby Department of Energy (DOE) facilities,” which by their very nature are not under the full control of a licensee.

This history demonstrates that the Commission does not require a licensee to exclude personnel from the controlled area for reasons unrelated to protection of the individuals from

³¹ See generally, *United States v. American Trucking Ass'ns*, 310 U.S. 534, 543-44, 60 S. Ct. 1059, 1063-64 (1940) (“even when the plain meaning [of a statute] did not produce absurd results but merely an unreasonable one ‘plainly at variance with the policy of the legislation as a whole,’ this Court has followed that purpose, rather than the literal words. When aid to construction of the meaning of words, as used in the statute, is available, there certainly can be no ‘rule of law’ which forbids its use, however clear the words may appear on superficial examination”) (citations omitted).

³² 533 U.S. 656, 121 S.Ct. 2478, 2482 (2001) (citations omitted); see also *Sequoyah Fuels Corp.*, LBP-93-25, 38 NRC 304, 320 (1993) (“The scope of regulations, like statutes, should be interpreted by determining their purpose through a consideration of their context, structure and scheme”); see generally *Kerr-McGee Chemical Corp.* (West Chicago Rare Earths Facility), ALAB-944, 33 NRC 81, 139-40 (1991); *U.S. Department of Energy Project Management Corp. Tennessee Valley Authority* (Clinch River Breeder Reactor Plant), CLI-83-1, 17 NRC 1, 3 n.2 (1983) (“While the dictionary definition of a term is helpful to understanding its general use, the dictionary is not to be used as a “fortress” in interpreting the scope of a term in a particular legal context”).

³³ See 64 *Fed. Reg.* 41338, 41354.

³⁴ 65 *Fed. Reg.* 56211, 56212.

accidents. Furthermore, the Commission's recognition that the controlled area boundary for the MOX Facility and other licensed facilities may include land that is owned and controlled by the DOE (and therefore not within the full control of the licensee) also clearly indicates that Section 70.61 does not require a licensee to have the authority to exclude individuals from the controlled area for reasons unrelated to protection of the individuals from accidents.

This conclusion is supported by precedents involving other NRC-licensed facilities on DOE reservations. For example, the Gaseous Diffusion Plants ("GDPs") are operated by USEC but are located on DOE sites with activities and personnel not regulated by the NRC. The controlled area at the GDPs is coincident with the boundary of the DOE reservations. Doses to the public from the GDPs are calculated at the boundary of the DOE reservations, not at the protected area fence or the boundary of the GDPs operated by USEC.³⁵ Furthermore, the controlled area at the Paducah GDP includes the West Kentucky Wildlife Management Area, which is open to the public for recreation, including hunting.³⁶

Under Section 70.61, Must a Licensee Itself be Able to Control Access, or May the Licensee Have Arrangements With Third Persons to Control Access?

The Board's Memorandum and Order implies that the SRS cannot serve as the controlled area because DOE, rather than DCS, would be responsible for physically excluding members of the public from the SRS. Such an interpretation is inconsistent with NRC's practice with respect

³⁵ See Safety Analysis Reports (SAR) for Portsmouth and Paducah GDPs, § 2.1.2.5 and Figures 2.1-5 and 2.1-6.

³⁶ SAR for Paducah GDP, §§ 2.1.2, 2.1.2.4, and 2.1.3.3, and Figures 2.1-4, 2.1-5, and 2.1-6. Similarly, the WNP-2 (now called Columbia) nuclear plant is located on land leased from DOE on its Hanford Site. For WNP-2, the exclusion area boundary extends beyond the WNP-2 property lines and includes land that is owned and controlled by the DOE (including roads, railroads, and a electrical substation controlled by the Bonneville Power Administration). WNP-2 has an agreement with DOE to limit access to the exclusion area if necessary. In the case of an emergency at WNP-2, the licensee has arrangements with federal and state authorities to control traffic on the transportation routes traversing the exclusion area, including possible removal of personnel at the substation. NRC Safety Evaluation Report for WNP-2, § 2.1.2.; Final Safety Analysis Report for WNP-2, § 2.1.2.1.

to exclusion area boundaries. For instance, it is not unusual for a licensee to have arrangements with federal, state, or local officials to block access in the event of an emergency to highways, railroads, and other transportation routes that traverse the exclusion area. The WNP-2 arrangement described above is one such example. In addition, NUREG-0800, Standard Review Plan 2.1.2, explicitly states:

Where the designated exclusion area extends into bodies of water such as a lake, reservoir, or river which is routinely accessible to the public, the reviewer must determine that the applicant has made appropriate arrangements with the local, state, Federal, or other public agency having authority over the particular body of water and the arrangements made provide for the exclusion and ready removal in an emergency, by either the applicant or the public agency in authority, of any persons on those portions of the body of water which lie within the designated exclusion area.

Therefore, DCS' arrangements with DOE to limit access to the SRS in the event of an emergency at the MOX Facility will satisfy the requirements of Section 70.61.

Are DCS' Plans Sufficient to Satisfy the Requirements of Section 70.61(f)?

As discussed above, DCS will establish an agreement or protocol with DOE to limit access to the SRS in the event of an emergency at the MOX Facility. For the following reasons, the agreement or protocol will be sufficient to satisfy Section 70.61(f) and to address the specific issues raised by GANE and BREDL:

First, DOE and contractor personnel at SRS will receive the training required by Section 70.61(f)(2). Therefore, these personnel may be treated similarly to MOX Facility workers for purposes of Section 70.61 and may be located within the controlled area boundary.

Second, personnel at the landfill at the SRS will receive training similar to DOE personnel.³⁷ Therefore, these personnel may also be treated similarly to MOX Facility workers for purposes of Section 70.61 and may also be located within the controlled area boundary.

Third, members of the public using highways and railroads will only be located on the SRS infrequently and will not be performing ongoing activities at the SRS. Therefore, as provided in the statements of consideration for Section 70.61, these individuals are not subject to the risk limits in Section 70.61 applicable to personnel inside the controlled area boundary. Furthermore, measures will be in place to close these transportation routes in the event of an emergency at SRS. The SRS security contractor and offsite law enforcement authorities can close down the roads and implement immediate access control measures as needed. Additionally, the railroad switching yard in Augusta maintains radio communications with trains and will divert rail traffic before it enters the SRS in the event of an emergency (and will verify rapid transit of trains if on the site at the time of the emergency).³⁸

Therefore, DCS respectfully requests that the Board reconsider its prior ruling and hold as a matter of law that Consolidated Contention 5 does not identify any valid basis for contesting the controlled area boundary as established for the purposes of Section 70.61.

If the Board does not reconsider and reverse its prior determination, DCS requests that it certify Consolidated Contention 5 to the Commission. This contention presents a novel legal interpretation of first impression. The provisions in Section 70.61 are only one year old, and the MOX Facility is the first facility that has been faced with their application and interpretation. The Board's ruling on the contention also will have substantial design and cost implications (not only for DCS, but also for other fuel cycle facilities), because the location of the controlled area

³⁷ DCS Response to CAR RAI Question 2.

boundary affects the allowable source term, which in turn affects the design. In its certification, the Board should request direction from the Commission on the following questions:

- (1) For the purposes of the requirements in 10 CFR § 70.61, must a licensee have the authority to limit access to the controlled area for reasons that are unrelated to protection of individuals against the effects of intermediate and high consequences events; and
- (2) For the purposes of the requirements in 10 CFR § 70.61, must a licensee directly be able to limit access to the controlled area, or may the licensee make arrangements with a third party to limit access to the controlled area?

V. THE BOARD'S RULING ON GANE CONTENTION 12 – CONSIDERATION OF IMPACTS OF TERRORISM UNDER NEPA

GANE Contention 12 “states that NEPA requires the analysis of foreseeable environmental impacts and asserts that the ER [environmental report] fails to analyze the foreseeable impacts of malevolent sabotage causing a beyond design basis accident.”³⁸ Both DCS and the NRC Staff opposed the admission of this contention. DCS argued that it raises matters that need not be considered under NEPA, and the NRC Staff argued that GANE had failed to state an adequate legal basis for the contention. In admitting Contention 12, the Board referred to the events of September 11, 2001, and stated that:

it can no longer be argued that terrorist attacks of heretofore unimagined scope and sophistication against previously unimaginable targets are not reasonably foreseeable. Indeed, the very fact that these terrorists attacks occurred demonstrates that massive and destructive terrorists acts can and do occur and closes the door, at least for the immediate future, on qualitative arguments that such terrorist attacks are always remote and speculative and not reasonably foreseeable.⁴⁰

³⁸ DCS Response to CAR RAI Question 2.

³⁹ *Memorandum and Order* at 50.

⁴⁰ *Id.* at 53.

DCS requests that the Board reconsider its ruling on this contention. The Board's decision appears to preclude DCS (or the NRC Staff in its Environmental Impact Statement ("EIS")) from addressing the "foreseeability" of a terrorist-caused beyond design basis accident at the MOX Facility on a qualitative basis. While the Board has stated that DCS and the NRC Staff "are still free to challenge quantitatively the likelihood of such a terrorist-initiated event,"⁴¹ DCS does not believe that such a quantitative analysis is possible. In *Limerick Ecology Action, Inc. v. NRC*,⁴² the court upheld the NRC's determinations that the risk of a sabotage event was beyond the state of the art of probabilistic risk assessment methodology, was not amenable to quantification, and need not be considered in an EIS.⁴³ It was the NRC's position then, and to the best of DCS' knowledge, it remains the Commission's position now, that no such quantification is practical, or necessary under NEPA.

Moreover, consideration of a terrorist-caused beyond design basis accident appears to run afoul of the principle that "worst-case" events do not need to be considered under NEPA. In *Robertson v. Methow Valley Citizens Council*,⁴⁴ for example, the Supreme Court specifically ruled that NEPA does not require such a "worst case" analysis, and noted that the Council on Environmental Quality ("CEQ") had modified its regulations to delete any requirement for such an analysis.⁴⁵ The Court quoted from the CEQ's response to rulemaking comments on the issue as follows:

Many respondents to the Council's Advance Notice of Proposed Rulemaking pointed to the limitless nature of the inquiry established by this requirement; that is, one can always conjure up

⁴¹ *Id.* at 54.

⁴² 869 F.2d 719 (3d Cir. 1989).

⁴³ *Id.* at 741-44.

⁴⁴ 490 U.S. 332 (1989).

⁴⁵ *Id.* at 354.

a worse “worst case” by adding an additional variable to a hypothetical scenario. Experts in the field of risk analysis and perception stated that the “worst case analysis” lacks defensible rationale or procedures, and that the current regulatory language stands without any discernible link to the disciplines that have devoted so much thought and effort toward developing rational ways to cope with problems of uncertainty. It is therefore, not surprising that no one knows how to do a worst case analysis....⁴⁶ Moreover, in the institutional context of litigation over EIS(s) the “worst case” rule has proved counterproductive, because it has led to agencies being required to devote substantial time and resources to preparation of analyses which are not considered useful to decisionmakers and divert the EIS process from its intended purpose.⁴⁷

By requiring DCS and the NRC Staff to evaluate “massive and destructive terrorist acts,” the Board appears to call for a “worst case” analysis to be performed, contrary to current NEPA law.

Furthermore, the Board’s decision does not appear to discuss whether the events of September 11 make a terrorist-caused beyond design basis accident foreseeable at the MOX Facility itself. The question inherent in NEPA is not whether an event is foreseeable anywhere in the United States, but instead whether such an event is foreseeable at the particular facility under review.⁴⁸

Finally, DCS requests that the Board take into consideration the decision of the licensing board in *Private Fuel Storage*,⁴⁹ just issued on December 13, 2001. In that decision, the board (while acknowledging this Board’s decision to the contrary in this proceeding), refused to admit a contention comparable to GANE Contention 12. This Board has held that 10 CFR § 50.13 and

⁴⁶ Slovic P., February 1, 1985, Response to ANPRM.

⁴⁷ 490 U.S. at 356, n. 17, quoting 50 Fed. Reg. 32236 (1985).

⁴⁸ NEPA requires analysis of the “environmental impact of the proposed action.” See 42 USC § 4332(c)(i). Furthermore, while the Board has apparently concluded that since September 11, the likelihood or foreseeability of a terrorist attack has increased, an alternative conclusion is also reasonable. That is, that given the dramatic increase in resources and attention being paid to this issue since September 11 by federal, state and local authorities, the likelihood or foreseeability of such an event has actually decreased.

⁴⁹ *Private Fuel Storage* (Independent Spent Fuel Storage Installation), LBP-01-37, __NRC __ (2001).

the Commission policy it embodies apply to reactors and are inapplicable to the MOX Facility, and that the Appeal Board's decision in *Long Island Lighting Co.*⁵⁰ "is inapposite."⁵¹ In contrast, the board in *Private Fuel Storage* held that the rationale for Section 50.13 remains applicable to the Commission's NEPA responsibilities relating to other facilities, and thus ruled the proposed contention inadmissible.⁵² DCS believes that the board in *Private Fuel Storage* is correct, and urge the Board to make a similar ruling. Accordingly, DCS respectfully requests that the Board reconsider its decision to admit GANE Contention 12. In the alternative, DCS requests that the Board certify this issue to the Commission. The Board has acknowledged the important policy implications raised by this contention and the appropriateness, under "normal" circumstances, for certification to the Commission, but has declined to certify its ruling to the Commission. In particular, the Board stated that the contention:

raises an extremely important policy question. In such circumstances, the Board normally would certify the question of the admissibility of this contention to the Commission pursuant to 10 C.F.R. § 1209(d). In this instance, however, DCS has vigorously opposed the admission of all of GANE's contentions and the grant of its intervention petition and DCS has the opportunity to place the issue squarely before the Commission in an appeal from the grant of GANE's intervention petition.... Thus, the certification by the Board of this matter is unnecessary.⁵³

DCS has chosen not to seek Commission review of the Board's determination to admit GANE as a party. To do so, of course, would require DCS to challenge the Board's determinations on all of GANE's admitted contentions. However, most of the contentions do not raise novel or significant policy or legal issues that warrant the Commission's attention at this

⁵⁰ *Long Island Lighting Co.* (Shoreham Nuclear Power Station), ALAB-156, 6 AEC 831 (1973).

⁵¹ *Memorandum and Order* at 52.

⁵² *Private Fuel Storage*, LBP-01-37, slip op. at 13.

⁵³ *Memorandum and Order* at 54-55.

time. Requiring DCS to challenge the Board's ruling on all of the contentions, in order to seek review of this particularly important policy question, would be an inefficient use of both the Commission's and DCS' resources.

Certification is warranted to ensure that issues related to terrorism involving the MOX Facility are treated consistently with NRC's overall approach to terrorism. Currently, the NRC is conducting a generic "top-to-bottom review" of its safeguards and security requirements and policies. As part of this top-to-bottom physical security review, the Commission is reexamining the design basis threat and will modify it, as appropriate.⁵⁴ Certification of this issue to the Commission will ensure that the security, environmental, regulatory, and policy implications of this issue are addressed as a coherent part of the Commission's overall review effort.

In addition, GANE's petition to suspend this proceeding, which is presently pending before the Commission,⁵⁵ requests that the Commission suspend the MOX Facility CAR proceeding based in part on "the Commission's longstanding refusal to consider the consequences of terrorist attacks in its Environmental Impact Statements for nuclear facilities...."⁵⁶ DCS' response stated, among other things, that: (1) acts of terrorism are intentionally performed and therefore inherently unpredictable; (2) a review under NEPA need not include all theoretically possible environmental effects; (3) a NEPA review may be limited to those effects which are shown to have some likelihood of occurring at a particular site; and (4) the NEPA rule of reason does not require the performance of a "worst case analysis."⁵⁷ Since

⁵⁴ See also Statement of Dr. Richard A. Meserve, Chairman, Submitted by the NRC to 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) (ADAMS Access. No. ML013390509).

⁵⁵ GANE Petition to Suspend (Oct. 10, 2001).

⁵⁶ *Id.* at 10.

⁵⁷ DCS Response at 10-12 (Oct. 22, 2001).

these issues are presently before the Commission on the petition to suspend, certification would enable the Commission to dispose of similar issues in one order.

The Board's decision has significant generic implications for future NEPA analyses performed by the NRC for other facilities. Moreover, there is no guidance for performing an evaluation of the environmental impacts of a deliberate crash of a large airplane causing "massive and destructive" damage to a nuclear facility. In particular, there is no guidance for: (1) evaluating the likelihood of such events; (2) determining the area of impact to the facility; (3) determining the ability of the facility to withstand such impacts; (4) determining the source term from such an accident; (5) assessing the dispersion of radioactive materials under such conditions; or (6) evaluating alternatives for mitigating the environmental impacts of such events. Thus, at a minimum, further guidance is needed on how an applicant (or the NRC Staff in an EIS) is to determine how an applicant (or the NRC Staff in an EIS) is to establish boundaries or parameters for determining the likelihood and consequences of such an event.

Finally, DCS requests that the Board take into consideration the December 13, 2001 licensing board decision in *Private Fuel Storage*, in which the board denied admission of a contention similar to GANE Contention 12, but also referred its ruling to the Commission. The board in that case stated that, in light of the ongoing top-to-bottom review of the Commission's physical security requirements, its ruling "seems to be one particularly suited for early review by the Commission"²⁸ In light of the apparent disagreement between the *Private Fuel Storage* board and the Board in this proceeding, certification to the Commission seems even more clearly to be the appropriate course of action.

²⁸ *Private Fuel Storage*, LBP-01-37, slip op. at 14.

Therefore, in the interests of administrative consistency, economy and efficiency, the Board should certify its substantive determination on GANE Contention 12 for consideration by the Commission. In so certifying, the Board should explicitly request direction on the following questions:

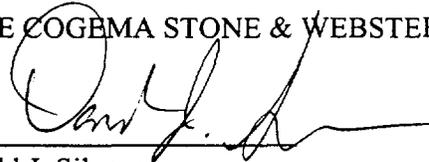
- (1) Whether, and under what circumstances, a terrorist-caused beyond design basis accident (such as the deliberate crash of a large airplane) must be considered under NEPA;
- (2) Whether a quantitative assessment of the likelihood or consequences of such an event is practicable or required under NEPA to determine if such an event is reasonably foreseeable;
- (3) If the impacts of a terrorist-caused beyond design basis event must be considered under NEPA, what assumptions or guidance should be used in performing such an evaluation; and
- (4) What range of alternatives should be considered for mitigating the environmental impacts?

VI. CONCLUSION

DCS respectfully requests that the Board reconsider and reverse its rulings on GANE Contentions 1 and 2 (relating to MC&A and physical security issues); Consolidated Contention 5 (relating to the MOX Facility controlled area); and GANE Contention 12 (regarding analysis of terrorist acts under NEPA). Alternatively, DCS requests that the Board certify these issues for the Commission to make a decision on these novel regulatory issues.

Respectfully submitted,

DUKE COGEMA STONE & WEBSTER



Donald J. Silverman
Alex S. Polonsky
Marjan Mashhadi
Morgan, Lewis & Bockius LLP
1800 M Street, N.W.
Washington, DC 20036

Phone: (202) 467-7502
Facsimile: (202) 467-7176

Dated: December 17, 2001

**UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
ATOMIC SAFETY AND LICENSING BOARD**

**Before Administrative Judges:
Thomas S. Moore, Chairman
Charles N. Kelber
Peter S. Lam**

In the Matter of)	
)	
DUKE COGEMA STONE & WEBSTER)	Docket No. 070-03098-ML
)	
(Savannah River Mixed Oxide Fuel Fabrication Facility))	ASLBP No. 01-790-01-ML
)	

CERTIFICATE OF SERVICE

I hereby certify that copies of "Duke Cogema Stone & Webster Motion for Reconsideration or, in the Alternative, for Certification to the Commission" were served this day upon the persons listed below, by both e-mail and United States Postal Service, first class mail.

Secretary of the Commission*
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001
Attn: Rulemakings and Adjudications Staff
(E-mail: HEARINGDOCKET@nrc.gov)

Administrative Judge Peter S. Lam
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001
(E-mail: psl@nrc.gov)

Administrative Judge
Thomas S. Moore, Chairman
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001
(E-mail: tsm2@nrc.gov)

John T. Hull, Esq.
Office of the General Counsel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001
(E-mail: jth@nrc.gov)

Administrative Judge Charles N. Kelber
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001
(E-mail: cnk@nrc.gov)

Dennis C. Dambly, Esq.
Office of the General Counsel
Mail Stop - O-15 D21
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
(E-mail: dcd@nrc.gov)

Glenn Carroll
Georgians Against Nuclear Energy
P.O. Box 8574
Atlanta, Georgia 30306
(E-mail: atom.girl@mindspring.com)

Donald J. Moniak
Blue Ridge Environmental Defense League
P.O. Box 3487
Aiken, S.C. 29802
(E-mail: donmoniak@earthlink.net)

Office of Commission Appellate
Adjudication
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001
(E-mail: hrb@nrc.gov)

* Original and 2 copies



Marjan Mashhadi

12/17/01

Date