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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

December 30, 2003 (9:49AM)

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

OFFICE OF SECRETARY
RULEMAKINGS AND
ADJUDICATIONS STAFF

In the Matter of)
)
DUKE ENERGY CORPORATION)
)
(Catawba Nuclear Station,)
Units 1 and 2))
)
)
)

Docket Nos. 50-413 OLA
50-414 OLA

ANSWER OF DUKE ENERGY CORPORATION TO THE "BLUE RIDGE
ENVIRONMENTAL DEFENSE LEAGUE'S
SECOND SUPPLEMENTAL PETITION TO INTERVENE"

I. INTRODUCTION

On December 2, 2003, the Blue Ridge Environmental Defense League ("BREDL") filed additional proposed, late-filed contentions in this license amendment proceeding.¹ Pursuant to 10 C.F.R. § 2.714(c) and the schedule established by the Atomic Safety and Licensing Board ("Licensing Board") in its December 15, 2003 Memorandum and Order, Duke Energy Corporation ("Duke") herein responds to BREDL's proposed late-filed contentions on the issue of admissibility. As discussed below, Duke opposes admission of each of BREDL's supplemental contentions as untimely, otherwise inadmissible, or both.

¹ See "Blue Ridge Environmental Defense League's Second Supplemental Petition to Intervene" (December 2, 2003) ("BREDL Supplement").

II. APPLICABLE NRC STANDARDS

The standards that NRC licensing boards must apply in ruling on the admissibility of all proposed contentions are set forth at 10 C.F.R. § 2.714(b) and (d). The failure of a proposed contention to comply with *any* of the NRC's threshold requirements mandates that the contention be rejected.² Duke addressed the NRC standards for assessing the admissibility of proposed contentions in its answer to the original contentions submitted in this matter.³ That discussion need not be repeated here.

However, in addition to satisfying the requirements in 10 C.F.R. § 2.714(b) and (d), late-filed proposed contentions must also address the balancing test in 10 C.F.R. § 2.714(a)(1).⁴ Non-timely contentions will not be entertained unless the Licensing Board determines that the contentions should be considered based upon a balancing of the following factors in Section 2.714(a)(1):

- (i) Good cause, if any, for failure to file on time.
- (ii) Availability of other means whereby the petitioner's interest will be protected.

² *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Unit 2), LBP-03-3, 57 NRC 45, 63 (2003), *citing Arizona Pub. Serv. Co.* (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-91-12, 34 NRC 149, 155-56 (1991).

³ See "Answer of Duke Energy Corporation to the 'Blue Ridge Environmental Defense League's Supplemental Petition to Intervene' and the 'Contentions of Nuclear Information and Resource Service'" (November 11, 2003) ("Duke Answer"), at Section IV.

⁴ *Sacramento Municipal Utility Dist.* (Rancho Seco Nuclear Generating Station), LBP-93-23, 38 NRC 200, 207 (1993); *see also Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-00-01, 51 NRC 1, 5 (2000); *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-00-8, 51 NRC 146, 153 (2000) ("Yet, even if a late-filed contention meets the requirements of section 2.714(a)(1), it also must satisfy the admissibility standards set forth in section 2.714(b)(2)(i)-(iii), (d)(2), in order to receive merits consideration. *See, e.g.,* LBP-99-43, 50 NRC 306, 312 (1999), *petition for interlocutory review denied*, CLI-00-2, 51 NRC 77 (2000).")

- (iii) The extent to which the petitioner's participation may reasonably be expected to assist in developing a sound record.
- (iv) The extent to which the petitioner's interest will be represented by existing parties.
- (v) The extent to which the petitioner's participation will broaden the issues or delay the proceeding.

In seeking admission of proposed late-filed contentions, "the burden of proof is on the petitioner, who must affirmatively address all five factors and demonstrate that, on balance, they warrant overlooking the lateness of the filing."⁵

In the present situation, BREDL concedes that its supplemental contentions are late-filed. As discussed in more detail below, BREDL asserts that "good cause" under 10 C.F.R. § 2.714(a)(1)(i) exists for filing proposed Contentions 10, 11 and 12 late because those new contentions are based on a slide presentation to the NRC Staff made at an October 23, 2003 meeting by Messrs. A. Mailliat and J.C. Melis of the French Institut de Radioprotection et de Sûreté Nucleaire ("IRSN") and because the IRSN slides were reportedly not placed in the NRC's CITRIX system until November 4, 2003. BREDL argues that "good cause" exists for filing proposed Contention 13 late because that proposed contention is based upon the U.S. Department of Energy ("DOE") supplemental environmental analysis on the EUROFAB option (the "Supplement Analysis"),⁶ which was not provided to BREDL until November 11, 2003. Therefore, BREDL asserts, all of the new contentions have been filed "within 30 days of receipt of the documents on which they are based." BREDL Supplement, at 10-11. Duke has no objection to the timeliness of Contention 13. However, Duke does object to the timeliness of

⁵ *Private Fuel Storage*, LBP-00-8, 51 NRC at 153.

⁶ *DOE Supplement Analysis: Fabrication of Mixed Oxide Fuel Lead Assemblies in Europe* (DOE/EIS-0229-SA3) (Nov. 2003).

Contentions 10, 11, and 12, because those three contentions address issues that were discussed in public long before the October 23, 2003 presentation now referenced. In addition, all of the proposed contentions fail to meet the NRC's threshold basis requirements of 10 C.F.R. § 2.714(b).

III. DISCUSSION

BREDL Contention 10

Duke's safety analysis for design basis loss of coolant accidents ("LOCAs") in Section 3.7 of the application is inadequate because it fails to account for uncertainties in the technical understanding of the behavior of MOX fuel during LOCAs that may lead to significant deviations from low-enriched uranium ("LEU") fuel behavior.

The sole basis for this proposed contention is a "recent presentation" to the NRC Staff by representatives of the IRSN on their "proposed series of tests at the Phébus experimental reactor to close gaps in the experimental database for both MOX fuel and high-burnup LEU fuel." BREDL Supplement, at 3. (BREDL misleadingly characterizes IRSN as the "French safety authority." In fact, IRSN is more closely analogous to the NRC's Office of Research and conducts work similar to our national laboratories. The organization with actual safety oversight authority for French nuclear plants is the General Department for Nuclear Safety and Radioprotection ("DNSGR").)⁷ As its basis for this contention, BREDL attaches a copy of the

⁷ According to the IRSN website (www.irsn.fr), "the IRSN carries out research and analysis on the risks related to radioactivity and their consequences on man and the environment." Again from the IRSN website (www.irsn.fr/va/04c/1.htm), DNSGR "was created at the same time as IRSN, to exercise the functions of authorization and control, with the exception of those relating to national defense."

The NRC has regular interactions with French nuclear organizations on various regulatory and research issues, including waste management, spent fuel storage, decommissioning, MOX fuel, and reactor issues. See the July 5, 2000 Memorandum to the Commission from J. Lee, Director, NRC Office of International Programs, re 7/10/00 visit of French ambassador Francois Bujon de L'Estang, Attachments 3 and 4.

slides from the October 23, 2003 IRSN presentation to the NRC Staff.⁸

The contention states: “the IRSN presentation points out that . . . during a LOCA, the MOX fuel pellet column collapses into the lower part of the fuel rod sooner than LEU fuel.” BREDL Supplement at 3. The sole reference for this bold, definitive proposition is Slide 6. *Id.* IRSN Slide 6, however, is a discussion in the context of severe accident source term rather than loss of coolant accidents. BREDL, in the contention, later attempts to tie the slide to a portion of the IRSN presentation (Slides 21 and 22) that deals with LOCA issues. BREDL argues that the presentation raises the possibility of increases in peak cladding temperature (“PCT”), cladding oxidation, and cladding hydrogen uptake — emphasizing that in Slide 21, IRSN pointed out that “this question is particularly important for end-of-life MOX fuel where power generation is not reduced, unlike for UO₂ fuel.” BREDL Supplement, at 4.

Finally, BREDL relies on Slides 24 and 25 of the IRSN presentation, arguing (quoting the contention, not the slide) that “modern, low-tin, high ductility cladding materials, such as the M5 cladding that will be used in the MOX [lead assemblies], will form bigger ‘balloons’ than conventional Zircaloy and are likely to have higher blockage ratios.” *Id.* Thus, BREDL asserts, “there is insufficient information to provide confidence that the MOX [lead assemblies] will not cause coolant blockage during a LOCA that could lead to an unacceptable loss of core coolable geometry and an uncontrolled core melt.” *Id.* BREDL argues that the

⁸ The PHEBUS program is an international cooperative research program. The PHEBUS experimental work is performed at the Cadarache Centre in France. The October 7, 2003 NRC meeting notice for the October 23, 2003 meeting with IRSN describes the purpose of the meeting as discussion of *proposed* testing at the PHEBUS test facility of “(a) fuel bundles under LOCA conditions to observe temperature effects and possible fuel relocation, and (b) fuel bundles under core melt conditions with air present to measure fission product release (source term).”

“unknowns” prevent a finding that the Emergency Core Cooling System (“ECCS”) at Catawba will meet the acceptance criteria of 10 C.F.R. § 50.46 for the MOX lead assemblies.

This late-filed contention is based entirely on the IRSN presentation and “uncertainties” or “unknowns” allegedly created by that presentation. Admissibility of the contention must be evaluated with respect to (a) timeliness of the issues raised and (b) sufficiency of the basis to establish a genuine dispute on a material issue. On each of these bases, Contention 10 is not admissible.

1. Timeliness

The most important factor for an assessment of whether a late-filed contention should be considered is the “good cause” factor.⁹ Duke has agreed that, as a rule of thumb, a filing within 30 days of receipt of new information would satisfy this standard. Prehearing Conference Transcript (“Tr.”) 82-85.¹⁰ BREDL claims “good cause” because the IRSN presentation referenced in the contention was not in the NRC’s public document system until November 4, 2003. While BREDL filed its supplemental contentions within 30 days of this date, the contentions are nonetheless untimely because the substance of the information merely alluded to in the IRSN slides was not new in the October 23 presentation. That information was previously discussed at a public meeting of the NRC-sponsored expert panel on source term for

⁹ See *Commonwealth Edison Co.* (Braidwood Nuclear Power Station, Units 1 and 2), CLI-86-8, 23 NRC 241, 244 (1986) (“If the proponent of a contention fails to satisfy [the “good cause” factor], it must make a ‘compelling’ showing with respect to the other four factors.”) (internal citations omitted); see also *Westinghouse Electric Corp.* (Nuclear Fuel Export License for Czech Republic — Temelin Nuclear Power Plants), CLI-94-7, 39 NRC 322, 329 (1994); *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-00-2, 51 NRC 77, 79 (2000).

¹⁰ Duke agreed to the 30-day deadline subject to a showing that the late-filed proposed contention is, in fact, based on new information rather than information “that could reasonably have been raised earlier.” Prehearing Conference Tr. 84 (Repka).

high burnup and MOX fuels on February 19-21, 2002 — more than 21 months prior to the supplemental contentions. BREDL's technical advisor, Dr. Lyman, attended that February 2002 meeting. See the transcript of the February 19-21, 2002 NRC meeting of the Source Term Applicability Panel, available on ADAMS at ML020770171. Dr. Lyman's participation is noted at Meeting Tr. 553, 557-558 (2/21/02).

The IRSN presentation, Slide 6, describes the "representative data base" on source term release rates for MOX fuel and high burnup UO₂ fuel. The MOX fuel test alluded to for the proposition in the contention is the French VERCORS RT2 test.¹¹ See IRSN Slides, p. 6 (graph). Also referenced (but not graphed) on the slide is the VERCORS RT7 test. There was substantial discussion of both the VERCORS RT2 and RT7 tests at the NRC meetings of February 2002. This is reflected in the public transcript of the meeting. See, e.g., Meeting Tr. 262-273 (2/19/02). Qualitative data concerning fission product release from MOX fuel were presented at the meeting by Bernard Clement of IPSN, a predecessor organization to the IRSN.¹² BREDL has not provided any justification for failing to raise these issues in its original proposed contentions.

Dr. Lyman was also apparently aware of these tests much earlier. He included a reference to the VERCORS source term tests with MOX fuel in his 2000 paper referenced in the original BREDL contentions.¹³ The VERCORS tests with MOX fuel were also referenced in Section 4.2 and Appendix B of the report of the source term expert panel — ERI/NRC 02-002,

¹¹ The VERCORS series of tests are conducted at the French Grenoble Nuclear Centre. The RT2 test was actually conducted in April 1998.

¹² Mr. Clement's slide presentation was distributed at the meeting on February 19, 2002.

¹³ E. Lyman, "Public Health Risks of Substituting Mixed-Oxide for Uranium Fuel in Pressurized Water Reactors," *Science & Global Security* 9, at 11 (page citation based on 2000 web version, which begins at page 1).

“Accident Source Terms for Light-Water Nuclear Power Plants: High Burnup and Mixed Oxide Fuels” (Nov. 2002). This report was also referenced by BREDL and Dr. Lyman in connection with proposed Contention 2.¹⁴

The Commission has long emphasized that petitioners have an obligation “to diligently uncover and apply all publicly available information to the prompt formulation of contentions.”¹⁵ On this point, the Commission recently emphasized that:

NRC contention admissibility and timeliness requirements demand a level of discipline and preparedness on the part of petitioners. But there would be no end to NRC licensing proceedings if petitioners could disregard our timeliness requirements every time he or she ‘realize[d] . . . that maybe there was something after all to a challenge it either originally opted not to make or which simply did not occur to it at the outset.’ Petitioners have an obligation to examine the application and publicly available information, and to set forth their claims at the earliest possible moment.¹⁶

In contrast, BREDL did not raise the VERCORS RT2 test as an issue — notwithstanding that the very same topic was addressed at the February 2002 NRC meetings and notwithstanding that the

¹⁴ The preliminary results of the VERCORS RT2 MOX fuel source term test were also presented at the 1999 NURETH-9 conference in San Francisco (a major international American Nuclear Society Topical Meeting on nuclear reactor thermal-hydraulics that was co-sponsored by the American Society of Mechanical Engineers, the American Institute of Chemical Engineers, and numerous international organizations). The paper is Malgouyres, Ferroud-Plattet, Ducros, Poletiko, Tourasse, and Buolard, “Influence of MOX Fuel in Fission Product Release Up to Meltdown Conditions” (ANS 1999). It is publicly available as part of the NURETH-9 proceedings, which may be purchased through the ANS website (www.ans.org).

¹⁵ *Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), CLI-83-19, 17 NRC 1041, 1048 (1983); *see also Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-28, 56 NRC 373, 386 (2002) (hearing petitioners have an “ironclad obligation to examine the publicly available documentary material pertaining to the facility in question with sufficient care to enable the petitioner to uncover any information that could serve as the foundation for a specific contention”).

¹⁶ *See Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2, Catawba Nuclear Station, Units 1 and 2), CLI-03-17, __ NRC __ (Dec. 9, 2003, slip op. at 13) (internal citations omitted).

test and results had been described in documents available at the time (including in documents referenced in BREDL's own earlier filing).

In the present case, the schedule is important. The MOX lead assembly program schedule balances a complex array of considerations involving the operating schedule for Catawba, the prospective exports and shipments, as well as the availability of the fabrication plant for the lead assemblies. The Licensing Board set a schedule for proposed contentions, and all petitioners were obligated to meet that schedule.¹⁷ In this context, the supplemental contention is not now timely simply because another slide presentation to the NRC Staff has come to BREDL's attention on technical information that has been circulating for many months. BREDL has also failed to make a "compelling" showing on the remaining factors of 10 C.F.R. § 2.714(a)(1)(ii)-(v), as discussed below.

2. Sufficiency of Basis

As Duke has discussed in its previous filing, under the Commission's requirements the basis offered for a contention must be *sufficient* to show that a *genuine* dispute exists on a material issue of law or fact. 10 C.F.R. § 2.714(b)(2)(iii). Likewise, a contention is not admissible if the contention is one that, even if proven, would not entitle petitioner to specific relief. 10 C.F.R. § 2.714(d)(2)(ii). A Licensing Board therefore must critically examine the basis offered to ensure that these criteria are met.¹⁸ In the present case, the slide presentation

¹⁷ BREDL even asked for, and received, one extension to that schedule.

¹⁸ *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 181 (1998), *reconsideration granted in part and denied in part on other grounds*, LBP-98-10, *aff'd on other grounds*, CLI-98-13, 48 NRC 26 (1998); *see also Yankee Atomic Elec. Co.* (Yankee Nuclear Power Station), LBP-96-2, 43 NRC 61, 90 (1996), *rev'd in part on other grounds*, CLI-96-7, 43 NRC 235 ("A document put forth by an intervenor as the basis for a contention is subject to scrutiny both for what it does and does not show.") (internal citations omitted).

does not demonstrate a genuine dispute with Duke's proposal for MOX fuel lead assemblies. At most, it demonstrates an area where IRSN is suggesting further experimental research "to close gaps in the experimental database" (to use BREDL's own characterization). A research proposal is not a basis for a contention and a complete experimental database and perfect certainty are not prerequisites to approval of Duke's lead assembly application. The NRC's threshold admissibility criteria are designed to filter out challenges, such as this one, based solely on purported "uncertainties" that may (or may not) be the subject of further research.¹⁹

First, the contention asserts "uncertainty" and "unknowns" based on only one test — the VERCORS RT2 test referenced on Slide 6 of the IRSN presentation. The IRSN presentation, however, does not address Duke's proposal or take any position on the lead assembly program. Instead, the contention is based on BREDL's characterization of the presentation, taken out of context, and without any indication that Dr. Lyman has seen, much less evaluated, the test data. Furthermore, as noted above, the RT2 test was discussed at the February 19-21, 2002 NRC meetings on severe accident source terms. Mr. Clement, the French official from IPSN, indicated that the other VERCORS test on MOX fuel (RT7) did *not* exhibit the lower temperature fuel relocation that was seen in RT2. *See Meeting Tr. 262-273 (2/19/02)*. The proposed contention simply overstates the importance of one comment on one test on one slide out of 36.

Second, even looking at the RT2 test in isolation, appropriate context is required to assess the sufficiency of the proffered basis. The reference to Slide 6 provides absolutely no

¹⁹ In this regard, the requirement in Section 2.714(b)(2)(iii) for a genuine dispute on a material issue of fact means "a dispute that actually, specifically, and directly challenges and controverts the application, with regard to a legal or factual issue, the resolution of which 'could make a difference in the outcome of the licensing proceeding.'" *Dominion*

detail on the VERCORS RT2 test — and no further detail is provided in either the proposed contention or the basis statement. In contrast, as can be seen from the context of the slides themselves, the IRSN statement relates to a discussion of source term for a severe (beyond design basis) accident. The RT2 test was a source term test, not a LOCA test intended to simulate conditions characteristic of a design basis LOCA. (Unlike a severe accident source term test, which assumes extended loss of cooling, a design basis LOCA test would include restoration of core cooling within a few minutes of accident initiation and maintenance of PCT below 2200° F in accordance with 10 C.F.R. § 50.46(b)). The mere existence of the test, and the oblique reference on the slide, do not establish any genuine dispute with respect to Duke's compliance with 10 C.F.R. § 50.46 (in the lead assembly LOCA analysis for ECCS performance).

Third, Duke's MOX fuel lead assembly LOCA analyses are presented in some detail in Section 3.7.1 of the application. BREDL does not directly challenge this discussion. In its references to Slides 21 and 25, BREDL suggests that IRSN supports a conclusion that fuel relocation would affect a LOCA (design basis) analysis. However, the IRSN slides do not make such a finding. IRSN merely raises an issue that it believes could be investigated experimentally to reduce uncertainty. This alone does not constitute a basis for a genuine dispute.²⁰ Moreover, fuel relocation during LOCA is not a new issue. It is an issue that was raised previously by the NRC as Generic Safety Issue ("GSI") 92, documented in NUREG-0933.²¹ That issue was

Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Unit 2), LBP-03-3, 57 NRC 45, 64 (2003) (internal citations omitted).

²⁰ As can be seen in the application, for example at 3-23 to 3-24, the LOCA analyses include margins and conservatisms to address uncertainties that always exist.

²¹ NUREG-0933, "A Prioritization of Generic Safety Issues" (Oct. 2003) ranks NRC generic safety issues as HIGH/MEDIUM/LOW/DROP on the basis of "risk significance

initially assigned a low priority by the NRC Staff and was subsequently dropped. The NRC Staff's priority determination for GSI-92 in NUREG-0933 concluded that there was "insufficient risk-based justification for starting a major re-review of existing ECCS Appendix K performance analyses."²² The mere proposal by a foreign research organization for further experiments to reduce uncertainty does not provide a basis for relief in this proceeding.²³

Fourth, BREDL speculates — based on Slide 21 — that possible increases in PCT, cladding oxidation, and cladding hydrogen uptake will be particularly important for end-of-life MOX fuel "where power generation is not reduced." BREDL Supplement, at 4. In fact, however, Figure 8.1 from the MOX Fuel Design Report referenced in Duke's application²⁴ (and available to BREDL) indicates that the MOX fuel lead assembly peak pin power would be expected to be *lower* at end-of-cycle than at the beginning of the cycle, and *substantially lower* during the third cycle of irradiation than during the first two cycles (*i.e.*, at "end-of-life").

estimates, the ratio of risk to cost and other impacts estimated to result if resolution of the safety issues were implemented, and the consideration of uncertainties and other quantitative or qualitative factors." (Abstract, p. 1). NUREG-0933 was first issued in January 1984. GSI-92, "Fuel Crumbling During LOCA," was first adopted shortly thereafter. NUREG-0933 subsequently placed GSI 92 in the DROP category, as of December 31, 1998. The "DROP" category covers "proposed issues that are without merit or whose significance is clearly negligible."

²² See <http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr0933/sec3/092rl.html>.

²³ Compare *Pennsylvania Power & Light Co.* (Susquehanna Steam Electric Station, Units 1 and 2), LBP-79-6, 9 NRC 291, 325 (1979), citing *Consolidated Edison Co. of New York Inc.* (Indian Point, Units 1, 2, and 3), ALAB-436, 6 NRC 547, 601-624 (1977) (The Licensing Board rejected a proposed contention that sought to "require the Applicants to perform certain research tasks." The Board noted that "what is being sought is a general research project, not one related specifically to the Susquehanna facility. NRC does not appear to have authority to impose such general research projects on its licensees.").

²⁴ *MOX Fuel Design Report*, BAW-10238 (NP), Revision 1 (May 2003). A copy was provided to the Licensing Board by Duke on November 21, 2003.

Therefore, BREDL's assertion is baseless speculation, and fails to make any meaningful, supportable challenge to Duke's lead assembly proposal.

Fifth, in referencing Slides 24 and 25, BREDL asserts that the behavior of the MOX fuel M5 cladding may exacerbate the response of the fuel to a LOCA. BREDL Supplement, at 4. However, these slides must be viewed in the context of the substantial testing and evaluation of M5 cladding that has been previously conducted, and the fact that M5 cladding has been approved by the NRC for use in the United States (as pointed out by the NRC Staff in its response to the initial proposed contentions in this case).²⁵

Sixth, concerning the combination of M5 and MOX fuel, BREDL states that "...there is insufficient information to provide confidence that the MOX LTAs will not cause coolant blockage during a LOCA that could lead to an unacceptable loss of core coolable geometry and an uncontrolled core melt." BREDL Supplement, at 4. This statement is unfounded on its face. No basis has been provided to support the hypothesis that cladding ballooning *would* cause unacceptable impacts on the MOX fuel lead assemblies during a postulated LOCA. Furthermore, even if it were assumed that severe cladding ballooning would cause coolant blockage in the MOX fuel lead assemblies, there is no basis for the assertion that this would somehow lead to "an uncontrollable core melt." *Id.* As explained in a supplement to the amendment application, and in accordance with standard practice for lead assembly programs, the four MOX fuel assemblies will be loaded into the Catawba core in dispersed

²⁵ See "NRC Staff's Response to (1) Blue Ridge Environmental Defense League's Supplemental Petition to Intervene and (2) Nuclear Information and Resource Service's Contentions" (November 10, 2003), at 27. The Staff cites the topical report BAW-10227P, "Evaluation of Advanced Cladding and Structural Material (M5) in PWR Reactor Fuel," approved by Safety Evaluations of December 14, 1999 and February 4, 2000.

locations to maintain core nuclear symmetry.²⁶ The suggestion in the contention that hypothetical local effects of severe ballooning from four assemblies would propagate throughout the core into an “uncontrollable core melt” with “loss of core coolable geometry” is conjecture at best, unsupported by any analysis or data. As such, it is not an adequate basis for an admissible contention.

Seventh, the proposed contention fundamentally ignores that MOX fuel is currently being used in several European countries, including France, and that none of the relevant regulators has taken any action to restrict MOX fuel use due to the results of the VERCORS tests, the research proposed by IRSN, or the issues asserted by BREDL. Similarly, M5 cladding is used in commercial reactors in both the United States and abroad, in some cases in combination with MOX fuel.²⁷ The mere fact of proposed testing to improve technical understanding and reduce uncertainty signifies nothing in and of itself, except that an ongoing technical process continues. The contention does not demonstrate how the LOCA analyses are inadequate to account for any uncertainties that may exist.

In total, the proposed basis for Contention 10 is paper thin. The IRSN presentation — the sole basis for the contention (and Contentions 11 and 12, as well) — did not address Duke’s application and made no comment on the particular lead assembly proposal. BREDL takes statements in the IRSN presentation out of context and its proposed contention is riddled with flaws and omissions. As discussed above, the proposed contention neglects test results (RT7) contrary to those it relies upon (RT2); ignores that the RT2 test was not a LOCA

²⁶ See Duke’s November 3, 2003 Response to the NRC’s July 25, 2003 Request for Additional Information, Response to RAI 11, at 9-10 and figures Q11 -1, Q11-2, Q11-3.

²⁷ European reactors have operated and are operating with the combination of M5 cladding and MOX fuel, as described in the *MOX Fuel Design Report*, Section 7.2.3.

test; makes no specific challenge to Duke's LOCA analysis in Section 3.7 of the application; ignores that fuel relocation has been raised by the NRC Staff as a generic issue before and subsequently dropped; speculates without any basis, and ignores information referenced by Duke, regarding lead assembly power generation at end-of-life; ignores the track record of M5 cladding; speculates without basis regarding ballooning leading to a core-wide LOCA; and does not address the fact that no European regulators have taken any action related to MOX fuel use based on the VERCORS tests. In this context, the fact that a foreign research agency has suggested tests to "close gaps in the experimental database" is not, in itself, significant. Indeed, the tests suggested by the French research agency are only proposed; they apparently are not yet funded or scheduled and may never be conducted. Suffice it to say, not every proposal for research and/or testing will ultimately receive financial support. Nothing more (independent of the fact of the proposal) is offered in the contention to demonstrate how such testing is necessary for a "reasonable assurance" finding in connection with the lead assembly application.

Finally, BREDL effectively would deny the application until the "integral LOCA MOX fuel-bundle tests that IRSN is proposing" are conducted, notwithstanding that no such tests are funded or scheduled. BREDL Supplement, at 4. Moreover, as explained in IRSN Slide 9, the proposed experimental program would require "... actual irradiated fuel . . . with the appropriate burnup." BREDL's contention creates a "chicken and egg" paradox. BREDL would argue that the lead assembly application cannot be approved until experimental data is gathered to address any perceived "gap" in the data. However, if the "necessary" experiment requires representative irradiated MOX fuel, the experiment cannot be performed. There is neither basis for such contradictory "relief" in the proposed contention nor any justification for how such

relief could be granted. Contention 10 therefore fails to establish an issue justifying invoking the NRC's formal adjudicatory process.²⁸ The contention should not be admitted.

BREDL Contention 11

Duke's analysis of the impact of the MOX lead assemblies on the probabilities and consequences of severe (beyond design basis) accidents is inadequate, because it fails to account for uncertainties in the technical understanding of MOX fuel during severe accidents that may lead to significant deviations from LEU fuel behavior.

Proposed Contention 11, based upon the same IRSN slide presentation as proposed Contention 10, challenges Duke's risk assessment of *severe accidents* in Section 3.8 of the amendment application (as opposed to the evaluation of design basis accidents, in Section 3.7 of the application). BREDL again cites IRSN Slide 6 and argues that "[a]nother part of the IRSN Phébus proposal . . . was a plan to address uncertainties in the behavior of MOX fuel during severe accidents." BREDL Supplement, at 5. BREDL argues that the probabilities of severe accident could be affected by "the poorer performance of MOX fuel during a LOCA," and that the consequences of severe accidents could be affected by "both higher release rates and higher release fractions for both fission products and actinides. *Id.* at 5-6 (again citing Slide 6). Therefore, BREDL argues, "these uncertainties should be fully analyzed in Duke's MOX [lead assembly] license amendment request." Duke objects to the admissibility of this contention for reasons similar to those discussed above for Contention 10.

1. Timeliness

This late-filed contention is again based entirely on the IRSN presentation. As discussed above, BREDL has completely failed to address the prior, publicly available information on this topic and therefore has failed to establish "good cause" for the late filing.

²⁸ Indeed, the data from the RT2 test (and the other VERCORS tests) are proprietary to IRSN and are not presently available to Duke or, presumably, to BREDL. It is not clear how this contention would be evaluated if admitted.

BREDL has also failed to make a “compelling” showing on the remaining factors of 10 C.F.R. § 2.714(a)(1)(ii)-(v), as discussed below.

2. Sufficiency of Basis

This contention challenges Section 3.8 of the license amendment application. As discussed in Duke’s answer to the original proposed contentions, Section 3.8 is a risk assessment that is not required for the present application.²⁹ The contention addresses “uncertainties” with respect to *beyond design basis* severe accidents that need not be addressed in a license amendment application (such as this one) that is based on a traditional, deterministic safety evaluation. Accordingly, the proposed contention is not admissible because it fails to establish a genuine dispute regarding a *material* issue of fact. 10 C.F.R. § 2.714(b)(2)(iii). Moreover, for the same reason, even if severe accident “uncertainties” exist, the contention would not entitle BREDL to relief in this proceeding. 10 C.F.R. § 2.714(d)(2)(ii).

Despite the fact that Duke’s application is not a risk-informed application, BREDL would presumably argue that the risk assessment of severe accidents is nonetheless warranted under NRC Staff guidance documents such as Regulatory Guide (“Reg. Guide”) 1.174, Rev. 1³⁰ or the NRC Standard Review Plan (“SRP”), NUREG-0800, Chapter 19, Appendix D.³¹ However, for the reasons already discussed in connection with Contention 10, the basis offered is simply *insufficient* to establish a basis for a *genuine* dispute on this point. While severe accident uncertainties always exist, there is absolutely no basis provided for the

²⁹ See Duke Answer, at 15-17.

³⁰ Reg. Guide 1.174, Rev. 1, “An Approach to Using Probabilistic Risk Assessment in Risk-Informed Decisions in Plant-Specific Changes to the Licensing Basis” (Nov. 2002).

³¹ NUREG-0800 (SRP), Chapter 19, “Use of Probabilistic Risk Assessment in Plant-Specific, Risk-Informed Decisionmaking: General Guidance” (Nov. 2002).

assertion (BREDL Supplement, at 5) that “there are uncertainties in aspects of MOX fuel behavior that may have a significant impact on Duke’s risk analysis for the Catawba core with four plutonium MOX [lead assemblies].” There is no showing as to how the uncertainties purportedly at issue would be significant for the *four* lead assemblies presently proposed. And no attempt is made to directly address the criteria of SRP Chapter 19, Appendix D.³²

BREDL is essentially extrapolating a proposal for research “to close gaps in the experimental database” into a beyond-design-basis challenge to the safety of using four MOX fuel lead assemblies in cores that would be almost exclusively comprised of LEU fuel. BREDL specifically asserts that the fuel performance differences noted by IRSN “. . . could increase the chance that an accident cannot be mitigated.” BREDL Supplement, at 5. However, the IRSN slides do not make that statement. In contrast, Duke has addressed LOCA analyses in the amendment application, Section 3.7.1. BREDL never explains how 2% of the fuel assemblies in the core would substantively change ECCS performance (and, therefore, the probability of severe accidents). Duke has stated that MOX fuel and LEU fuel are fundamentally similar (MOX fuel is approximately 95% uranium). Section 3.7.1 of the amendment application explains potential impacts on LOCA analyses of MOX fuel phenomena, and concludes that there are no significant differences in calculated LOCA performance between LEU and MOX fuel. None of this is directly addressed (or disputed) by BREDL, with specificity.

BREDL also asserts that there will be “higher release rates and higher release fractions for both fission products and actinides.” BREDL Supplement, at 5-6. The contention implies that this conclusion is drawn from IRSN Slide 6; in fact, however, a review of the slides

³² For example, no attempt is made to determine how four lead assemblies in a core reasonably create “special circumstances” such that compliance with existing regulations would be inadequate to protect public health and safety.

reveals this as a bit of “spin.” Slide 6 notes only characteristics of both MOX fuel and high burnup UO₂ fuel that might affect the source term; the slide makes no broad conclusion that MOX fuel has higher release rates and higher release fractions. Nevertheless, as it has in other contentions, BREDL argues that these factors would increase severe accident consequences. However, even assuming higher release rates and release fractions, in this proposed contention BREDL has still not provided any basis for asserting that differences in 2% of the fuel would substantively change the consequences of severe accidents. The IRSN slides do not do that. Even Dr. Lyman’s own report, addressed in connection with several of BREDL’s other proposed contentions and referenced above, does not establish a significant change in public health consequences from severe accidents involving only four MOX fuel assemblies.³³

At bottom, Contention 11 asserts no more than the existence of “uncertainties,” based on IRSN’s research proposal. As with Contention 10, the mere proposal for further experimental research does not establish a *genuine* dispute on a *material* issue. The IRSN proposal would not, on its face, provide a reason to deny an amendment for a limited scope demonstration program designed to confirm the performance of weapons grade MOX fuel. The contention should not be admitted.

³³ See Duke Answer, at 23. Taking Dr. Lyman’s worst case results, a 30% increase in public health consequences for a 40% MOX fuel core, and scaling those results to a lead assembly core, results in an increase in consequences in risk terms of 1.6% — a number well within the uncertainty of the analysis and the margins inherent in the Catawba plant.

BREDL Contention 12

Duke's Environmental Report fails to consider the effects of plutonium fuel characteristics on severe accident potential (in particular, the susceptibility of plutonium MOX fuel to "slumping" during a LOCA or the adverse effect that slumped fuel may have on the ability of the safety injection system to cool the entire core).

Proposed Contention 12 is identical in substance to Contentions 10 and 11, differing only in its argument that the IRSN issues (*i.e.*, the "uncertainties" or "unknowns") should be addressed in the Environmental Report ("ER") under the National Environmental Policy Act ("NEPA"). BREDL argues that "MOX fuel has characteristics that may affect the potential for and consequences of a LOCA or severe accident" and that the "significance of these characteristics" must be addressed "with respect to the potential for and consequences of a design basis or severe accident." BREDL Supplement, at 6-7. For the reasons similar to those discussed above, this contention should not be accepted.

1. Timeliness

Based on the same IRSN slide presentation as Contentions 10 and 11, this proposed contention is untimely for the same reasons. BREDL does not demonstrate "good cause" for failing to raise the issue in its original proposed contentions based on the February 2002 meeting and other documents. BREDL has also failed to make a "compelling" showing on the remaining factors of 10 C.F.R. § 2.714(a)(1)(ii)-(v), as discussed below.

2. Sufficiency of Basis

The NRC's NEPA regulations generally require an assessment of potential consequences of both design basis and severe accidents, subject to the general NEPA "rule of

reason.”³⁴ Duke included such assessments in its license amendment application, Attachment 5, Section 5.6.3. The proposed contention does not in any way show how these discussions would be substantively affected by consideration of the IRSN proposal. One slide, from a foreign research entity, referencing one test, under conditions not disclosed, does not provide a basis to assert that the existing environmental analysis of accidents is inadequate. As discussed above, the IRSN has offered no opinion on Duke’s proposed lead assemblies. There is no substantive showing either in the IRSN slides or the contention that the LOCA analysis would be affected, or that severe accident consequences would significantly increase beyond the projections Duke has already made and included in its ER.

BREDL also offers no basis, whatsoever, for the proposition inherent in this proposed contention: that an ER must somehow acknowledge and address every uncertainty or research proposal that could relate to an application under review. Such a requirement would create a nearly impossible burden for researching new or pending research proposals and would defy the “rule of reason.” NRC’s regulation, 10 C.F.R. § 51.45(c), generally requires an analysis of “the environmental effects of the proposed actions” as well as “alternatives available for reducing or avoiding adverse environmental effects,” and “consideration of the economic, technical, and other benefits and costs of the proposed action and alternatives.” Duke’s ER does this, explaining that even in beyond-design-basis accidents, any differences introduced by four MOX fuel assemblies will not meaningfully increase public health risk. Certainly, the proposed contention does not articulate how — pending actual conduct of the proposed experiments —

³⁴ See *Yankee Atomic Elec. Co.*, 43 NRC at 90; see, e.g., *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 87-88 (1998) (an EIS should provide sufficient discussion to enable the decisionmaker to take a “hard look” at environmental factors and to make a “reasoned decision.”); *Marsh v. Oregon Natural*

further discussion, quantitative or otherwise, could be provided as a practical matter or how such discussion would be meaningful for the lead assembly program proposed by Duke.

In sum, this proposed contention merely incants NEPA terminology, without identifying a meaningful, present-day issue to be considered in an environmental review. The basis fails to demonstrate a genuine dispute on a material issue. 10 C.F.R. § 2.714(b)(2)(iii). It also fails to establish how specific relief (for example, beyond a statement indicating that IRSN has proposed additional research to close “gaps in the experimental database”) could be granted in this proceeding. 10 C.F.R. § 2.714(d)(2). Accordingly, proposed Contention 12 should be rejected.

BREDL Contention 13

Duke’s license amendment application must be rejected because it is not supported by an adequate analysis of the security-related environmental impacts of shipping plutonium oxide to France, or the security-related impacts of shipping the lead assemblies from France back to the United States.

This proposed contention is a substitute for the prior proposed Contention 8, which BREDL has withdrawn. BREDL Supplement, at 7. As in the prior version, BREDL essentially asserts that the NRC — in the context of the environmental review of the present amendment application — must review security-related issues associated with transportation of feed material and fabricated assemblies between the United States and France. Unlike the original contention, BREDL now references the DOE Supplement Analysis issued in November 2003, addressing MOX fuel lead assembly fabrication in Europe. However, BREDL never substantively challenges that document. Instead, BREDL argues that DOE’s evaluations are inadequate for present purposes because DOE “does not address the existence of significantly

Resources Council, 490 U.S. 360, 373-74 (1989) (federal agencies should apply a rule of reason in implementing NEPA obligations).

changed circumstances since 1996, which cast grave doubt on the wisdom of overseas plutonium shipments.” BREDL Supplement, at 8. In this basis, and as discussed below, BREDL attacks the adequacy of DOE’s evaluation of transportation impacts in the *1996 Programmatic Environmental Impact Statement for Storage and Disposition of Weapons-Usable Fissile Materials* (“PEIS”) — not the Supplement Analysis. BREDL also claims that a number of alternatives to European fabrication and “mitigative measures” must be considered and addressed. *Id.* at 9. BREDL argues that Duke’s ER is “woefully insufficient” because it merely cross-references DOE’s 1996 and 1999 environmental impact statements. *Id.* However, the proposed contention, like its predecessor, fails to raise a genuine dispute within the scope of this proceeding on an issue for which relief could be granted.

First, the issue of transportation impacts between the United States and France related to lead assembly fabrication is not material to Duke’s amendment application for Catawba. As addressed in Duke’s prior response to proposed Contention 8, the amendment application before the Licensing Board does not involve any export or transportation approval. As explained in the application, any NEPA obligations related to the transportation aspects of the European fabrication option apply to DOE. In stating this fact, the application is not “woefully insufficient” — rather, it merely points out the appropriate “tiering” that has occurred between the NEPA reviews of DOE and the NRC. Furthermore, to the extent the NRC would consider this issue at all (given DOE’s responsibility for it), the appropriate context is the pending DOE Part 110 export license application before the NRC. BREDL has already petitioned to intervene in that matter.

Second, BREDL in this version of the contention completely ignores the Supplement Analysis and fails to explain — with basis and specificity — what is deficient in that

review. BREDL attacks the 1996 PEIS, not the 2003 analysis. After acknowledging its existence, the proposed contention and basis *never* address the November 2003 Supplement Analysis or ever explain how that Supplement Analysis is inadequate to address the “changed circumstances” since 1996. BREDL faults DOE for not updating the 1996 PEIS in light of “changed circumstances,” but ignores the substance of the 2003 Supplement Analysis which, inherently, did just that.

In the Supplement Analysis, DOE has provided (in Section 5.0) a detailed discussion of transportation, including transportation on the global commons consistent with Executive Order 12114. DOE’s discussion — which post-dates 1996 and does not merely reference back to the PEIS — includes (in Section 5.7) a discussion of “sabotage or terrorist attack.” DOE explains that its focus, appropriately, is on its ongoing assessment of protection of the shipments rather than on speculative consequences:

There is also the potential for attempts at acts of sabotage or terrorist attacks during transport. DOE’s proposed action includes physical safeguards aimed at protecting the public from harm. These protective measures include the use of SST/SGT vehicles for overland shipments and dedicated purpose-built vessels for ocean shipment. Safety features of transportation casks that provide containment, shielding, and thermal protection also provide protection against sabotage. The candidate ports analyzed in this SA are military ports that provide a heightened level of security, including trained security personnel and physical barriers such as perimeter fencing with controlled access and surveillance. *DOE continues to examine the protections built into its transportation system. DOE would modify its methods and systems as appropriate based on the results of this examination to reduce the potential for sabotage or terrorist attack to be successful.*

Supplement Analysis, at 23 (emphasis added). DOE concludes that the “chance of success of any such attempt [at sabotage or terrorism] is judged to be very low, particularly in light of the transport methods to be employed by DOE in these shipments, which are specifically designed to afford security against sabotage or terrorism, as well as safety in the event of an accident.” *Id.*

BREDL provides only rhetoric, not a basis that would demonstrate a legitimate, specific dispute with the DOE analysis.

Third, as suggested by the NRC Staff at the oral prehearing conference earlier this month, even if the transportation issues were somehow deemed to be within the scope of the present proposed amendment, consideration under NEPA of the terrorist issues raised in this contention is precluded by binding Commission precedent. *See Private Fuel Storage* (Independent Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340 (2002); *see also Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), CLI-02-24, 56 NRC 335 (2002). Significantly, in the *Private Fuel Storage* decision the Commission observed:

We hasten to add that our decision against including terrorism within our NEPA reviews does not mean that we plan to rule out the possibility of a terrorist attack against NRC-regulated facilities. On the contrary, as we outlined above, the Commission and its Staff have taken steps to strengthen security and are in the midst of an intense study of the effects of postulated terrorist attacks and of our relevant security and safeguards rules and policies. These activities are rooted in the NRC's ongoing responsibilities under the AEA to protect public health and safety and the common defense and security. But we see no practical benefit in conducting that review, case-by-case, under the rubric of NEPA, nor any legal duty to do so.

CLI-02-25, 56 NRC at 347-48. Likewise, the security issues of concern to BREDL have been addressed by DOE and are continuously examined as part of DOE's ongoing security responsibilities. As explained in the Supplement Analysis, DOE is taking measures to assure that the risk of attack on the plutonium oxide and fuel assembly shipments is appropriately low. There is no reason for the NRC to force a re-review under strained NEPA logic contrary to the NRC's own precedent.

In the basis for Contention 13 BREDL argues, without any citation or support, that since *DOE* has undertaken to address terrorism concerns in its environmental review, “DOE is subject to review for the reasonableness of its analysis.” BREDL Supplement, at 7, n. 4.³⁵ This position is illogical. Any review that the NRC would undertake under NEPA would be subject to Commission precedent on the appropriate scope of its (the NRC’s) NEPA reviews. What DOE would do or has done to address terrorism concerns in a NEPA analysis does not bind the NRC to do the same in its NEPA reviews. Moreover, under either DOE’s or NRC’s approach (that is, whether in a NEPA document or elsewhere), the conclusion is the same — security issues are addressed by ongoing protection to assure that the risk of attacks is acceptably low.

BREDL’s filing of December 12, 2003,³⁶ adds no substantive support to its argument on this point. There, BREDL argues that the NRC is bound by DOE’s determination of the scope of the environmental analysis of the actions and decisions within DOE’s jurisdiction. BREDL Response, at 4. However, no support is offered for this argument. Clearly, in an NRC proceeding, Commission precedent with respect to NRC reviews of NRC licensing actions trumps DOE determinations on matters wholly within DOE’s purview. BREDL similarly argues that the NRC is bound by DOE’s approach to the terrorism issue because the current application is part of the DOE program and Duke has referenced DOE’s environmental analysis. *Id.*, at 4-5. However, it simply does not follow that, because the amendment application before the NRC is part of a DOE program, DOE’s NEPA approaches must be applied

³⁵ In this discussion in BREDL’s supplement, BREDL actually asserts that “DOE and not NRC is responsible for the EIS for disposition of plutonium” This is exactly Duke’s first point, as discussed above. BREDL argues against itself to support the present point.

³⁶ “Blue Ridge Environmental Defense League’s Response to Board Questions” (December 12, 2003) (“BREDL Response”).

by the NRC and DOE's reviews must be replicated. Moreover, Duke's reference to DOE's reviews is merely that — a reference to the substantial work of DOE on the broad MOX fuel program, including many of the issues of particular concern to BREDL.³⁷

BREDL, fundamentally, is calling for re-opening of the DOE environmental review process and reconsideration by either DOE or NRC of options related to plutonium disposition generally and lead assembly fabrication specifically. BREDL Supplement, at 9-10. None of this is relief that the NRC, and this Licensing Board, can grant.³⁸ DOE has decided to pursue European fabrication of lead assemblies based on its own projection of schedules for the program, for qualification of the MOX fuel, and for domestic MOX fuel fabrication facility availability. To the extent BREDL seeks relief, it must pursue that with DOE by whatever process may be available with respect to DOE's decisions, or with Congress if BREDL seeks a fundamental redirection of national policy on plutonium disposition. In the meantime, BREDL

³⁷ In *Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), LBP-01-35, 54 NRC 403, 424 (2001), the Licensing Board correctly observed that “[the applicant’s] practice of adopting and incorporating the DOE environmental impact statements into its [Environmental Report] generally does not bring those DOE documents within the scope of this proceeding or open them to challenge in the discrete proceeding on the [MOX fuel fabrication facility].” By BREDL’s approach, if Duke had not referenced the DOE Supplement Analysis then presumably the NRC would not be bound by DOE’s decision to address terrorism. This would set a very odd standard, by which there would be an advantage to remaining silent in an Environmental Report on related NEPA reviews.

³⁸ In the MOX fuel fabrication facility case, the Licensing Board recognized that a contention addressing alternative locations for the facility and alternatives to MOX fuel use (such as immobilization) was beyond the scope of that proceeding. *Duke Cogema Stone & Webster*, 54 NRC at 470. Here, DOE policy decisions related to lead assembly fabrication are beyond the scope of the proceeding.

completely ignores the very real benefit associated with disposing of weapons-grade plutonium as soon as possible.³⁹

In total, this contention argues that the NRC should address matters already appropriately addressed by DOE. This would violate the principles of “tiering” established in the regulations of the Council on Environmental Quality (“CEQ”). *See, e.g.*, 40 C.F.R. §§ 1502.20, 1508.28(a). Furthermore, the contention argues for the NRC to undertake such redundant reviews by creating a false impression that security related to overseas transportation is being ignored. Those issues have not been ignored. They have been affirmatively addressed by DOE in the Supplement Analysis and will continuously be addressed by DOE as part of its ongoing security responsibilities. BREDL has failed in Contention 13 to provide any basis for admission of a specific issue within the scope of this proceeding.

Other Late-Filing Criteria

With respect to the factors other than “good cause” under 10 C.F.R. § 2.714(a)(1), that must be addressed for proposed Contentions 10 to 12, BREDL’s showing is cursory — it is not the “compelling” showing that is required where good cause is not present. As discussed above, the timely conduct of this proceeding is crucial given the complex schedule considerations involved. In this context, the petitioner’s participation on the issues proposed will significantly broaden the issues and delay the proceeding under Section 2.714(a)(1)(v). These supplemental contentions focus on the alleged need for additional experimental research. By their very nature, these proposed contentions would introduce into litigation potentially open-ended matters. Moreover, as noted above, the data from the RT2 test is proprietary to IRSN and

³⁹ Pursuing European fabrication allows the lead assembly program to proceed in parallel with licensing and construction of the MOX fuel fabrication facility, enabling any batch

is not presently available to Duke, or presumably, to BREDL. It is therefore far from clear how this contention would be evaluated even if admitted. Therefore, giving due weight to Section 2.714(a)(1)(v), the late contentions should not be admitted.⁴⁰

Regarding the extent to which BREDL's participation on the additional proposed contentions may reasonably be expected to assist in developing a sound record under Section 2.714(a)(1)(iii), there is no positive consideration that would outweigh the lack of "good cause" and the potential for delay. BREDL asserts that it will be presenting the views of Dr. Lyman, "a highly qualified expert who has extensive experience regarding nuclear power plant safety, environmental and security analyses." BREDL has not, however, adequately shown that Dr. Lyman's areas of expertise include fuel performance and LOCA analyses associated with the IRSN research proposal, or even any particular knowledge of the VERCORS tests.⁴¹

use of MOX fuel to begin years earlier than if lead assemblies are delayed until the fabrication facility is available.

⁴⁰ *Compare Commonwealth Edison Co.*, CLI-86-8, 23 NRC at 248 (Affirming dismissal of a late-filed contention raising numerous quality assurance allegations, the Commission stated that "it should have been clear to the Board that admission of the contention would substantially delay completion of the proceeding."); *Texas Utils. Generating Co.* (Comanche Peak Steam Electric Station, Units 1 and 2), LBP-83-75A, 18 NRC 1260, 1262-63 (1983) (The Licensing Board noted that the late-filed contention sought to raise issues that were "not concrete or litigable," that the plant would not load fuel unless the NRC Staff was satisfied that it was safe to do so and that problem areas were resolved, and that under these circumstances, "any attempt to litigate the contention would be both endless and fruitless.").

⁴¹ To make an adequate showing for admission of a late-filed contention under Section 2.714(a)(1)(iii), a petitioner must demonstrate that it has "special expertise" on the matters it seeks to raise. The petitioner "should set out with as much particularity as possible the precise issues it plans to cover, identify its prospective witnesses, and summarize their proposed testimony." *Braidwood*, CLI-86-8, 23 NRC at 246. BREDL's passing reference to this requirement in its justification of the late submittal fails to meet this standard.

Regarding the “availability of other means whereby the petitioner’s interest will be protected” under Section 2.714(a)(1)(ii), BREDL states that, “[a]side from this proceeding, BREDL has no means of protecting its interest in ensuring that the [lead assembly] testing of plutonium MOX lead test assemblies is conducted in a manner that adequately protects health and safety and complies with the environmental safeguards of NEPA.” BREDL Supplement, at 11. However, BREDL’s specific proposal (in late-filed Contentions 10-12) that the proposed PHEBUS testing is needed to establish the safety of the lead assemblies (and thereby protect BREDL’s interests) is purely conjecture. Meanwhile, the desirability of, and the need for, the further MOX fuel LOCA tests that IRSN is proposing will certainly be considered by the NRC and others in multiple forums — where Dr. Lyman has participated in the past. Thus, there may in fact be other means whereby BREDL’s interest in the PHEBUS testing can be addressed. In any event, this factor (along with the consideration under Section 2.714(a)(1)(iv) that no other parties will represent BREDL’s interest) merit less weight than factors three and five (assistance in developing a sound record and broadening the issues/delaying the proceeding).⁴²

In sum, a balancing of the factors of Section 2.714(a)(1) in this proceeding reveals no adequate (much less “compelling”) showing to offset the lack of good cause for the untimely filing of the proposed contentions.

⁴² See *Private Fuel Storage, L.L.C.*, 51 NRC at 154, citing *Commonwealth Edison Co.*, 23 NRC at 244-45.

IV. CONCLUSION

For all of the reasons stated above, the supplemental proposed contentions should not be accepted for hearing.

Respectfully submitted,

A handwritten signature in black ink that reads "David A. Repka". The signature is written in a cursive style and is followed by a long horizontal line extending to the right.

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ATTORNEYS FOR DUKE ENERGY
CORPORATION

Dated in Washington, District of Columbia
This 23rd day of December 2003

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of:)
)
DUKE ENERGY CORPORATION) Docket Nos. 50-413 OLA
) 50-414 OLA
)
)
Catawba Nuclear Station,)
Units 1 and 2)

CERTIFICATE OF SERVICE

I hereby certify that copies of the "ANSWER OF DUKE ENERGY CORPORATION TO THE BLUE RIDGE ENVIRONMENTAL DEFENSE LEAGUE'S SECOND SUPPLEMENTAL PETITION TO INTERVENE" in the captioned proceeding have been served on the following by deposit in the United States mail, first class, this 23rd day of December, 2003. Additional e-mail service, designated by **, has been made on December 23, 2003, as shown below.

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A handwritten signature in black ink that reads "David A. Repka". The signature is written in a cursive style with a long horizontal line extending to the right.

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