

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

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OFFICE OF THE 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
(Savannah River Mixed Oxide Fuel
Fabrication Facility)

Docket No. 70-3098-ML

ASLBP No. 01-790-01-ML

Blue Ridge Environmental Defense League¹ (BREDL) Additional Comments

***DUKE COGEMA STONE & WEBSTER MOTION FOR RECONSIDERATION OR, IN
THE ALTERNATIVE, FOR CERTIFICATION TO THE COMMISSION (12/17/01)***

I. Introduction

The "applicant," Duke Cogema Stone and Webster filed the above motion on December 17, 2001 as a challenge to parts of the Board's December 6, 2001 Order on standing and contentions. This motion illustrates that there are in fact genuine disputes between applicant and parties, and as such the proceeding should proceed as planned. As an admitted party to the proceeding, BREDL is hereby additional comments regarding the DCS response to GANE Contentions 1 and 2.

As stated in the applicant's 12/17/01 motion, "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." In its 12/06/01 ruling accepting GANE's Contentions 1 and 2, the Board found that there is no dispute that MC&A and physical protection systems are

¹ Please note that due to the acceptance of BREDL as a party by the Board, NRC staff, and applicant, Don Moniak will no longer be a party to this proceeding as an individual and for the sake of clarity will continue to represent only BREDL during the proceeding.

“systems.” (Board Memorandum and Order, 12/06/01, Page 27), and 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.” (Pages 28-29).

BREDL supports the Board’s ruling and findings for the following reasons in addition to those already articulated by the Board:

- The primary justification for the MOX FFF is nuclear non-proliferation and the heart of this mission/justification is Material Control and Accounting. The central purpose of the MFFF is largely MCP&A.
- This application involves large expenditure of federal funds and can not be treated as a private venture. Taxpayers will foot the bill for inefficient design and project management.
- Common sense dictates that Material Control and Accounting be integrated into the design of a plutonium processing facility early in the design stage; and “industry standards” represented by Department of Energy Orders, Directives, and Standards confirm this approach.

II. BREDL Comments

A. Nuclear nonproliferation

As stated in BREDL’s August 12, 2001 *Introduction to Contentions*, the “entire basis for this proposed action was and continues to be nuclear nonproliferation, and therefore the basis rests on subjective issues of national security and international security that are apparently unquantifiable.”

1. The Applicant cited nonproliferation policy as the justification for the proposed action in its Environmental Report:

- Page ES-1: “the facility is an integral part of the overall U.S. Government’s strategy for the disposition of surplus plutonium in accordance with [U.S. Foreign Policy statements].”
- Page ES-6: “Although the proposed action does have environmental impacts, the impacts are small and consequently acceptable. The environmental impacts are outweighed by the benefit of enhancing nuclear weapons reductions.”

2. The NRC Commission, on Page 7 in its June 14, 2001 Order of Referral, wrote,

“The Commission believes that this proceeding should be completed in a timely and efficient manner because the applicant is seeking authorization to build a facility that would implement a significant objective of national security and policy: reducing the inventory of plutonium in the nation’s nuclear weapons’ inventory in accordance with the U.S. -- Russian Federal Plutonium Disposition Agreement.”

If this proceeding is to be completed in a timely and efficient manner for national security and policy reasons, then the applicant and the NRC have obligations to live up to this standard and insure that no obstacles or inefficiencies disrupt the process.

3. Material Control and Accounting is central to the U.S.-Russian Agreement² on plutonium disposition, addressed in Articles VII and VIII.

a. Article VII

1. Each Party shall have the right to conduct and the obligation to receive and facilitate monitoring and inspection activities in accordance with this Article and the Annex on Monitoring and Inspections, which is an integral part of this Agreement, in order to confirm that the terms and conditions of this

² AGREEMENT BETWEEN THE GOVERNMENT OF THE UNITED STATES OF AMERICA AND THE GOVERNMENT OF THE RUSSIAN FEDERATION CONCERNING THE MANAGEMENT AND DISPOSITION OF PLUTONIUM DESIGNATED AS NO LONGER REQUIRED FOR DEFENSE PURPOSES AND RELATED COOPERATION. September, 2000.

Agreement with respect to disposition plutonium, blend stock, spent plutonium fuel and immobilized forms, and disposition facilities are being met.

2. Disposition plutonium and blend stock shall become subject to monitoring and inspection under this Agreement, in accordance with the Annex on Monitoring and Inspections and procedures developed pursuant to that Annex, either (a) after receipt but before processing at a conversion or conversion/blending facility, or (b) upon receipt at a fuel fabrication or an immobilization facility, whichever (a) or (b) occurs first for any given disposition plutonium or blend stock.

3. Each Party shall begin consultations with the International Atomic Energy Agency (IAEA) at an early date and undertake all other necessary steps to conclude appropriate agreements with the IAEA to allow it to implement verification measures beginning not later in the disposition process than: (a) when disposition plutonium or disposition plutonium mixed with blend stock is placed into the post-processing storage location of a conversion or conversion/blending facility; or (b) when disposition plutonium is received at a fuel fabrication or an immobilization facility, whichever (a) or (b) occurs first for any given disposition plutonium.

4. If agreed in writing by the Parties, the exercise of each Party's right set forth in paragraph 1 of this Article may be suspended in whole or in part by the application of equivalent IAEA verification measures under the agreements referred to in paragraph 3 of this Article. The Parties shall, to the extent practicable, avoid duplication of effort of monitoring and inspection activities implemented under this Agreement and appropriate agreements with the IAEA.

b. Article VIII:

"1. Each Party shall be responsible within the territory of the United States of America and the Russian Federation, respectively, for: a) ensuring safety and ecological soundness of disposition plutonium activities under the terms of this Agreement; and b) effectively controlling and accounting for disposition plutonium, blend stock, spent plutonium fuel and immobilized forms, as well as

providing effective physical protection of such material and facilities containing such material taking into account the recommendations published in the IAEA document INFCIRC/225/Rev. 4, The Physical Protection of Nuclear Material, or a subsequent revision accepted by the Parties.”

4. “Industry standards” dictate early planning and integration of Safeguards and Security plans.

For better or worse, the standard for plutonium processing in the U.S. is set by Department of Energy. DOE Policy 470.1 defines *INTEGRATED SAFEGUARDS AND SECURITY MANAGEMENT (ISSM) POLICY*³:

“The Department is committed to conducting work efficiently and securely. It is Department policy that the ISSM framework shall be used to systematically integrate safeguards and security into management and work practices at all levels so that missions are accomplished securely. Direct involvement of all personnel during the development and implementation of an ISSM framework is essential for success. The ISSM framework will be implemented through programmatic directives and other related directives.”

The objective of DOE Order **474.1A**, *CONTROL AND ACCOUNTABILITY OF NUCLEAR MATERIALS*, is to “prescribe Department of Energy (DOE) requirements, including those for the National Nuclear Security Administration (NNSA), for nuclear material control and accountability (MC&A) for DOE-owned and -leased facilities and DOE-owned nuclear materials at other facilities that are exempt from licensing by the Nuclear Regulatory Commission (NRC).”⁴

³ May 5, 2001 approved version available at:
<http://www.directives.doe.gov/cgi-bin/explhcgi?qryVIBV6a4N;doe-230>

⁴ November 22, 2000 approved version is available at:
<http://www.directives.doe.gov/cgi-bin/explhcgi?qryIQBY9a4jN;doe-260>

The requirements of this order (Section 4) include:

(1) Each facility must control and account for nuclear materials subject to this Order according to the strategic and monetary importance of the nuclear materials and the consequence of their loss. MC&A programs must deter and detect theft and diversion of nuclear material by both outside and inside adversaries.

(2) Planning for MC&A must address theft and diversion of special nuclear material (SNM) and the unauthorized control of a weapon, test device, or improvised nuclear device, where appropriate. Planning must also consider the potential for an insider threat, as detailed in *Design Basis Threat for Department of Energy Programs and Facilities (U)*, issued by the Office of Security Affairs.

(3) DOE must consider MC&A requirements, systems, and technologies in the planning, design, construction, and operation of new or renovated DOE facilities. DOE must use techniques and equipment that maximize material loss detection sensitivity, increase the quality of accountability measurements, and reduce the magnitude of inventory differences and associated control limits.

(5) MC&A measures must facilitate, to the extent practical, cost-effective integration of the operational mission of the program with environmental, health and safety, and physical protection considerations.

(6) MC&A systems must help prevent radiological and/or toxicological sabotage involving nuclear materials that could adversely affect national security, the health and safety of employees, the public, or the environment.

(7) MC&A programs must, unless excluded by provisions of implementing treaties and agreements, facilitate the development and implementation of foreign country and International Atomic Energy Agency safeguards systems.”

Guidance for implementing these two orders can be found in DOE Manual 474.1-1, *Manual for Control and Accountability of Nuclear Materials*, the purpose for which is “to prescribe Department of Energy (DOE) requirements and procedures for nuclear material control and accountability

(MC&A). This Manual supplements DOE O 474.1, CONTROL AND ACCOUNTABILITY OF NUCLEAR MATERIALS.”⁵

BREDL respectfully submits that in this proceeding it is best to defer to DOE standards and orders regarding Material Control and Accounting of plutonium and other fissile materials.

Respectfully submitted,



Don Moniak
Blue Ridge Environmental Defense League

dated January 7, 2001 in Aiken, SC

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⁵ November 22, 2000 approved version is available at:
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CERTIFICATE OF SERVICE
by Blue Ridge Environmental Defense League
(Docket # 70-3098, ASLBP # 01-790-01-ML)

I hereby certify that copies of:

1. BREDL's Response to DCS Motion of 12/17/01 for Reconsideration; and
2. BREDL's Additional Comments DCS Motion of 12/17/01 for Reconsideration

were sent to the following list via e-mail with paper copies served via U.S. Postal Service First Class Mail.

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