

May 21, 2004

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

DOCKETED  
USNRC

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

May 25, 2004 (4:06PM)

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

**BLUE RIDGE ENVIRONMENTAL DEFENSE LEAGUE'S  
COMMENTS ON WHETHER "SIGNIFICANT QUANTITY" OF  
PLUTONIUM CONSTITUTES PUBLICLY AVAILABLE INFORMATION**

Pursuant to the Atomic Safety and Licensing Board's ("ASLB's") oral order of May 14, 2004, Blue Ridge Environmental Defense League ("BREDL") hereby comments on the question of whether the amount of plutonium that constitutes a significant quantity ("S.Q.") for purposes of making a nuclear weapon constitutes publicly available information.<sup>1</sup> The information is publicly available from International Atomic Energy Agency, ("IAEA") and the U.S. Department of Energy ("DOE"), and has been publicly critiqued.

The IAEA Safeguards Glossary (2001), a publicly available document, defines an S.Q. as "the approximate quantity of nuclear material in respect of which, taking into account any conversion process involved, the possibility of manufacturing a nuclear explosive device cannot

<sup>1</sup> During the meeting on May 14, BREDL understood that this information was due by May 21, 2004. It appears from the ASLB's written order of May 18, 2004, however, that the ASLB may have expected this information to be submitted by Thursday, May 20. BREDL apologizes if it misunderstood the Board's instruction, and respectfully requests leave to submit the requested information today.

be excluded.” See IAEA Glossary, Section 3.14, [www-pub.iaea.org/MTCD/publications/PDF/nvs-3-cd/PDF/NVS3\\_prn.pdf](http://www-pub.iaea.org/MTCD/publications/PDF/nvs-3-cd/PDF/NVS3_prn.pdf). The IAEA has publicly stated that 8 kilograms of plutonium constitutes an S.Q. *Id.*, Table II at page 19.

Publicly available information from the U.S. DOE and the Natural Resources Defense Council (“NRDC”), a respected environmental organization, indicate that the IAEA’s S.Q. criterion of 8 kilograms of plutonium is not conservative. The DOE has released the formerly classified information that hypothetically, a mass of 4 kilograms of plutonium is sufficient for one nuclear explosive device. U.S. DOE, Restricted Data Declassification Decisions, 1946 to the Present (RDD-46) at 28 (January 1, 2001). See [www.osti.gov/opennet/rdd-6.pdf](http://www.osti.gov/opennet/rdd-6.pdf). According to NRDC, the IAEA’s criterion for establishing the quantity of plutonium needed to form an S.Q. is “outdated, technically erroneous, and even dangerous,” resulting in international standards for material control and accounting that are far too lenient. Thomas B. Cochran and Christopher E. Paine, *The Amount of Plutonium and Highly-Enriched Uranium Needed for Pure Fission Nuclear Weapons* (Revised April 13, 1995). See <http://www.nrdc.org/nuclear/fissionw/fissionweapons.pdf>. According to NRDC’s technical analysis, a one kiloton nuclear bomb can be made with one to three kilograms of plutonium. *Id.* at 6. Thus, NRDC has petitioned the IAEA to make an eight-fold reduction in the amount of plutonium considered necessary for an S.Q. *Id.* at 1.

Respectfully submitted,



Diane Curran  
Harmon, Curran, Spielberg, & Eisenberg, L.L.P.  
1726 M Street N.W., Suite 600  
Washington, D.C. 20036  
202/328-3500  
e-mail: [dcurran@harmoncurran.com](mailto:dcurran@harmoncurran.com)

May 21, 2004

## CERTIFICATE OF SERVICE

I hereby certify that on May 21, 2004, copies of Blue Ridge Environmental Defense League's Motion to Withdraw Contention II and Request to Change Hearing Schedule for Contention I and Blue Ridge Environmental Defense League's Comments on Whether "Significant Quantity" of Plutonium Constitutes Publicly Available Information were served on the following by e-mail and/or first-class mail, as indicated below.

Ann Marshall Young, Chair  
Administrative Judge  
Atomic Safety and Licensing Board  
U.S. Nuclear Regulatory Commission  
Mail Stop: T-3F23  
Washington, D.C. 20555  
E-mail: [AMY@nrc.gov](mailto:AMY@nrc.gov)

Anthony J. Baratta  
Administrative Judge  
Atomic Safety and Licensing Board  
U.S. Nuclear Regulatory Commission  
Mail Stop: T-3F23  
Washington, D.C. 20555  
E-mail: [AJB5@nrc.gov](mailto:AJB5@nrc.gov)

Office of Commission Appellate Adjudication  
U.S. Nuclear Regulatory Commission  
Mail Stop: O-16C1  
Washington, D.C. 20555

Thomas S. Elleman  
Administrative Judge  
Atomic Safety and Licensing Board  
4760 East Country Villa Drive  
Tucson, AZ 85718  
E-mail: [elleman@eos.ncsu.edu](mailto:elleman@eos.ncsu.edu)

David A. Repka, Esq.  
Anne W. Cottingham, Esq.  
Winston & Strawn, LLP  
1400 L Street, N.W.  
Washington, D.C. 20005-3502  
E-mail: [drepka@winston.com](mailto:drepka@winston.com)  
[acotting@winston.com](mailto:acotting@winston.com)

Susan L. Uttal, Esq.  
Antonio Fernandez, Esq.  
Margaret J. Bupp, Esq.  
Office of the General Counsel  
Mail Stop - O-15 D21  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555-0001  
E-mail: [slu@nrc.gov](mailto:slu@nrc.gov) [axf2@nrc.gov](mailto:axf2@nrc.gov),  
[mjb5@nrc.gov](mailto:mjb5@nrc.gov)

Mary Olson  
Southeast Office, Nuclear Information and  
Resource Service  
P.O. Box 7586  
Asheville, NC 28802  
E-mail: [nirs.se@mindspring.com](mailto:nirs.se@mindspring.com)

Lisa F. Vaughn, Esq.  
Legal Dept. (PBO5E)  
Duke Energy Corporation  
526 South Church Street (EC11X)  
Charlotte, NC 28201-1006  
E-mail: [lfVaughn@duke-energy.com](mailto:lfVaughn@duke-energy.com)

Janet Marsh Zeller, Executive Director  
Blue Ridge Environmental Defense League  
P.O. Box 88  
Glendale Springs, NC 28629  
E-mail: [BREDL@skybest.com](mailto:BREDL@skybest.com)

<p>Office of the Secretary (original and two copies) ATTN: Docketing and Service U.S. Nuclear Regulatory Commission Mail Stop: O-16C1 Washington, D.C. 20555 E-mail: <u>HEARINGDOCKET@nrc.gov</u></p>	
---	--



Diane Curran