

Date to OPA: 7-18  
Action Item #: 028A  
Assigned to: SB

SECY #: 0407  
Due Date: 8-1  
Date Completed: \_\_\_\_\_

OFFICE OF THE SECRETARY  
CORRESPONDENCE CONTROL TICKET

Date Printed: Jul 14, 2011 15:15

PAPER NUMBER: LTR-11-0407  
ACTION OFFICE: OPA | EDO

LOGGING DATE: 07/12/2011

AUTHOR: Diane Davis  
AFFILIATION: NY  
ADDRESSEE: Gregory Jaczko  
SUBJECT: Teaching graduate engineering thermonuclear energy:fission and fusion

ACTION: Direct Reply  
DISTRIBUTION: EDO, SECY to Ack

LETTER DATE: 07/02/2011

ACKNOWLEDGED No

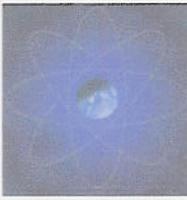
SPECIAL HANDLING: OPA..should coordinate response with EDO

NOTES:

FILE LOCATION: ADAMS

DATE DUE: 08/03/2011

DATE SIGNED:



**THE INTERNATIONAL INSTITUTE FOR THERMONUCLEAR FUSION  
ENERGY EDUCATION, R&D, REGULATION, TECHNOLOGY  
AND PUBLIC POLICY, INC.**

July 2, 2011

The Honorable Gregory B. Jaczko, Chairman  
U.S. Nuclear Regulatory Commission  
Mail Stop O-16G4  
Washington D.C., 20555-0001

Re: teaching graduate engineering thermonuclear energy: fission and fusion

Dear Chairman Jaczko:

The most wonderful renaissance is beginning to occur in the field of thermonuclear energy and I wanted you to know about a new and exciting first-time course called "Advanced Nuclear Design and Radwaste Management" in the graduate school of engineering- Energy and Environmental science Division at New York Institute of Technology – Manhattan Campus, soon to be a university.

Many of our students come from China, India, Eastern Europe, Belarus and Ukraine as well as Russia. I am preparing research for my course lectures and will need significant information on NRC plans to bring the new 13 NPPs online, where they are, the dates when construction is expected to begin, end and the Technology going critical. I will need to know your decommissioning and/or license renewal plans coming up.

Also, I would like to visit several of the U.S. plants especially the Westinghouse AP1000, and the new ALWRs, BWRs and PWRs. I am located in Manhattan. Could you please, have one of your deputies give me an introduction with the contact information at Indian Point NPP here in NY, as well as who I should contact at Westinghouse to obtain permission to visit one of their AP 1000 NPPs.

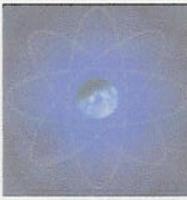
I am trying to finish up my Ph.D. work at PPPL in thermonuclear fusion and public policy. The course outline will be a combination of the traditional Generation I technology, Generation II and advanced designs along with case studies and decommissioning, Codes and Building Codes, Radiation Shielding and Safety and Reliability features and characteristics of both fission NPPs and fusion experimental technology.

In another letter I have advised Dr. David H. Crandall, Ph.D. Chief Scientist and Deputy Technical Director of U.S. DOE – National Nuclear Security

*Mail Address: P. O. Box 628 – G.C.S., New York City, New York 10163-0628 U.S.A. – Telephone: 000-000-0000  
Office Address: The Windsor – Suite B-11, Five Tudor City Place, New York City, New York, 10017-5863*

*Email: [institutefusenedtech@Lycos.com](mailto:institutefusenedtech@Lycos.com)*

*URLs: [www.institutefusenedtech.org](http://www.institutefusenedtech.org) / [www.fusionenergythepublicsguide.com](http://www.fusionenergythepublicsguide.com)*



THE INTERNATIONAL INSTITUTE FOR THERMONUCLEAR FUSION  
ENERGY EDUCATION, R&D, REGULATION, TECHNOLOGY  
AND PUBLIC POLICY, INC.

The Honorable Gregory B. Jaczko, Chairman  
U.S. Nuclear Regulatory Commission  
June 30, 2011  
Page 2-

Administration who knows me well and for many years, being a counselor on my disertation committee. I have also informed Debra Frame at U.S. D.O.E. – Office of Fusion Energy as I had been designated a U.S. Delegate to IAEA last December in Vienna, and Debra helped me with my Letter of Delegate Status.

I am so excited about this thermonuclear renaissance and about this opportunity to teach my passion. Nuclear energy made America great, secure from within and allowed the Middle Class to build up their welath during the Cold War Years. Today, with dependency on foreign oil and gas, America is in debt and insecure and the average person is foregoing food and clothing just to pay for gasoline to get around, which I have written about extensively in a series of monographs on my doctoral area of research: *Fusion Energy ~ The Public's Guide Volume I: Averting Human Extinction: Energy Policy and Environmental Degradation*. Book is available at [www.bn.com](http://www.bn.com) under the name of the book as well as at various university bookstores and public libraries [www.fusionenergythepublicsguide-onlinestore.com](http://www.fusionenergythepublicsguide-onlinestore.com). I've posted several articles about environmental destruction by CO<sub>2</sub> from burning fossil fuels on my graduate website [www.institutefusedtech.org](http://www.institutefusedtech.org), especially recently posted Articles Nine, Ten and Eleven, which you might enjoy reading. These Articles note a ten-times faster climate change than originally believed, and not reversible in the next 1,000 years.

Thank you for your kind help and assistance.

Sincerely yours,

Diane A. Davis, M.S., Ph.D. Cand.  
Founder and CEO  
BB 917-932-7944

Mail Address: P. O. Box 628 – G.C.S., New York City, New York 10163-0628 U.S.A. – Telephone: 000-000-0000  
Office Address: The Windsor – Suite B-11, Five Tudor City Place, New York City, New York, 10017-5863

Email: [institutefusedtech@Lycos.com](mailto:institutefusedtech@Lycos.com)

URLs: [www.institutefusedtech.org](http://www.institutefusedtech.org) / [www.fusionenergythepublicsguide.com](http://www.fusionenergythepublicsguide.com)

GRADUATE SCHOOL OF ENGINEERING - ENVIRONMENTAL SCIENCE

ADVANCED NUCLEAR DESIGN AND RADWASTE MANAGEMENT

COURSE #ENVT 760 - SPRING 2012

DRAFT No. 1 June 30, 2011

		4. Worldwide food and water supplies, social, political, economic, species continuance, implications of nuclear power generation (inclusive of GDP, GNP, reduction in global warming climate change benefits, less atmospheric CO <sub>2</sub> )	
2	Hand outs	<p>a) Historical Review of Thermonuclear Fission Energy &amp; Technology</p> <p>b) Types of Fission Powerplant Technologies Throughout the World</p> <p>c) <u>NPP Designs:</u> <u>Characteristics:</u></p> <p>1. Generation I Traditional NPP Technology Designs: BWR, PWR, PHWR, LMGC</p>	
3	Hand outs	<p>Generation II NPP Designs: Standardized LWRs, CANDU</p> <p>Generation III NPP Advanced</p>	

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		<p>Designs: LWR, MPower Modular by B&amp;W, VVER 1000, Westinghouse AP1000, CANDU (Canada, U.K., Korea), European Advanced Design</p>	
4	Hand outs	<p><u>Generation I and II:</u> a) Traditional Fuels b) Coolants c) Moderators <u>Generation III, III+ and IV:</u> a) Advanced Fuels b) Advanced Coolants c)...Advanced .....Moderators d) Advanced Safety and Reliability Design Features</p>	
5	Hand outs	<p><u>Safety and Reliability</u> Traditional Design Features and Characteristics 1. Inherent Passive Safety Features of NPP Designs 2. Active Safety features of NPP Designs 3. Radiation Shielding in Primary Containment Chamber Design 4. Radiation Shielding in Secondary Structural and Building Materials</p>	