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PENDING NOMINATIONS OF GREGORY B. JACZKO AND PETER B. LYONS

HEARING

BEFORE THE

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS UNITED STATES SENATE

ONE HUNDRED NINTH CONGRESS

FIRST SESSION

ON

THE NOMINATIONS OF **GREGORY B. JACZKO** AND **PETER B. LYONS** TO BE MEMBERS OF THE NUCLEAR REGULATORY COMMISSION

APRIL 20, 2005

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ONE HUNDRED NINTH CONGRESS
FIRST SESSION

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C O N T E N T S

Page

APRIL 20, 2005

OPENING STATEMENTS

Inhofe, Hon. James M., U.S. Senator from the State of Oklahoma 1
Jeffords, Hon. James M., U.S. Senator from the State of Vermont, prepared statement 25
Lautenberg, Hon. Frank R., U.S. Senator from the State of New Jersey 6
Voinovich, Hon. George V., U.S. Senator from the State of Ohio 4
Warner, Hon. John W., U.S. Senator from the Commonwealth of Virginia 8

WITNESSES

Jaczko, Gregory B., nominated by the President to be a member of the Nuclear Regulatory Commission 9
Committee questionnaire 28
Letter, Office of Government Ethics 36
Prepared statement 26
Responses to additional questions from Senator Lautenberg 59
Lyons, Peter B., nominated by the President to be a member of the Nuclear Regulatory Commission 11
Committee questionnaire 39
Letter, Office of Government Ethics 46
Prepared statement 37
Responses to additional questions from Senator Lautenberg 59

PENDING NOMINATIONS OF GREGORY B. JACZKO AND PETER B. LYONS

WEDNESDAY, APRIL 20, 2005

U.S. SENATE,
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS,
Washington, DC.

The committee met, pursuant to notice, at 9:30 a.m. in room 406, Dirksen Senate Office Building, Hon. James Inhofe (chairman of the committee) presiding.

Present: Senators Inhofe, Warner, Voinovich, Carper, Lautenberg, and Obama.

Senator INHOFE. Our meeting will come to order. We always start punctually. Since this is a confirmation hearing, but you have already passed that point, it is still necessary to ask the two of you each the same questions. So I will ask the question, and if you would each respond for the record. Are you willing to appear at the request of any duly constituted Committee of Congress as a witness?

Mr. LYONS. Yes.

Mr. JACZKO. Yes, I am.

Senator INHOFE. Do you know of any matters which you may or may not have thus far disclosed, that might place you in any conflict of interest to this position?

Mr. LYONS. No.

Mr. JACZKO. No.

OPENING STATEMENT OF HON. JAMES M. INHOFE, U.S. SENATOR FROM THE STATE OF OKLAHOMA

Senator INHOFE. All right, good. I will go ahead and start with an opening statement. Today we are going to hear from the two Commissioners recently appointed to the Nuclear Regulatory Commission: Greg Jaczko and Pete Lyons.

Both Commissioners are Senate veterans. Commissioner Jaczko served on Senator Reid's staff, and prior to that, worked for this committee. So he certainly knows his way around here. Commissioner Lyons is a former staffer for Senator Domenici and the Senate Energy Committee. So we welcome both of you here, and we look forward to serving with you.

Both Commissioners were recess appointed by the President in January, and their appointments will not expire for 2 years. It is no secret that the process that led to the recess appointments was one in which I was highly critical. Over the last few years, two Admirals were nominated to the NRC, and both withdrew their names out of frustration with the process.

Numerous other nominees were perpetually held up on the Senate floor. This was the result of the controversy over the nomination of Commissioner Jaczko, and Senator Reid's strong desire to get him on the Commission.

There had been a number of concerns raised with regard to Commissioner Jaczko by those who want to see the success of nuclear power continue to grow in the future. His extensive work in opposition to licensing of Yucca Mountain is at the heart of much of that concern.

I understand that the Commissioner has recused himself from the NRC action on Yucca Mountain for 1 year. I look forward to discussing both the parameters and the timing of that recusal today.

I am not holding this hearing to rehash the history of the last 2 years. While Commissioner Jaczko's past work on nuclear matters has caused concern, I have been pleased to hear reports that in his tenure thus far as Commissioner, he has conducted himself in a manner that is very fair and very open. I am very glad to hear that, and I appreciate that very much. I know that will continue.

Today's hearing is important, because the Commissioners have not had the opportunity to share their views with this committee on nuclear power and what they see as the role of the NRC in regulating nuclear power. As they know, this committee has sole jurisdiction in the Senate over the Nuclear Regulatory Commission.

It is important that we fully understand what is guiding you, and it is equally important that you understand what we hope to see out of the NRC.

I have spent a good deal of time and energy over the past decade working hard to reform the way NRC does business. That effort has been very successful. I want to be certain that not only will that progress not be reversed, but that the NRC will continue to improve.

In 1998, as Chairman of the Nuclear Subcommittee, I began a series of oversight hearings of the NRC. The hearing I held in 1998 was the first such oversight hearing in many, many years. We traced it back as far as we can, and it has been quite some time. I do not think that any bureaucracy, any commission, can go without any oversight, and I think we have a lot of progress as a result of that.

When I began conducting oversight of the NRC, I did so with the goal of changing the bureaucratic atmosphere that had infected the NRC. By 1998, the NRC had become an Agency of process, not results. It was neither efficient nor effective. If the Agency was to improve, it has to employ a more results-oriented approach, one that was risk-based and science-based, and not one mired in unnecessary process and paperwork.

I am pleased that in the last 7 years, we have seen tremendous strides, and those who work for the NRC should be proud. This approach has made the NRC a lean and more effective regulatory Agency.

I have always been an advocate of nuclear energy, and nuclear power has proven to be a safe, reliable, and clean source of energy. Over the next 15 years, our energy demands will increase by nearly 30 percent. If we are to meet the energy demands of the future,

and we are serious about reducing utility emissions, then we should get serious about the zero emissions energy production that nuclear power provides.

Nuclear facilities are more efficient and safe today than ever before, and we are exploring new, even better technologies. We should be excited about the future of nuclear energy. I am pleased with the NRC's commitment to both license renewal and new reactor licensing, as they are key to the continued success of this clean, efficient energy.

The committee will be active this year on legislation pertaining to the NRC. Senator Voinovich and I will be introducing three bills today dealing with nuclear power: reauthorization of Price-Anderson; the nuclear security bill; and reauthorization of the fees bill that this committee passed by unanimous consent almost 5 years ago.

Staff is already in preliminary discussions with the Minority on these issues, and I anticipate an NRC oversight hearing in the future, as well as a classified hearing on the nuclear security. It is my hope to have these bills out of the committee in the very near future.

I want to thank the Commissioners for being here today, and I look forward to your testimony.

[The prepared statement of Senator Inhofe follows:]

STATEMENT OF HON. JAMES M. INHOFE, U.S. SENATOR FROM THE STATE OF OKLAHOMA

Good morning, today we are going hear from two Commissioners recently appointed to the Nuclear Regulatory Commission: Greg Jaczko (YATSKO) and Pete Lyons. Both Commissioners are Senate veterans. Commissioner Jaczko served on Senator Reid's staff and prior to that worked for this committee. Commissioner Lyons is a former staffer for Senator Domenici and the Senate Energy Committee. Welcome to both of you. Commissioner Jaczko, welcome back to EPW.

Both Commissioners were recess-appointed by the President in January and their appointments will not expire for 2 years. It's no secret that the process that led to the recess appointments was one in which I was highly critical. Over the last few years two Admirals were nominated to the NRC and both withdrew their names out of frustration with that process. Numerous other nominees were perpetually held up on the Senate floor. This was the result of the controversy over the nomination of Commissioner Jaczko and Senator Reid's strong desire to get him on the Commission. There had been a number of concerns raised with regard to Commissioner Jaczko by those who want to see the success of nuclear power continue to grow in the future. His extensive work in opposition to licensing of Yucca Mountain is at the heart of much of that concern.

I understand that the Commissioner has recused himself from NRC action on Yucca Mountain for one year I look forward to discussing both the parameters and timing of the that recusal today.

I am not holding this hearing to rehash the history of the last 2 years. While Commissioner Jaczko's past work on nuclear matter has caused concern, I have been pleased to hear reports that in his tenure thus far as Commissioner, he has conducted himself in a manner that is both fair and open. It is my hope that this will continue. Today's hearing is important because these Commissioners have not had the opportunity to share their views with this committee on nuclear power and what they see as the role of the NRC in regulating nuclear power. And as they know, this committee has sole jurisdiction in the Senate over the Nuclear Regulatory Commission. It is important that we fully understand what is guiding you, and it is equally important that you understand what we hope to see out of the NRC.

I have spent a good deal of time and energy over the past decade working hard to reform the way NRC does business. And that effort has been very successful. I want to be certain that not only will that progress not be reversed, but that the NRC will continue to improve.

In 1998, as chairman of the Nuclear Subcommittee, I began a series of oversight hearings of the NRC. The hearing I held in 1998 was the first held by this committee in years. Fortunately, every year since that time we have had the Commission appear before us. Senator Voinovich has continued this rigorous oversight as the current chairman of that subcommittee.

When I began conducting oversight of the NRC, I did so with the goal of changing the bureaucratic atmosphere that had infected the NRC. By 1998, the NRC had become an Agency of process, not results. It was neither efficient nor effective. If the Agency was to improve it had to employ a more results-oriented approach—one that was risk-based and science-based, not one mired in unnecessary process and paperwork. I am pleased that in the last 7 years, we have seen tremendous strides and those who work for the NRC should be proud. This approach has made the NRC a lean and more effective regulatory Agency.

I have always been an advocate of nuclear power. Nuclear power has proven to be a safe, reliable and clean source of energy. Over the next 15 years, our energy demands will increase by nearly 30 percent. If we are to meet the energy demands of the future, and we are serious about reducing utility emissions, then we should get serious about the zero emissions energy production that nuclear power provides. Nuclear facilities are more efficient today than ever before—and we are exploring new, even better technologies. We should be excited about the future of nuclear energy. I am pleased with NRC's commitment to both license renewal and new reactor licensing, as they are key to the continued success of this clean, efficient energy.

The committee will be active this year on legislation pertaining to the NRC. Just this week three bills were introduce by Senator Voinovich and myself dealing with nuclear power: reauthorization of Price Anderson; a nuclear security bill; and reauthorization of a fees bill that this committee passed by unanimous consent almost 5 years ago. Staff is already in discussions with the Minority on these bills, and I anticipate an NRC oversight hearing in the near future as well a classified hearing on nuclear security. It is my hope to have these bills out of committee in the very near future.

I want to thank the Commissioners for being here today and I look forward to their testimony.

Senator INHOFE. Senator Voinovich, before you came in, we went through the required questions. Since they are already on the Commission it is not like the normal type of hearing that we have. So I recognize you at this time.

OPENING STATEMENT OF HON. GEORGE V. VOINOVICH, U.S. SENATOR FROM THE STATE OF OHIO

Senator VOINOVICH. Thank you, Mr. Chairman.

I think it is wonderful that we are having this hearing, and I welcome our two Commissioners here this morning. Mr. Jaczko and Mr. Lyons, thank you for being here today.

Mr. Chairman, you and I both take oversight responsibilities of the NRC very seriously. You set the tone, and I am trying to follow in your footsteps. Together, we have held six oversight hearings of the NRC, starting in 1998, when you were Chairman of the Clean Air Climate Change and Nuclear Safety Committee, which I now chair.

An important part of this oversight involves close scrutiny of those individuals who are nominated by the President to lead the Commission. That is why I signed a letter, along with 14 of my colleagues, in November 2004, urging Leader Frist to not confirm the Republican or Democratic nominees to the Commission without a hearing.

Due to Senator Reid's insistence that many other nominees not be confirmed by the Senate until Mr. Jaczko be placed on the Commission, President Bush recess appointed both of you to the Commission. I strongly believe that circumventing this committee and

the Senate is the wrong way to do things, but that is the way it happened.

Mr. Chairman, I thank you for your strong leadership in holding this hearing today. Although the nominees are both already serving on the Commission, I welcome the opportunity to ask them some important questions on the record.

Mr. Jaczko, I signed the letter, not only because of process concerns, but also because of significant questions about your impartiality. We had a wonderful meeting in the office, and I appreciate the time that you spent with me. I am not going to go into all the details. We know what they are.

I would like to say that I am pleased, along with what the Chairman had to say, that the reports are that you have been fair and open as a Commissioner. However, I have been in this business long enough to understand that perception is not often reality.

I look forward to talking with you further about how some of these things, in terms of negative perceptions, can be worked out. I think the most important thing is that your actions speak louder than your words, and I have to say, good job.

You also have agreed to recuse yourself from NRC action on Yucca Mountain for 1 year. Like the Chairman, I would like to talk about some of the details and what that recusal means.

Mr. Lyons, your nomination and confirmation occurred very quickly after the other pending nominee withdrew his name. I am concerned that the speed at which you went through the process did not allow enough time to be fully vetted. I thank you for coming in to meet with me personally. I enjoyed meeting with you, also.

All that being said, I look forward to hearing your words this morning, and having you answer some of our questions. I know this is a special day for your respective families, because of the fact that they are here today. I just want to thank them for the sacrifice that they have made. Mr. Jaczko, you have been through a little bit more than Mr. Lyons.

I know it is really interesting in life. Those of us who are in the business get a lot of flak. And we can take it, because it is part of it. But for our families, it is very difficult. I know my mother, when I was Mayor of the city of Cleveland, chose not to subscribe to the Cleveland Plain Dealer. She just did not. She said, "I just do not want to read it any more, George."

So we thank you for what you have been through. It is harder on the families. So thank you, Mr. Chairman.

[The prepared statement of Senator Voinovich follows:]

STATEMENT OF HON. GEORGE V. VOINOVICH, U.S. SENATOR FROM THE STATE OF OHIO

Good morning. Mr. Jaczko and Mr. Lyons, thank you for being here today.

Mr. Chairman, you and I both take our oversight responsibilities of the Nuclear Regulatory Commission very seriously. Together, we have held six oversight hearings of the NRC starting in 1998 when you were chairman of the Clean Air, Climate Change, and Nuclear Safety Subcommittee that I now chair.

An important part of this oversight involves close scrutiny of those individuals that are nominated by the President to lead the Commission.

That is why I signed a letter along with 14 of my colleagues in November 2004 urging Majority Leader Frist to not confirm the Republican or Democrat nominees to the Commission without a hearing.

Due to Senator Reid's insistence that many other nominees not be confirmed by the Senate until—you Mr. Jaczko—be placed on the Commission, President Bush

recess appointed both of you. I strongly believe that circumventing this committee and the Senate is the wrong way to do things.

Mr. Chairman, I thank you for your strong leadership in holding this hearing today. Although the nominees are both already serving on the Commission, I welcome the opportunity to ask them some important questions on the record.

Mr. Jaczko, I signed the letter not only because of process concerns but also because of significant questions about your impartiality. As a senior policy advisor to Senator Reid, you worked for several years against important issues that will be or are before the Commission—specifically the licensing of Yucca Mountain as the Nation's nuclear waste repository.

As the Chairman mentioned in his opening statement, I too am pleased with reports that you have been fair and open thus far as a Commissioner. However, I have been in this business long enough to understand that 'perception is often reality'. I look forward to talking with you further about how you will overcome these negative perceptions. Additionally, I understand that you have agreed to recuse yourself from NRC action on Yucca Mountain for 1 year, and I would like to talk to you about the details of that recusal today.

Mr. Lyons, your nomination and confirmation occurred very quickly after the other pending nominee withdrew his name. I am concerned that the speed at which you went through this process did not allow enough time for you to be fully vetted. I thank you for coming in to meet with me recently and look forward to asking you additional questions today.

With all of that being said, I want to look forward. I thank you both and your families for your willingness to serve. The NRC plays a critical role in the welfare of the American public and their number one concern must be safety.

The NRC currently has a very full plate, including:

- Considering license renewals, applications for new plants and power up-rates at existing plants, and the licensing of the Yucca Mountain nuclear waste repository;
- Ensuring public confidence in nuclear power and that nothing like the Davis-Besse incident ever occurs again; and
- Evaluating and strengthening security at the Nation's nuclear plants.

I want to make sure that the NRC has the budget and personnel to get the job done well in all of these areas. I recently met with Chairman Diaz who told me that increases are needed for fiscal year 2006, and I want to hear both of your thoughts on what the Commission needs as well.

While the NRC will be busy, this committee and my subcommittee will also be very busy over the next 2 months on nuclear issues. First, Chairman Inhofe and I introduced three pieces of legislation today on reauthorization of the Price Anderson nuclear insurance program, nuclear security, and reauthorization of the fees that make up a large part of NRC's budget. These bills have all been considered by the committee in the past, and I hope to get them reported out of the committee before June.

Second, I plan to hold the annual NRC oversight hearing when we return from the recess at the end of this month. Third, in May, I am working with Chairman Inhofe to hold a classified hearing on nuclear security.

Mr. Chairman, thank you again for your strong leadership and for holding this important hearing. I look forward to hearing from our witnesses today.

Thank you.

Senator INHOFE. Thank you, Senator Voinovich. I might add, my wife and I, we canceled our subscription to the Tulsa Daily World 25 years ago. So that is a policy.

I want to say this about Senator Voinovich. He is now chairman of the subcommittee that I chaired. There is no one in America more qualified to deal with the air issues and the nuclear issues than he is. He has an extensive background in that.

I will recognize Senator Lautenberg, for an opening statement.

OPENING STATEMENT OF HON. FRANK R. LAUTENBERG, U.S. SENATOR FROM THE STATE OF NEW JERSEY

Senator LAUTENBERG. Thank you very much, Mr. Chairman. Holding this hearing is very important to me. New Jersey has its problems, which I will talk about.

We have two people before us today, that we are pleased that you bring the capabilities that you each do. Senator Reid, particularly, Mr. Jaczko, appreciated your service; Senator Jack Reid and Senator Harry Reid.

Now that we have that straight, we can get on to the other things. I know that members of the committee and staff are familiar with these nominees. Mr. Jaczko formerly worked for Senator Harry Reid, and Mr. Lyons worked for Senator Domenici. The NRC is rarely in the public spotlight. But its mission is crucial, and will only become more important in the future.

Now my home State gets more than half of its electric power from three nuclear facilities. Nuclear power is vital to the economy of our region.

Mr. Chairman, I cannot help but think about what happened when we closed down two brand-new facilities, one in New Hampshire and one in Long Island. It cost billions of dollars. We were unwilling to accept the presence of these facilities and the locations they were at.

Now we find ourselves leaning far more to the dependence on nuclear facilities than ever before. The main thing that we are concerned about, as we have heard discussions in the Senate and the Congress for a long time, is the fact that nuclear power is vital to the economy of our region. I believe it has the potential for the future as a source of energy that does not produce air pollution, that is common from other power plants.

But public safety must always, always be the No. 1 concern with regard to nuclear power facilities. It is the NRC's job to make sure that public safety is the top priority.

In New Jersey, the public and the Department of Environmental Protection have some safety concerns about our nuclear plants. The Oyster Creek facility, for instance, is the oldest operating nuclear facility in the country. It will be 40 years old when its current license expires in 2009.

There is significant disagreement in my State about whether Oyster Creek should be relicensed. As the time for that decision grows closer, it is absolutely essential that we be able to turn to the NRC for factual, unbiased information.

There are also concerns about the safety issues with two other plants: the Salem and Hope Creek nuclear power plants. Once again, it is up to the NRC to insist that a culture of safety is in place at every nuclear facility.

Now, of course, we have to come up with a safe, feasible solution to the problem of nuclear waste. The newly released report by the National Academy of Sciences raises a red flag about the practice of storing spent fuel rods in pools of water.

Now we all know it is not an easy problem to solve. I am also concerned about the potential for a catastrophe during transport, should all of this stored nuclear waste be moved to one central location.

Dry cask storage may not be a perfect solution. But it might be the best solution that we can find at this time. The question is, can we implement a better solution? If we cannot, should we go forward using nuclear energy and relying on dry cask storage? Without alternatives, we are left in a dilemma that seems unsolvable. The an-

swers to these questions have tremendous implications for our national energy policy, as well as our national security.

So again, Mr. Chairman, I commend you for getting to this hearing. It is long overdue, I think, and I look forward to hearing the views of Mr. Jaczko and Mr. Lyons on these and other matters. Thank you.

Senator INHOFE. Thank you, Senator Lautenberg.

We have been joined by Senator Warner, who is the senior member of this committee. He has requested, Mr. Lyons, that he introduce you. So after his opening remarks and introduction, we will ask each of you to introduce any family that is here before we get started.

Senator Warner.

OPENING STATEMENT OF HON. JOHN W. WARNER, U.S. SENATOR FROM THE COMMONWEALTH OF VIRGINIA

Senator WARNER. Thank you, Mr. Chairman and colleagues of the committee.

This is indeed an individual who requires no introduction, but he very graciously asked me to do so, and I am privileged to do so. I shall be brief.

This individual is one of the President's nominees to be a Commissioner, as we all know, for the Nuclear Regulatory Commission, but his career is extraordinary. He has been in both public service and scientific world.

He spent almost three decades at Los Alamos National Laboratory. As you know, that is one of our premiere institutions for a wide range of complicated things integral to our security system. He served first as a scientist in the laboratories and nuclear programs, and later as a manager of energy, environment, and industrial partnerships.

In 1997, Dr. Lyons accepted an invitation from our good friend and close colleague, Senator Domenici, to come to Washington and work in his Senate Office. Dr. Lyons worked for Senator Domenici for almost 10 years on issues related to nuclear energy, global and non-proliferation, energy policy, and programs involving the Department of Energy. He may call on you to come back on a sabbatical to get his bill through. It is coming up pretty soon, I think. So maybe we had better move along pretty quickly.

I had the opportunity recently to visit with Dr. Lyons in connection with this new appointment. We discussed concerns we both share about the decline in the number of scientists and engineers who are graduating from colleges and universities in this country, and about the need for nuclear power. I feel very strongly about that.

I very much enjoyed our conversation and meeting. I understand that your lovely wife is here today. I will accede to the Chairman's desire to have you introduce her.

So I strongly recommend to the committee, and then I shall do so to the full Senate, the advice and consent be conferred upon this man, that he be allowed to accept the President's appointment.

Thank you very much.

Senator INHOFE. Thank you, Senator Warner.

If you would like, Mr. Jaczko and Dr. Lyons, to introduce any family who is here, this is the time to do it.

Mr. JACZKO. Actually, I am accompanied by my staff, which I think is my new family.

[Laughter.]

Mr. JACZKO. So I do not have any other family members here.

Mr. LYONS. The only family member who was able to be here today is one of my three sons, David.

Senator INHOFE. Good. David, we welcome you here.

Mr. LYONS. Also there are several members of my staff here. Thank you, sir.

Senator INHOFE. All right, good.

Mr. Jaczko, you may start off with your opening statement. If you want to limit your comments, your entire statement will be placed in the record.

STATEMENT OF GREGORY B. JACZKO, NOMINATED BY THE PRESIDENT TO BE A MEMBER OF THE NUCLEAR REGULATORY COMMISSION

Mr. JACZKO. Thank you, Mr. Chairman. First, I would like to thank Chairman Inhofe and Senator Voinovich for the kind words that you had to say about me in your opening remarks. I do appreciate that very much. I appreciate Chairman Inhofe and other committee members for inviting us here and giving us this opportunity to testify before the Environment and Public Works Committee.

It has been a privilege for me to serve as a Commissioner on the U.S. Nuclear Regulatory Commission since January of this year. I have spent the last 3 months learning about the Agency's processes, programs, and structure. I have had an opportunity to travel to several of our regional offices to visit nuclear power plants, as well as nuclear fuel cycle facilities. I have had an opportunity to visit six different States, as I said, in three of our four regions.

I have made a point of reaching out to various stakeholders in the industry to hear firsthand their views about the impact that the NRC's policies have on licensees in the communities around the Nation. I look forward to continuing to serve the public in my new role. As I said, it is an honor for me to be here today.

As the Nation's regulator of commercial uses of nuclear materials, the NRC serves an important public policy role. Its efforts are defined clearly in its mission statement, which has been developed over several decades through guidance from the Congress and this committee, in particular.

As you know, the mission of the NRC is to license and regulate the Nation's civilian use of nuclear materials, to ensure the adequate protection of public health and safety, common defense and security, and the protection of the environment.

I believe this is a very concise and powerful statement. I see my challenge as a Commissioner is to interpret and put into practice this mission statement in an effective regulatory framework.

I appreciate the important oversight role that this committee has played in the work of the NRC, and I look forward to working closely with the committee to develop and foster that relationship.

I also look forward to building new relationships, and productive and collaborative relationships with the licensees and stakeholder groups to accomplish this goal.

I will pledge that I will work with licensees to ensure the NRC's programs and regulations continue to promote the safety and security of our Nation's nuclear facilities.

The role that Congress, State and local governments, and stakeholders play in this process is very important. The Congress represents the interests of the American people by ensuring the safe and secure use of nuclear materials. I look forward to hearing those views on the issues facing the NRC and ensuring that these concerns are appropriately addressed within the Commission.

I would also like to say that I have been very pleased to work with the NRC staff. Chairman Inhofe, you mentioned the bureaucracy, and I think the NRC is fairly small when it comes to bureaucracy. We have about 3,000 employees. But I have found that it is a very dedicated, very skilled, and very talented group of people, and I have been very fortunate to work with them.

As I said, I have had an opportunity to not only be in our headquarters offices, but also to visit our three regional offices, and see some of the people who are out in the field, which I think is, in some sense, really the face of our Agency.

I will also work to foster a sense of trust and openness between the NRC staff and the Commission. Because I believe that is crucial to our Agency conducting its mission and achieving its mission.

I believe that my background enables me to achieve these goals. I have a Bachelor's Degree and a Doctorate in particle physics. I also had an opportunity to serve as an adjunct professor at Georgetown University.

I have also had the opportunity to work both in the U.S. House of Representatives and here in the Senate, working both for this committee and members who serve on this committee.

My professional life has been devoted to science and its impact on public policy. I see my position as an NRC Commissioner as a logical extension of that path.

The challenges the Agency faces in the years to come are numerous and varied, from integrating safety and security into our nuclear power plant regulatory framework, to ensuring the safe use of nuclear material in medical and industrial applications, to maintaining transparency and openness in our post-September 11th environment.

Openness, specifically, has been a vital focus, at least as far back as the early 1990's, with Chairman Ivan Selin's belief that the Agency should increase its "efforts to reach out to the public at large, to recognize how important public credibility is to the achievement of its regulatory goals." I believe that is just as true today as it was then.

I look forward to delving into these important issues with all my fellow Commissioners, with Commissioner Lyons, the NRC staff, and all interested stakeholders.

I pledge to you to consider the complex policy issues that come before the Commission in a fair, objective, and open-minded manner, based on my scientific and public policy background, and an

awareness of the direct impact that the decisions I make have in our communities and on our licensees.

As I said, I look forward to working closely with this committee, as you provide guidance and direction. I welcome any questions you may have this morning, and I will be responsive to your concerns in the future. Again, I want to thank you for the opportunity to testify today.

Senator INHOFE. Thank you, Dr. Jaczko.

Dr. Lyons.

STATEMENT OF PETER B. LYONS, NOMINATED BY THE PRESIDENT TO BE A MEMBER OF THE NUCLEAR REGULATORY COMMISSION

Mr. LYONS. Thank you, Chairman Inhofe, Senator Carper, Senator Lautenberg, Senator Warner, Senator Voinovich. I thank you very much for the opportunity to testify before your committee. It is an honor and a privilege to appear before you today.

I was greatly honored by my recess appointment by the President to serve on the NRC. After being sworn in on January 25, I have been busy, along with my fellow Commissioners, in deliberations on a variety of issues.

During these few months of NRC service, I have valued the guidance from the three senior members of the Commission, and support from the outstanding and dedicated staff at the NRC.

Nuclear energy is a vital component of our Nation's energy portfolio, providing 20 percent of our Nation's electricity. Nuclear technologies are important to many other industries, and help to underpin our Nation's strong economy, quality of life, and standard of living. But nuclear energy and other nuclear technologies will be utilized only if safety, security, and environmental considerations are addressed to the satisfaction of the public.

The Commission has a vital role with respect to the safety and security of our civilian nuclear plants, fuel cycle facilities, and other civilian applications of nuclear technologies. The challenging and crucial nature of the Commission's decisions is absolutely important on all of these issues.

I want to assure the committee that I am committed to careful evaluation of the facts of each case on which I render a decision. I pledge to you that all decisions I make will be based on the existing laws and regulations and on the merits of each specific case.

I believe that my past experience will be useful in my service on the Commission. My academic training, particularly in nuclear physics at Cal Tech, my three decades at Los Alamos, and my 8 years on Senate staff have prepared me, I believe, for this new role.

I have always viewed national security as a very broad arena, to include our Nation's military, economic, safety, and environmental well-being. Within that broad definition of national security, I have contributed to a very wide range of national security interests, throughout my service at Los Alamos and in the Senate.

I view this service as a Commissioner as another opportunity to contribute to our Nation's security through the NRC's focus on safety, security, and environmental impacts of civilian uses of nuclear technologies.

My experience at Los Alamos provided many lessons relevant to this appointment. At the laboratory, I led and managed very large, complex national security projects with critical deadlines and complex safety issues, involving hundreds of scientists.

During my time on Senate staff, I supported policy deliberations on a wide range of civilian and military nuclear issues.

I will draw on this range of knowledge and experience as I discharge my responsibilities on the Commission.

I look forward to future interactions with this committee. I assure you that I stand ready to respond to any and all inquiries from this committee, and that I welcome guidance from your committee, now and throughout my tenure at the NRC, as I discharge my responsibilities at the Commission. I look forward to answering your questions, and I thank you for the opportunity to appear here today.

Senator INHOFE. Thank you, Dr. Lyons.

The Chair, at this point, would yield to Senator Warner for comments.

Senator WARNER. Just very quickly, Mr. Chairman and members of the committee, I think we are fortunate to have two eminently qualified individuals. Both of you have my strongest support.

Again, Dr. Lyons, I return to the discussions that we had in my office regarding the future of nuclear power. I do not want to go into a great dissertation on this, but I do believe our country has to look at that. You can see the rest of the world moving, in some way, toward greater accessing of nuclear power. Is that not correct? You see it in Europe. You see it in Asia.

Mr. LYONS. Very much so, sir.

Senator WARNER. We simply cannot ignore this opportunity. I want to assure the American public that I take a position of urging consideration of nuclear power, from the standpoint of one who has associated with the Navy basically my entire lifetime. The safety record there is extraordinary; no incidents of any danger to the individuals.

The safety records of nuclear power throughout the world, have there been any incidents recently of harm to individuals in the growing nuclear power industry elsewhere in the world?

Mr. LYONS. To my knowledge, there are no recent significant incidents.

Senator WARNER. To mine, either. So I do hope Americans keep an open mind, as we see our gasoline prices at the pump climb.

You have talked about this, Mr. Chairman, China drawing so much of the world's resources of energy now that we have to look at these alternatives. I thank the Chair and members of the committee.

Senator INHOFE. Well, thank you, Senator Warner, and I agree with all of your comments. We have been joined by Senator Carper.

Senator Carper.

Senator CARPER. Thanks, Mr. Chairman.

Senator Warner mentioned his experience with the Navy. Along with other services in the Armed Forces in our country, he served as the Secretary of the Navy for a number of years.

I think I have shared with him this story. But about 2 years ago, I took our son's Boy Scout troop to Norfolk Naval Station. I do this

about every other year. We visit ships and submarines and air craft carriers. We sleep in the beds and eat in the galley. It is a lot of fun for them and, frankly, for me and the adults who go along, too.

A couple of years ago when we were there, about 3 years ago now, one of the ships that we visited was the Teddy Roosevelt. It is 1,000 feet long. It is about 30 stories high. When it goes to sea with the Air Wing aboard, there are about 5,000 sailors and 75 aircraft. The Teddy Roosevelt stops to refuel once every 25 years.

Senator WARNER. In other words, those sailors sleep on full reactors.

Senator CARPER. They sleep right on those reactors. You and I have known a number of people who live on reactors on the submarines and aircraft carriers and other ships.

We live in a day when today, close to 60 percent of our oil is imported. We have these huge trade deficits. Nuclear power, while not having a perfect record has, I think, a distinguished record, especially in the U.S. Navy.

Senator WARNER. We might add the pollution factor.

Senator CARPER. Absolutely.

Senator WARNER. We realize with our environment, how hard you are working on cleansing the air, yourself. You are a pioneer now on this committee on the question of clean air. If there is any question about that, nuclear power is a major contributor to our clean air.

Senator CARPER. As we wrestle with multi-pollutant legislation, we do not have to worry about sulphur dioxide emissions from these plants. We do not have to worry about nitrogen oxide, mercury, or CO_2 at all. For us to ignore that kind of potential, we do so at our own peril.

Having said all that, and as one who is an advocate of developing the next generation of nuclear power plants to create some of our electricity, your job, your role, is all the more important.

We have come to, I think, a point in our Nation's history where a lot of people who have been skeptical, dubious, of nuclear energy, because of the safety concerns, what do we do with the waste, and do we have to worry about a Chernobyl or Three Mile Island incident? We always have to be mindful and vigilant that that can happen.

But your jobs are more important than ever. Just at a time when people are willing to take a second look to consider how we might better utilize nuclear power to meet our energy needs, your role is all the more critical and you need to be all the more vigilant. We appreciate your service, and we are glad that you are here today. We look forward to asking you questions. Thank you.

Senator INHOFE. Thank you, Senator Carper.

Senator Obama, we have concluded with opening statements. But if you have one, we would recognize you at this time.

Senator OBAMA. Thank you, Mr. Chairman.

I am happy to wait and participate in the question and answer portion.

Senator INHOFE. All right, sir.

Well, I will go ahead and start. Dr. Jaczko, I could not believe it was you when I walked through that door, with your bright and

shiny smiling face. I could not see any horns. I just am delighted that you are not what I expected.

I think it would be unreasonable for this committee to ask any former staffers to recuse themselves from areas which they have dealt with before, because you have dealt with all areas, both of you have.

I do not think it is unusual, though, that if there is a particular area that you have been committed to, that has been such a topic of conversation, that we would request a recusal.

I understand that you did recuse yourself for a period of 1 year on issues dealing with Yucca Mountain. The only tough question you will get today is, will you continue to recuse yourself for the rest of your service on items dealing with Yucca Mountain?

Mr. JACZKO. Mr. Chairman, to answer that question, I think I want to say, first of all, that I do believe I can be fair and objective on all matters, including Yucca Mountain, that may come before me as a Commissioner. I agreed to recuse myself for 1 year, because I thought it was appropriate given, I believe, the perceptions about my ability to be objective and fair.

My hope is that within 1 year, I will have demonstrated that absolutely I can be fair and objective. My hope is that at the end of my recusal, that the answer to that question will be self-evident, whether or not I need to further recuse myself. But I will certainly continue to discuss with our Office of General Counsel, as well as other members of the Commission, what my appropriate action should be on any matters, including Yucca Mountain, after that recusal.

Senator INHOFE. Well, you know, there is some precedent for this. It was Commissioner Curtis, a few years ago, who had had a very similar association with Seabrook. He did recuse himself, by letter to us, in his tenure of service. So if that is the request I make of you, do I understand that you prefer not to do that?

Mr. JACZKO. I would certainly review that. I am not familiar with all the details of his circumstances, and I will certainly review that with the Office of General Counsel and seek their advice on the similarities with my circumstance.

Senator INHOFE. All right, and to both of you, I think what Senator Warner said certainly speaks for, I think, all of us on this committee. As we look at the energy crisis that we are faced with today, and you see how far we have come in nuclear energy. Yet, we know that, in my opinion, we are going to have to dramatically expand the use of nuclear energy over the coming years.

Now to do this, it is going to mean that you will have to continue the very aggressive record that the NRC has had in granting licenses and renewals and this type of thing. I would just ask each one of you, you have been on the job now, so you are pretty familiar with what resources you have. Do you have the resources to keep up that record, the record to which the Commission has been challenged, in terms of new facilities and expansions?

Mr. JACZKO. I could begin. I certainly think this is something that we are taking a very good look at, in making sure that we do have the resources to do that. I think, right now, we have some uncertainties because we do not have any definite new license applications. I think it makes it, of course, difficult for us to plan and

budget until we have some definite idea of what exactly we may be receiving in terms of new license applications.

So I think we certainly have resource challenges, from a human capital standpoint, which I know this committee has been very, very interested in, and has introduced legislation on those issues. Certainly, maintaining that expertise is an important part of what we need to do to make sure we have the resources and ensure that we are providing the new expertise as members of our staff retire.

Senator INHOFE. OK, very good.

Dr. Lyons, do you have any thoughts on that?

Mr. LYONS. Senator Inhofe, before Commissioner Jaczko and I arrived, the Commission had been demonstrating a very impressive record on license renewals. I believe they have processed about 30 license renewals to date. They have been doing it on a very time-effective, predictable basis. Certainly, I look forward toward continuing that record.

I think I have perhaps two specific comments. While the license renewals are important, I think it is also of substantial interest that in two recent cases, license renewals have been not denied, but returned to the licensee as being inadequate. As we look at license renewals, it is very important that we demand that they maintain the high standards of the ones to date.

On the subject of new reactors, if such applications are submitted, I have a very strong concern, which I have expressed in some Commission meetings, that we are not adequately budgeting for at least what industry is proposing in the way of new license applications. I am concerned about that.

Senator INHOFE. I see.

Senator Lautenberg.

Senator LAUTENBERG. Thank you very much, Mr. Chairman.

It is interesting to see now how the outreach, if I can call it that, for consideration of nuclear power is certainly there.

I would ask this. There have been a couple of notorious failures of plants that were built and never really operated. They were abandoned, finally. One was in New Hampshire. One was in Long Island, and another was in Washington. Each one was a loss of several billion dollars, and several billion dollars at a time when a billion was a lot of money.

The fact of the matter is that there ought to be something in the history of those that tells us about the things that prevented these plants from ever really operating. One, I think, was low power for while, and it eventually shut down.

So I do not know whether either of you are familiar with those situations, or if you are familiar enough to even talk about them at the moment. But if not, I would ask you each to take a look at the history, and see what it is that went wrong.

Dr. Lyons, you know, in my State, over 50 percent now of our energy is created from a nuclear facility. We worry a lot about the safety standards. It is a very crowded State. It is the most densely populated State in the Union. As I mentioned in my opening remarks, the oldest nuclear plant in the country is there at Oyster Creek.

I am told that the NRC standard for safety is only that it be, and here I put this in quotes, "adequate." Does that sound like an appropriate target for safety, adequate?

Mr. LYONS. Senator Lautenberg, that is the statutory law for the NRC, to provide adequate protection of safety and security. Adequate, I believe, is defined in the minds of the five sitting Commissioners as they evaluate the safety against other risks that we also face. It is the judgment of the sitting Commissioners to establish that definition of adequate, consistent with the statute.

Senator LAUTENBERG. It hardly sounds adequate to me, when you think about it. I think it needs a broader review of what that standard ought to be. Does it mean that under any condition, that there is no danger? With the storage of the rods in pools of water, which the National Academy of Science's report indicates that there are threats from the storage in that form, why has the NRC taken the opposite position on this question? Do you know, Mr. Jaczko?

Mr. JACZKO. The NRC's mission, as I mentioned in my opening remarks, and as you said, is to protect the public health and safety. Obviously, this term, adequate, is in there, and that is a challenge for us to understand what that means.

But we take very seriously that public safety mission, as an Agency. We have, for a long time, reviewed the safety and security of the spent nuclear pools. We have done reviews of the security situation, and believe that there are methods in place to provide safety, in the event of incidents at the spent fuel pools.

So we do believe that they are safe, and that they can continue to be operated safely. But we also take very seriously the recommendations of the National Academy, and are currently reviewing those to see if there are changes that we need to make in order to better improve the safety of these facilities.

Senator LAUTENBERG. I would appreciate that, and would like you to get back to me when that review is completed. The scientists who wrote the National Academy of Science's report identified the Oyster Creek plant in my State as particularly vulnerable to terrorist attack. That was because the pool of spent fuel rods sits on top of the plant, and it is not protected by 3-foot thick walls that surround the reactor.

Is there any plan, that either of you know of, by the Commission, to require that these rods be moved to dry casks, which I believe is far safer than the pool storage?

Mr. LYONS. Well, at many reactor sites, there is movement to dry casks, as the spent fuel pools are becoming more full. There is not a specific requirement from the NRC, at least at this time, forcing movement from the pool to the dry cask. As Commissioner Jaczko indicated, in the assessment of the NRC, both the pool storage and the dry cask storage are safe means of storage.

Senator LAUTENBERG. Well, again, with our pool storage on top of the plant and not surrounded by protected material, it makes us very concerned about what kind of attack could come to a very dangerous material, once released in the air. So I appreciate the fact that you are the qualified candidates that you are, and I am sure that we will move expeditiously on this.

Senator INHOFE. Thank you, Senator Lautenberg.

Let me just get a request in here. I do want to submit for the record a copy of Commissioner Curtis' recusal, and ask you, Dr. Jaczko, if you would review it and respond to whether or not you might reconsider and agree to do what he did. So I will be sending that to you.

[The referenced document follows:]

MAY 19, 2005.

Hon. JAMES M. INHOFE,
Chairman, Committee on Environment and Public Works,
U.S. Senate,
Washington, DC.

Dear CHAIRMAN INHOFE: Thank you again for the opportunity to testify before the U.S. Senate Committee on Environment and Public Works on April 20, 2005. It was an honor to appear before you to discuss my nomination to the Nuclear Regulatory Commission (NRC). I appreciate your graciousness and appreciate the assistance of your staff.

During my nomination process, I agreed to recuse myself from making public statements and voting on the Yucca Mountain project for 1 year. I agreed to take this step to allow an appropriate period of time during which I could demonstrate that I can be fair and objective on any matter that comes before the Commission.

I am writing to respond to your request that I consider an additional recusal from Yucca Mountain issues. I have reviewed the circumstances of the former NRC Commissioners you mentioned in the hearing and consulted with the Office of the General Counsel. After careful consideration of your concerns, and upon the advice of the Office of the General Counsel, I do not believe that an additional recusal is necessary. I would be pleased to meet with you or your staff to discuss the issue in more detail.

Please be assured that I will continue to exercise my duties according to the highest ethical and legal standards which bind me and my fellow commissioners. I am confident that my work on the Commission will demonstrate my commitment to those standards.

Again, I appreciated the opportunity to appear before your Committee and to address this important subject. Please do not hesitate to contact me if you have questions or concerns.

Sincerely,

GREGORY B. JACZKO.

Senator INHOFE. Senator Voinovich.

Senator VOINOVICH. I would just like, for the members of the committee, to remind them of what the Chairman said. We have introduced three pieces of legislation: reauthorization of the Price-Anderson nuclear insurance program; long-overdue nuclear safety; and reauthorization of the fees that make up a large part of the NRC's budget.

I assume that both of you are familiar with that legislation, and I would like your comments on whether or not those three pieces would be helpful to you in accomplishing your respective responsibilities.

The other is that we are going to have another oversight hearing at the end of this month on the Nuclear Regulatory Commission. The Chairman and I are trying to find a date when we can have a closed session, classified briefing on the security. Because I think this is very, very important that the members of the committee are brought up to date on where we are in terms of safety.

I have been concerned about the personnel situation for a long time, frankly, on another committee that I chair, and that is the Oversight of Government Management in the Federal Work Force. I would just like you to comment on your observations in terms of whether or not you have the people to get the job done.

Now, Mr. Diaz came to see me, and he said that he needs another 50 people, Mr. Chairman. He needs a budget increase if he is going to get the job done, particularly if you guys get involved in some new reactor licensing, which I understand may be forthcoming here in the next several months. I would like you to comment on that, both of you.

Mr. JACZKO. On the first question, if I could, Senator Voinovich, on the issue of the legislation, the one thing I would like to stress is for us, the importance of the fee reauthorization. That is extremely important, because without that legislation, I believe we would revert back to a 33 percent fee recovery. That would be a dramatic change in our budget. So that is a very crucial piece of legislation for us, for this year.

Senator VOINOVICH. The current legislation provides 90 percent by the industry, and 10 percent.

Mr. JACZKO. That is right.

Senator VOINOVICH. Mr. Chairman, I talked to Senator Domenici also about maybe bumping their budget a bit, across the Feds, another $2 million. But the people in the industry would have to come up with some more money. I understand if they can get the right people, and move things through and have an efficient operation, they are willing to pay it.

Mr. JACZKO. I think that does get into your second question of our resource needs. I have been very impressed, since I have been at the Agency, with the planning that is going on to ensure that we replace the knowledge that, in many cases, resides in the people that we have in the Agency. There is a lot of work going on to ensure that we will continue to have the expertise we need to address these issues.

That having been said, they are definitely challenges. If, in fact, we get into an era of new licensing action, we will be doing things that the Agency has not done for a long time. So it is crucial that we have the resources. We certainly support, obviously, anything that Chairman Diaz believes is necessary for increased budgets to support those activities.

Mr. LYONS. Certainly, on the three pieces of legislation, those are very positive. From the perspective of the Commission, we greatly appreciate that.

When I visited with you earlier, we talked about the human capital issues, and I share your very strong concern and interest in those areas. At the same time, I have also been very impressed in my time on the Commission to see the extent of the planning which is going in to address the human capital issues at the Commission.

Areas like knowledge management, knowledge transfer to new staff, and a wide range of very effective recruiting tools are being used by the Commission. At least, to date, they have succeeded in attracting, appropriately, highly qualified candidates for open positions.

But I share your concern, and I believe that human capital issues are a growing issue throughout all of the different industries and Government functions that utilize nuclear technologies.

Senator VOINOVICH. Do you think the portion of the legislation that deals with people who have retired and are determined that they would be very helpful in the transition to a new work force,

to take on the responsibilities that you have, is worthy of consideration?

I know there are some people that they know the idea well, and I think everyone is familiar, that if you leave an Agency and you take your pension, you cannot be brought back to the Agency, even if you are really needed, unless you have your pension offset. This would allow a waiver of that so that people could be brought back on a temporary basis that are deemed to be very essential to the training of new people and the transition. Do you want to react to that?

Mr. LYONS. Well, Senator, I believe you said it very well. I think it is a critical piece of legislation. You emphasized the knowledge transfer to newer staff.

However, I do not think one wants to rely for a long period of time on individuals brought back under that mechanism. We should transfer the knowledge.

But I do think that having that mechanism will allow a much more effective knowledge transfer to new staff. From that standpoint, I think it is very important.

Senator VOINOVICH. I would just like to point out a final note for the members of the committee. Several years ago, the Nuclear Regulatory Commission had six times the number of people over 60, as they had under 30. So they have this big bathtub where these retirements are here in this period there, where they have not brought in any young blood. So you have a real human capital challenge.

Senator INHOFE. That is kind of like the Pope.

Senator Carper.

Senator CARPER. Thanks, Mr. Chairman.

Mr. Jaczko, I want to commend you for your decision to recuse yourself from all matters pertaining to Yucca Mountain for at least the next year. I am mindful of the request that the Chairman has made, and am pleased that you are going to discuss that with the counsel in the agencies, and make a decision. I do not know that it is a recusal that needs to be continued. But I am pleased that you have at least done it for this 1 year.

First of all, let me say to Mr. Lyons, you were good to come by and visit with me a couple of months ago, and I thank you for that. As I recall, our meeting was interrupted by a call from our Secretary of State that I was compelled to take, and I apologize for that.

I would like to talk with both of you, but especially with you, Mr. Lyons, about the issue of disposal of our nuclear waste and the storage of those nuclear wastes. It is an issue that continues to concern us all. I would just ask if you could give us an update on what is going on, in terms of preparing a long-term repository for those nuclear wastes at Yucca Mountain or perhaps some other place.

Mr. LYONS. Well, from the Commission's perspective, Senator, we must await the application for a license from the Department of Energy for Yucca Mountain or any future repository. So at the moment, the Commission, I would say, is in a difficult position of trying to plan for a very large quantity of work that will come with

that license application, while at the same time having very little ability to predict precisely when that application will come in.

At the moment, the NRC has to be in the mode of preparing to accept that application in terms of appropriate staffing and appropriate changes in our operations in Las Vegas, to prepare for that eventuality. As far as other possibilities, it was already mentioned previously that dry cask storage is being used at a number of sites, and probably is going to be used at still more sites.

From the Commission's perspective, that is certainly a safe method of storage. Whether all sites have sufficient room to accommodate large number of dry casks, I simply do not know. I can anticipate that the Congress may need to look at other possibilities, depending on the future disposition or future outcome of a license application on Yucca Mountain.

Certainly, the Congress could consider other alternatives for a national strategy for spent fuel. But for now, the dry cask and the spent fuel pools are a safe approach.

Senator CARPER. Thank you.

Last week, all three members of our congressional delegation in Delaware joined with several other Members of Congress in submitting a letter to David Walker, who is the Comptroller General of the United States. It is a two-page letter dated April 14, and I doubt that it has come to your attention. But in the letter, we ask General Walker to review the NRC's reactor oversight process.

I would just ask if you have any opinions of the reactor oversight process; and if so, do you have any suggestions for how that might be improved. Mr. Lyons? Then I would ask Mr. Jaczko, as well.

Mr. LYONS. I have been very impressed by the Reactor Oversight Process, and I have been trying to learn more about it. I still have a great deal more to learn.

The Reactor Oversight Process was a very deliberate movement toward risk informed and performance-based inspection over the last few years by the Commission, and I believe that is a very positive step. The so-called ROP, the Reactor Oversight Process, is under constant review.

There will be a meeting. I do not know the exact date later this summer when the Commission will review the ROP. In the visits that I have had at nuclear power plants so far, I have been very impressed with how the ROP is being applied. But also, I have been impressed in the way that the inspectors onsite are constantly looking at ways to improve that process.

So I anticipate that the ROP is an evolving process. I think it is a very solid foundation, and it is one that we will look toward further improving.

Senator CARPER. Good, thank you.

Mr. Jaczko.

Mr. JACZKO. I would have to largely echo the comments of Commissioner Lyons. It is a somewhat new process that we have, and I think certainly a review would be a positive development. It is a process that we are reviewing right now.

There are various aspects of the Reactor Oversight Process that are new since September 11th. For instance, we are trying to work through how we properly incorporate security elements of inspec-

tions into that process in a way that ensures that we are properly protecting public health and safety.

So there are always elements of it that we are reviewing, and I think we will continue to do that. But I think, in general, it has been an effective mechanism for us to conduct inspections in a way that is transparent, and that is clear and concise for the licensees that we regulate.

Senator CARPER. Thanks very much; thanks, Mr. Chairman.

Senator INHOFE. Thank you, Senator Carper.

Senator Obama.

Senator OBAMA. Mr. Chairman, I appreciate the opportunity. But actually, between Senator Voinovich, Senator Carper and myself, I think most of my questions have been answered. These two gentlemen seem eminently qualified.

I would just note that Illinois actually has the most nuclear power plants of any State in the country. So issues of long-term strategies for nuclear waste, how we are storing those, are extraordinarily important to us. Obviously, that is something beyond the scope of this particular hearing. But over the long term, it is something that I would be very interested in seeing how we are moving.

I guess I would just have one general question. That is, I actually am somebody who believes that we have been too reticent to move forward with nuclear power as an important energy source and alternative fossil fuels.

I would just be interested in your two perspectives, very generally, of what you think are the biggest impediments for us expanding nuclear capacity in a way that is safe. Is the biggest problem right now the issue of waste, or is it that the regulatory burdens, in terms of design, are such that it is very difficult for people to make the investments, or companies to make the investments possible? I would just be interested in your general philosophies on how you think we can, in an intelligent, safe, secure way, move forward so that we can meet our long-term energy challenges.

Mr. Jaczko.

Mr. JACZKO. Senator, I will not address the nuclear waste issue, because of elements of my recusal. But I will say, some of the issues that have been touched upon here, I think, one could call them impediments.

They are probably challenges more in terms of how we deal with potential new applications for nuclear power. They have really to do with our resource needs, in making sure that we have the personnel and the staff to do license reviews, which is a complicated process that has not been done at our Agency in a comprehensive way for a long time.

So that is probably the biggest challenge that we face as an Agency in responding. As a regulatory commission, it is our job to be responsive to license applications that may be presented to us or other decisions by the private industry or Congress or other policymakers, in terms of our energy decisions. So for us, as I said, I think the biggest challenges will be in our resources.

Senator OBAMA. Just on this issue license review, I am wondering, my understanding, at least, is that other nations move more aggressively and have greater reliance on nuclear power. They employ more of a cookie cutter approach to construction and

development of nuclear plants. As a consequence, the licensing becomes less cumbersome, because you are not reinvesting what a nuclear power plant looks like, each and every time.

So I am just wondering, and again this is more of a policy strategy issue than it is the particulars of your regulatory function. So if you want to beg off, you can. But I am just curious as to whether you think that part of the problem here is that we do not seem to have a clear set of construction safety guidelines for new power plants that would allow us to streamline the licensing process.

Mr. JACZKO. We are trying to do that, I think, absolutely. We have a new process for licensing that has never been used before. But it attempts to address that issue a little bit better.

That process would work in what we call design certification. So there are several designs for new reactors that have already gone through a process of review. That design certification then, if that design is used by a new licensee, it does not need to go through a further review.

Senator OBAMA. OK, so that already exists.

Mr. JACZKO. That already exists, yes.

Senator OBAMA. If I am a power plant company, why would I not always want to go with that? Is it because I think I can build it cheaper, using a different design?

Mr. JACZKO. That is, I think, an interesting question. In many ways, that is how our Nation is different in our nuclear power industry, in that many other nations have gone to a more uniform approach.

Here, this is largely, I believe, because of economic reasons, utilities have purchased designs, and then had an architect, and they would modify the designs in order to achieve the maximum economic benefit for that particular plant at that particular time. So the intent of our licensing framework is to try and do it in a way that is more uniform and more standard to facilitate that.

Senator OBAMA. Mr. Lyons, do you have anything to add to that?

Mr. LYONS. I think Commissioner Jaczko covered it quite well. I have perhaps a few additional comments. In addition to the certified designs, Part 52 allows a utility today to not only obtain the construction license, but also the operating license, before they start construction.

That process has never been tested, as Commissioner Jaczko said, and that leads to regulatory uncertainty. That is at least one of the factors that I believe will be carefully considered by any utility as they approach construction.

But there will be other considerations, too. The fact that we have not constructed a reactor in this country for approaching three decades now means that there is uncertainty in the costs for that construction.

You referenced the modular construction, which is being used throughout the world now. That has never been used in this country. It had not been invented yet at the time we built our plants. Now, if new plants are built, they certainly will use modular construction. That will certainly present some tremendous efficiencies in the construction process. A number of companies are doing construction in under 4 years.

It also will lead to some very interesting challenges for the Commission. Instead of the NRC inspecting components as they are being constructed at one place, components are now being constructed all across the world.

That is both a benefit and a challenge of the modular construction that you mentioned. But it does lead, and it is leading in a number of countries, to very quick construction. And as Commissioner Jaczko mentioned, the ability to stay with certified designs is already important in a number of places in the country, and that it is in place here.

Senator OBAMA. Thank you very much, Mr. Chairman.

Senator INHOFE. Thank you, Senator Obama.

Senator Carper or Senator Voinovich, do you have any further questions or comments?

Senator VOINOVICH. Yes, I have one other question I would like to ask, Mr. Chairman, if that is all right.

Senator INHOFE. All right, you are recognized, Senator Voinovich.

Senator VOINOVICH. On the Davis-Besse problem, we had an oversight hearing in May of last year, and I asked the Commissioners whether they believed the NRC should set benchmarks for nuclear plants. There was some reluctance to do that. I would like to know your opinion about setting benchmarks for safety at these plants. This is the best, and this is what you should be striving for.

The second issue that I raised was strengthening the training for the resident inspectors. Because with Davis-Besse, we found out not only did the company not do what they were supposed to do, but the Nuclear Regulatory Commission was not doing the job they were supposed to do. Are either of you familiar with this to react to this question about what is going on?

Mr. JACZKO. Well, I can tell you, as an Agency, we obviously take the situation at Davis-Besse very seriously. There, as you rightly indicate, there were problems.

Senator VOINOVICH. Well, let me just say this to you. One of the problems that you all ought to know about this is, I am a supporter of nuclear power and so are a lot of other people in this country. But when you have Davis-Besse incidents and other things like that, it really causes the public to be very, very skeptical about nuclear power. So it is really important that everyone knows that that is not going to happen again.

Mr. JACZKO. We have put in place several programs to ensure that a Davis-Besse does not happen again. We have worked very hard on issues of safety culture, which is an issue that I know you are very interested in, and we continue to work with those issues.

They are challenging issues. Getting people to identify and bring forward safety concerns is always a challenge. Working to ensure a climate that encourages that, both within the NRC and within the utilities, is something that we are continuing to work on.

We have programs in place at the NRC. We are working on revamping those programs to ensure that different views are heard within the Commission, so that resident inspectors and other inspectors are comfortable coming forward when they identify problems and know that those problems will be looked at.

Senator VOINOVICH. How about the training of these people? It is very important. Do you know of any training programs that have

come in? Have they enhanced the training of those people that are resident inspectors?

Mr. JACZKO. I do not know of any, but I will get back to you on that.

Mr. LYONS. I know that training is an ongoing process. There is now some training for our inspectors in the general area of safety culture. The safety conscious work environment, as Commissioner Jaczko indicated, is being very carefully evaluated at all plants now, and the residents have been trained in that specific area.

Having said that, in the few visits I have had to date at the plants, I am extraordinarily impressed with the quality of the resident inspectors, and the dedication that they are showing toward their work.

I certainly agree with you that Davis-Besse must never happen again. As I came to the Commission, I viewed as one of my greatest challenges efforts to ensure that a "Davis-Besse" problem (not the same incident, but that general type of problem) cannot happen again.

Senator VOINOVICH. Thank you, Mr. Chairman.

Senator INHOFE. Thank you, Senator Voinovich.

Senator Carper, did you have any remaining comments?

Senator CARPER. I have one last quick one, if I could, Mr. Chairman. This will be really for both of you. In response to Senator Obama's question about the next generation of technology and construction for nuclear power, you mentioned the modular units that are being built around the world, which probably would be built here if we were to begin construction of new nuclear power units.

As we gather here today in this room, in another part of the Capitol, the Senate Energy Committee has been working to craft a comprehensive energy bill that would reduce our reliance on foreign oil, which will do good things for our air and for our environment.

Part of what they are examining is nuclear energy, and how to incentivize to encourage the next steps in producing more electricity more safely through nuclear power. This is not really in your job description, but if you have any comments for us, guidance or counsel, on what steps we might to take as a Senate in crafting a comprehensive energy bill that does encourage the development of the next generation of nuclear power plants, what might those be?

Mr. JACZKO. Senator, I guess I will begin. I think, as I mentioned earlier, one of the most important things is ensuring that we have the resources to do any kind of licensing review, if that were to happen. I think that is the most important thing, as Commissioner Lyons mentioned.

Some of our processes will be very new. As new processes, they always have problems that may be identified and quirks, and we will need to work through those. But the better we are staffed, and the better job we are able to do to plan for those things, the more able we will be to respond efficiently and timely to any license applications that come up.

So in the short term that I have been at the Commission, the biggest challenge that I do see for us as an Agency is really in that human capital and resource management for what could potentially be a very different type of activity for the NRC.

I would note that we want to make sure that we continue to do the things that we are doing now, which is to focus on the operational safety of the existing fleet, and not lose site of that as we may perhaps focus on new licensing activities, so that we continue to work on ensuring that we prevent any kind of incident like Davis-Besse from happening again. So it is making sure that we are meeting the existing challenges, and also have the resources to meet the new ones.

Senator CARPER. I would just say to my friend, Senator Voinovich, that as much as we may advocate the expansion and development of a new generation of nuclear power, the one thing that could undo or really take away any momentum for doing that, would be an incident or an accident at any of our facilities. That would overwhelm almost any incentive we might provide in the energy bill, I think, to commit to a new generation of nuclear power.

Mr. Lyons, do you have any comments?

Mr. LYONS. I absolutely agree with your comments, sir, that safety and security of the existing plants is one of the pre-conditions for consideration of any new plants.

We talked a little bit earlier about some of the uncertainties that will have to be addressed before a utility can move ahead with construction. The regulatory uncertainty, as Commissioner Jaczko just discussed, is certainly one of those areas of uncertainty.

There are several areas of, let us say, financial uncertainty, from the perspective of construction times and construction costs, since we do not have a history in this country, and, in addition, the waste issue. Any or all of those issues would be appropriate to consider within the energy bill.

I do not know the details of the current bill this year. I invested the last 3 to 4 years of my life working on earlier versions of that bill. I am very hopeful that we will see a bill this year that provides not only support for the NRC needed to discharge our responsibilities, but the other elements that will also be required.

Senator CARPER. Good. My thanks to both of you, thanks for being here today and for your testimony and your service.

Senator INHOFE. Thank you very much, and we look forward to seeing you again when the whole Commission comes back for oversight. The meeting is adjourned.

[Whereupon, at 10:45 a.m., the committee was adjourned.]

[Additional statements submitted for the record follow:]

STATEMENT OF HON. JAMES M. JEFFORDS, U.S. SENATOR FROM THE STATE OF VERMONT

Thank you Mr. Chairman, today we have before us the two commissioners who received recess appointments by the President to serve on the Nuclear Regulatory Commission. Greg Jaczko and Peter Lyons are both longtime public servants.

The Senate has been the beneficiary of their commitment to nuclear issues, as they both have had distinguished careers here as senior Senate staff. On behalf of Vermonters, and of all Americans, I want to commend them both for the service that they have already given to the country and to the NRC.

As both Commissioners know, the mission of the Nuclear Regulatory Commission is one of the most vital missions carried out by the Federal Government.

Regulating the Nation's civilian use of nuclear materials, ensuring adequate protection of public health and safety when these materials are used or disposed of, and protecting the environment are all critical Commission functions.

I want to make myself perfectly clear, and I know the Chairman shares my view: the top priority for the NRC is safety. There is no greater issue than safety. I want

the people of Vermont and across the country to be safe and it is the NRC's job to guarantee it.

As the Commissioners are well aware, there have been some serious problems at Vermont Yankee since the Senate's confirmation of the last NRC Commissioner.

Vermont Yankee, operated by Entergy, discovered last year that two pieces of radioactive fuel rods were missing from the plant's storage facilities. Officials with Entergy Nuclear could not find two rods, one 7 inches and another about 17 inches long. Though the rods were eventually located in the spent fuel pool, either was capable of quickly giving a lethal dose of radiation to an unshielded handler.

Senator Leahy, Congressman Sanders, Congressman Olver, and I requested that the Government Accountability Office conduct a study on the actions that the NRC should take to ensure that nuclear plants are more effectively controlling spent nuclear fuel. That report was released on April 8, 2005.

I have been pleased that the NRC has reacted positively to this report. I do not want missing fuel to become the norm.

It is not enough to tell the public that we "think" it is likely that highly radioactive material went to storage or to spend several anxiety-ridden weeks looking for missing fuel.

We must improve our nuclear materials accounting system, and we must do it now, and I will be asking the Commissioners for their commitment to move swiftly to implement the report's recommendations. I want to know what the NRC is going to do to prevent this from ever happening again at Vermont Yankee or, for that matter, at any other nuclear facility in America.

Two days before the GAO report was released, the National Research Council released another report on the safety and security of commercial spent nuclear fuel. This report contains some serious recommendations regarding the safety and security of wet and dry fuel storage and access to security related information.

For example, the National Research Council recommended that the NRC conduct a site specific evaluation of the spent fuel storage at each nuclear power plant and consider whether other alternatives, such as moving to dry cask storage, would improve safety as well. I expect the NRC to comply with these recommendations as well.

These Commissioners have the opportunity to assure the Senate that they will commit to the implementation of these recommendations, and that they will do so in a thorough and transparent way that addresses the concerns of the public.

If we are going to be serious about protecting our citizens and the environment while providing safe, reliable, and affordable electricity for all Americans, we need to make sure that nuclear plants operate well and safely. I will be looking for commitments from the Commissioners today that they are committed to this goal.

Again, I thank the Commissioners for appearing here today. I look forward to their testimony.

STATEMENT OF GREGORY B. JACZKO, NOMINATED BY THE PRESIDENT TO BE A MEMBER OF THE NUCLEAR REGULATORY COMMISSION

Chairman Inhofe, Senator Jeffords, and committee members, I want to thank you for this opportunity to testify before the Environment and Public Works Committee.

It has been a privilege to serve as a Commissioner on the U.S. Nuclear Regulatory Commission (NRC) since January 21, 2005. I have spent the last three months learning about the agency's processes, programs, and structure. I have traveled to NRC offices, nuclear power plants, and fuel cycle facilities in six different states and three of the agency's four regions. I have reached out to stakeholders to hear firsthand their views about the impact that NRC policies have on licensees and communities around the Nation. I look forward to continuing to serve the public in my new role.

It is therefore an honor to be here today. As the Nation's regulator of the commercial uses of nuclear materials, the NRC serves a critical public policy role. The NRC's efforts are defined in its mission, which has developed over decades of guidance from the Congress.

The mission of the NRC is to license and regulate the Nation's civilian use of nuclear materials to ensure the adequate protection of public health and safety, promote the common defense and security, and to protect the environment. I believe this is a concise and powerful statement. My challenge as a Commissioner is to continue the evolving effort to translate that mission statement into an effective regulatory framework.

I look forward to continuing to build productive and collaborative relationships with licensees and stakeholder groups to accomplish this goal. I will work with li-

censees to ensure the NRC's regulations and programs continue to promote the safety and security of our Nation's nuclear facilities and materials. The role that stakeholders, including state and local governments, play in this process is crucial—they represent the wishes of the American people by ensuring the safe and secure use of nuclear materials. I look forward to hearing their views on the issues facing the NRC and ensuring their concerns receive the attention they deserve.

And I would also like to say that I am pleased to work with the NRC staff. After three months at headquarters and out in the regions, I have been impressed by the expertise and dedication of the staff to the vital mission of the agency. I will work to foster a sense of trust and openness between the NRC staff and the Commission.

I believe my background enables me to achieve these goals. I earned a bachelor's degree from Cornell University and a Ph.D., in particle physics from the University of Wisconsin-Madison, and I have served as an adjunct professor at Georgetown University. I also had the opportunity to work in both the United States House of Representatives and here in the United States Senate. My professional life has been devoted to science and its impact on public policy, and I see my position as an NRC Commissioner as a logical extension of that path.

I believe the challenges the agency faces in the years to come are numerous and varied, from integrating a safety and security culture into our regulatory framework, to ensuring the safe use of nuclear material in medical and industrial applications, to maintaining transparency and openness in our post-September 11th environment.

Openness, specifically, has been a vital focus at least as far back as the early 1990's, with NRC Chairman Ivan Selin's belief that the agency should increase its "efforts to reach out to the public at large, to recognize how important public credibility is to the achievement of its regulatory goals." I believe that is just as true today as it was then.

I look forward to delving into these important issues with all interested stakeholders and with my fellow Commissioners. I pledge to you to consider the complex policy issues that come before us in a fair, objective, and open-minded manner, based on my scientific and public policy background and an awareness of the direct impact the decisions I make have in our communities and on our licensees.

And I look forward to working closely with this committee as you provide guidance and direction. I welcome any questions you may have this morning and I will be responsive to any concerns you have in the future.

Again, thank you for this opportunity to testify before you today.

UNITED STATES SENATE

COMMITTEE ON ENVIRONMENT
AND PUBLIC WORKS

ROOM 410 DIRKSEN BUILDING WASHINGTON, DC 20510

INFORMATION

REQUESTED OF PRESIDENTIAL NOMINEES

In order to assist the Committee in its consideration of nominations, each nominee is requested to complete the attached Statement For Completion By Presidential Nominees. The Statement is intended to be publicly available. In the event that a nominee asks that a specific answer be kept confidential, he or she should notify the Chairman and Ranking Member.

The original and forty (40) copies of the requested information should be made available to the Honorable James M. Inhofe, Chairman, Committee on Environment and Public Works, U.S. Senate, Washington, DC 20510 (Attn: Marty Hall: Deputy Staff Director) as soon as possible.

Name of Nominee: Gregory Jaczko

Business Address: Office of Senator Harry Reid, 528 Hart

Washington, DC 20510

Business Phone: 202 224-3783

Home Address:

Washington, DC 20009

Home Phone:

UNITED STATES SENATE
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
STATEMENT FOR COMPLETION BY PRESIDENTIAL NOMINEES

Name: Jaczko (Last) Gregory (First) B (Middle)

Position to which nominated: Member, Nuclear Regulatory Commission

Date of Nomination: February 12, 2004

Date of birth: 10 /29/ 1970 (Day) (Month) (Year) **Place of birth:** Norristown, Pennsylvania

Marital status: Unmarried **Full name of spouse:** _____

Name and ages of children: _____

Education:

Institution	Dates attended	Degrees received	Dates of degrees
Bethlehem Central High School	9/1985 – 6/1989	High School Diploma	6/1989
Cornell University	9/1990 – 12/1993	B.A.	1/1994
Univ. of Wisconsin, Madison	5/1994 – 8/ 1999	PhD	12/1999

Employment record:

List all positions held since college, including the title and description of job, name of employer, location, and dates. If you were terminated involuntarily from any position(s), please note the circumstances.

Appropriations Director, Science Policy Advisor: U.S. Senator Harry Reid, Washington, D.C.
8/2001 – Present

Professional Staff: U.S. Committee on Environment and Public Works, Washington, D.C.
3/2001 – 8/2001

Congressional Science Fellow: U.S. Representative Edward Markey, Washington, D.C.
9/1999 – 12/2000

Instructor and Adjunct Professor: Georgetown University, Washington, D.C.
Spring Semester 2001, 2002, 2003, 2004

Teaching Assistant and Research Assistant: Univ. of Wisconsin-Madison, Madison, WI
8/1994 – 8/1999

Honors and awards:

List significant scholarships, fellowships, honorary degrees, military medals, honorary society memberships, and any other special recognitions for outstanding service or achievement.

American Association for the Advancement of Science Congressional Fellowship

National Science Foundation Summer Institute in Japan Fellowship

Memberships:

List significant memberships and offices held in professional, fraternal, business, scholarly, civic, charitable and other organizations.

Organization	Office held (if any)	Dates
American Physical Society	N/A	1997 - 1999

Qualifications:

State fully your qualifications to serve in the position to which you have been named.

I am qualified for this position, because I have scientific and policy background dealing with nuclear power issues. As a fellow working for a U.S. Representative, I was the legislative assistant responsible for nuclear power issues. Since working in the Senate, I have been a committee staffer and legislative staffer responsible for nuclear power oversight issues. In addition, I have a doctorate in physics, providing me with a solid

scientific understanding of scientific and technical issues facing the commercial nuclear industry.

Future employment relationships:

1. Indicate whether you will sever all connections with your present employer, business firm, association or organization if you are confirmed by the Senate.

I intend to sever all connections with my present employer

2. As far as can be foreseen, state whether you have any plans after completing government service to resume employment, affiliation or practice with your current or any previous employer, business firm, association or organization.

I currently have no plans in this regard

3. Has anybody made a commitment to you for a job after you leave government?

No

4. (a) If you have been appointed for a fixed term, do you expect to serve the full term?

Yes

(b) If you have been appointed for an indefinite term, do you have any known limitations on your willingness or ability to serve for the foreseeable future?

N/A

(c) If you have previously held any Schedule C or other appointive position in the Executive branch, irrespective of whether the position required Congressional confirmation, please state the circumstances of your departure and its timing.

N/A

Financial Statement:

Note: The Office of Government Ethics will provide the Committee with a copy of your Executive Personnel Financial Disclosure Report (SF-278).

1. List sources, amounts and dates of all anticipated receipts from deferred income arrangements, stock options, uncompleted contracts and other future benefits which you expect to derive from previous business relationships, professional services and firm memberships or from former employers, clients, and customers. Amounts should be indicated by the categories established for reporting income on Form SF-278, Schedule A.

None

2. Are any assets pledged?

N/A

3. Are you currently a party to any legal action?

No

4. Have you filed a Federal income tax return for each of the last 10 years? If not, please explain the circumstances.

Yes

5. Has the Internal Revenue Service ever audited your Federal tax return? if so, what resulted from the audit?

No

Potential conflicts of interest:

1. Describe any financial or deferred compensation agreements or other continuing of interest: dealings with business associates, clients or customers who will be affected by policies which you will influence in the position to which you have been nominated.

N/A

2. List any investments, obligations, liabilities, or other relationships that might involve potential conflicts of interest, or the appearance of conflicts of interest, with the position to which you have been nominated.

Since Georgetown University is a licensee of the Nuclear Regulatory Commission, there is a conflict of interest on specific matters affecting the Georgetown University license.

3. Describe any business relationship, dealing or financial transaction (other than taxpaying) which you have had during the last 10 years with the Federal Government, whether for yourself or relatives, on behalf of a client, or acting as an agent, that might in any way constitute or result in a possible conflict of interest, or an appearance of conflict of interest, with the position to which you have been nominated.

None

4. Explain how you will resolve any potential conflict of interest, or appearance of a conflict of interest, that may be disclosed by your responses to the above items.

See attached letter

I intend to recuse myself from matters involving the University license as directed by the Ethics Officer.

5. Explain how you will comply with conflict of interest laws and regulations applicable to the position for which you have been nominated. Attach a statement from the appropriate agency official indicating what those laws and regulations are and how you will comply with them. For this purpose, you may utilize a statement by the relevant agency Ethics Officer.

I intend to follow the advice and recommendations of the Ethics Officer.

Political affiliation and activities:

List all memberships and offices held in, or financial contributions (in excess of $1,000), and services rendered to any political party or election committee during the last 10 years.

None

Published writings:

List the titles, publishers and dates of any books, articles, or reports you have written. (Please list first any publications and/or speeches that involve environmental or related matters.)

See attached

Additional Matters:

1. If there is any additional information that you believe may be pertinent to the Members of the Committee in reaching their decisions, you may include that here.

2. Do you agree to appear before all Congressional Committees which seek your testimony?

Yes.

AFFIDAVIT

GREGORY B JACKO ss, being duly sworn, hereby states that he/she has read and signed the foregoing Statement for Completion by Presidential Nominees including the Financial Statement and that the information provided therein is, to the best of his/her knowledge and belief, current, accurate, and complete.

Subscribed and sworn before me this 19th ~~March~~ day of March, 2009

Notary Public

NOTARY PUBLIC
DISTRICT OF COLUMBIA

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

OFFICE OF THE
GENERAL COUNSEL

March 1, 2004

The Honorable James M. Inhofe, Chairman
Committee on Environment and Public Works
United States Senate
Washington, D.C. 20510

Dear Mr. Chairman:

This is regarding question 5 from the Committee to Dr. Gregory B. Jaczko which requests a statement from the appropriate agency official on laws and regulations on conflicts of interest.

If Dr. Jaczko becomes a Commissioner of the United States Nuclear Regulatory Commission (NRC), he is prohibited from engaging in any outside business, vocation, or employment under section 201(e) of the Energy Reorganization Act of 1974 or from receiving any earned income from any outside employment or activities under Executive Order 12731.

Dr. Jaczko would be subject to all the government-wide ethics regulations for Executive Branch employees issued by the United States Office of Government Ethics (OGE) (5 C.F.R. Parts 2634-2640), such as the standards of employee conduct, which prohibit receiving gifts from prohibited sources and misuse of his position and title. Dr. Jaczko would be required to file annually a public financial disclosure report and receive annual ethics training. Dr. Jaczko would also be subject to the criminal conflict of interest laws (18 U.S.C. 201-209), the Hatch Act restrictions on political activities, and the NRC supplemental conduct regulations on security ownership (5 C.F.R. Part 5801).

We have already reviewed Dr. Jaczko's recently-filed financial disclosure report. We also informed Dr. Jaczko that the Office of the General Counsel will always be available to advise him on any conflict of interest questions or matters, during his service as an NRC Commissioner.

Please contact me if you have any further questions or I can be of any service.

Sincerely,

Karen D. Cyr

Karen D. Cyr
General Counsel and
Designated Agency Ethics Official

STATEMENT OF PETER B. LYONS, NOMINATED BY THE PRESIDENT TO BE A MEMBER OF THE NUCLEAR REGULATORY COMMISSION

Chairman Inhofe, Ranking Member Jeffords, and committee members. I thank you for the opportunity to testify before your Environment and Public Works Committee. It is an honor and privilege to appear before you today.

I was greatly honored by my recess appointment by the President to serve on the Nuclear Regulatory Commission (NRC). After being sworn in on January 25, I've been busy, along with my fellow Commissioners, in the deliberations of the Commission.

Nuclear energy is a vital component of our Nation's energy portfolio, providing 20 percent of our Nation's electricity. Nuclear technologies are important to many other industries, and help to underpin our Nation's strong economy, quality of life, and standard of living. But nuclear energy and other nuclear technologies will be utilized only if safety, security, and environmental considerations are addressed to the satisfaction of the public.

The Commission has an important role with respect to the safety and security of our existing civilian nuclear plants and fuel cycle facilities. And if the utility industry proposes expansion of the Nation's nuclear energy production, the Commission must also play a vital role.

For both existing and any new plants and facilities, the Commission must evaluate current operations and new proposals with the goal of ensuring that each one provides adequate protection of public health and safety and the environment. In addition, new and existing plants and facilities must address the increased security concerns that are present in a post-9/11 world and we must be prepared to respond to any radiological emergency. In addition, the Congress and the American people must be kept informed of our activities.

In a similar fashion, the Commission regulates other civilian applications of nuclear technologies, with their widespread applications to medicine and other industries. Here again, the NRC has key responsibilities.

The challenging and crucial nature of the Commission's decisions is vital on all these issues. I want to assure the committee that I am committed to careful evaluation of the facts of each case on which I render a decision. I pledge to you that all decisions I make will be based on the existing laws and regulations and on the merits of each specific case.

I believe that my past experiences will be useful in my service on the Commission. My academic training in nuclear physics at Cal Tech, my three decades at Los Alamos National Laboratory, and my 8 years on Senate staff have prepared me for this new role.

I've always viewed national security as a broad arena, to include our Nation's military, safety, economic, and environmental well-being. Within that definition, I contributed to a very wide range of national security interests throughout my service at Los Alamos and in the Senate. I view my service as a Commissioner as another opportunity to contribute to our Nation's security through the Commission's specific focus on safety, security, and environmental impacts of civilian uses of nuclear technologies.

My experiences at Los Alamos provided many lessons relevant to this appointment. At the Laboratory, I managed and led large complex national security projects with critical deadlines and complex safety issues involving hundreds of scientists with budgets of multi-$100 million. I participated in programs at the highest classification levels and assisted in cleanup of environmental problems which arose from the legacy of nuclear technologies used in the past, before our current focus on future environmental impacts.

While in Los Alamos, I was first elected and then re-elected twice to serve a total of 16 years on the Los Alamos School Board. While a local school board certainly does not make policy decisions rivaling the impact of those made by the Commission, that experience definitely broadened my appreciation for public service and provided further relevant management experiences.

During my time on Senate staff, I supported and witnessed policy deliberations on a wide range of civilian and military nuclear issues.

I will draw on this range of knowledge and experience as I discharge my responsibilities on the Commission.

In preparing this statement, I reviewed testimony provided by previous Commissioners at their confirmation hearings. I was struck by the statement from Kenneth Rogers in 1987 when he stated:

I am committed to the position that the NRC is an independent regulatory agency that must render its decisions on the basis of a publicly open record. It must promptly and vigorously enforce its regulations, which must themselves be estab-

lished on the very best professionally recognized technical and factual basis. However, as a regulatory agency whose credibility with the public is vital, the NRC must maintain a distinct, perceptible distance from industry and a totally professional posture that recognizes that distance. It is very important in discharging that responsibility, that the Commission does so in a manner of openness and candor that clearly demonstrates to the public and its elected representatives that the Commission's priorities and actions are assiduously directed to the successful fulfillment of that mission in an unbiased and firm manner.

This statement of Commissioner Rogers accurately describes my own commitment to those same values that he described so well 18 years ago.

I look forward to future interactions with this committee. I assure you that I stand ready to respond to any and all inquiries from this committee and that I welcome guidance from this committee in discharging my responsibilities.

I look forward to addressing your questions.

Thank you for the opportunity of testifying before your committee.

UNITED STATES SENATE

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

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WASHINGTON, DC 20510

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Name of Nominee: Peter B. Lyons

Business Name: **Nuclear Regulatory Commission**
Business Address:
City, State & Zip:

Business Email:
Business Phone:
Cell Phone:

Home Address:
City, State & Zip:
Home Phone:

UNITED STATES SENATE
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
STATEMENT FOR COMPLETION BY PRESIDENTIAL NOMINEES

Full Legal Name: Peter Bruce Lyons

Position to which nominated: Commissioner of the Nuclear Regulatory Commission
Date of Nomination: January 19, 2005

Date of birth: February 23, 1943 **Place of birth:**

Marital status: married **Full name of spouse:** Debra Josephson Abrams

Name and ages of children:

Education

Institution	Dates Attended	Degrees Received	Dates of Degrees
California Institute of Technology	1964-1969	Ph.D. - physics	June, 1969
University of Arizona	1960-1964	B.S. - physics/math	May 1964
Boulder City NV HS	1956-1960	graduated	May 1960

Employment record:

List all positions held since college, including the title and description of job, name of employer, location, and dates. If you were terminated involuntarily from any position(s), please note the circumstances.

Position Title	Employer	Address	Dates	Terminated (Y/N)
Professional Staff Member	U.S. Senate Energy & Nat. Res.Comm.	Dirksen Senate Office Building	1/2003-1/2005	moved to NRC on recess appointment
Science Advisor to Sen. Domenici	Los Alamos Lab, detailed to Senate	Hart Senate Office Building	1/1997-1/2003	retired from lab
Program Director, Dep. Associate Dir., Program Mgr	Los Alamos National Laboratory	Los Alamos, NM	~1984-1997	no
Technical Staff Member, Technical Group	Los Alamos National Laboratory	Los Alamos, NM	1969--~1984	no

Position Title	Employer	Address	Dates	Terminated (Y/N)
Leader				

Honors and awards:

List significant scholarships, fellowships, honorary degrees, military medals, honorary society memberships, and any other special recognitions for outstanding service or achievement.

Date	Honor/Award
~2003	Fellow of the American Physical Society
1998	New Mexico - Distinguished Public Service Award
1977 - 1993	Elected for 3 terms - Los Alamos County School Board
1964-1969	NSF Graduate Fellowship
1964-1965	Phi Kappa Phi National Graduate Fellowship
1960-64	General Motors National Scholarship
Member of:	Phi Kappa Phi, Phi Beta Kappa, Sigma Pi Sigma, Sigma Xi (academic honor societies)
Five year term	Chairman - NATO Nuclear Effects Task Group

Memberships:

List significant memberships and offices held in professional, fraternal, business, scholarly, civic, charitable and other organizations.

Organization	Office held (if any)	Dates
American Physical Society	none	since ~1963
American Nuclear Society	none	since ~2002
IEEE	none	since ~ 1975

Qualifications:

State fully your qualifications to serve in the position to which you have been named.

My Ph. D. degree in physics, with emphasis in nuclear physics and nuclear astrophysics, at Cal Tech provides technical background. Since 1997 I worked for Senator Domenici as his science advisor and have provided such advice on a wide range of issues.

Future employment relationships:

1. Indicate whether you will sever all connections with your present employer, business firm,association or organization if you are confirmed by the Senate. YES

2. As far as can be foreseen, state whether you have any plans after completing government service to resume employment, affiliation or practice with your current or any previous employer, business firm, association or organization. NO

3. Has anybody made a commitment to you for a job after you leave government? NO

4. (a) If you have been appointed for a fixed term, do you expect to serve the full term? YES

(b) If you have been appointed for an indefinite term, do you have any known limitations on your willingness or ability to serve for the foreseeable future? NOT APPLICABLE

(c) If you have previously held any Schedule C or other appointive position in the Executive branch, irrespective of whether the position required Congressional confirmation, please state the circumstances of your departure and its timing.

I have not previously held any Schedule C or other appointive position.

Financial Statement:

Note: The Office of Government Ethics will provide the Committee with a copy of your Executive Personnel Financial Disclosure Report (SF-278).

1. List sources, amounts and dates of all anticipated receipts from deferred income arrangements, stock options, uncompleted contracts and other future benefits which you expect to derive from previous business relationships, professional services and firm memberships or from former employers, clients, and customers. Amounts should be indicated by the categories established for reporting income on Form SF-278, Schedule A.

As a retiree from the University of California/Los Alamos National Laboratory, I receive the Defined Benefit Plan amount determined by my service years and final salary. That benefit is disclosed on Form SF-278.

While with the University, I participated in a 403B program, the assets of which are now with Fidelity Investments and are shown in detail on Form SF-278.

2. Are any assets pledged? NO

3. Are you currently a party to any legal action? NO

4. Have you filed a Federal income tax return for each of the last 10 years? YES

5. Has the Internal Revenue Service ever audited your Federal tax return? NO

Potential conflicts of interest:

1. Describe any financial or deferred compensation agreements or other continuing of interest: dealings with business associates, clients or customers who will be affected by policies which you will influence in the position to which you have been nominated.

I participate in the University of California's defined benefit pension plan. Therefore, pursuant to 18 U.S.C. §208, I will not participate personally and substantially in any particular matter that will have a direct and predictable effect on the ability or willingness of the State of

California to provide this contractual benefit, unless I first obtain a written waiver or qualify for a regulatory exemption.

2. List any investments, obligations, liabilities, or other relationships which might involve potential conflicts of interest, or the appearance of conflicts of interest, with the position to which you have been nominated.

NONE

3. Describe any business relationship, dealing or financial transaction (other than taxpaying) which you have had during the last 10 years with the Federal Government, whether for yourself or relatives, on behalf of a client, or acting as an agent, that might in any way constitute or result in a possible conflict of interest, or an appearance of conflict of interest, with the position to which you have been nominated.

NONE

4. Explain how you will resolve any potential conflict of interest, or appearance of a conflict of interest, that may be disclosed by your responses to the above items.

By letter dated January 26, 2005, to the NRC General Counsel, I described the steps I have taken or will take to avoid any actual or apparent conflict of interest. A copy is attached.

5. Explain how you will comply with conflict of interest laws and regulations applicable to the position for which you have been nominated. Attach a statement from the appropriate agency official indicating what those laws and regulations are and how you will comply with them. For this purpose, you may utilize a statement by the relevant agency Ethics Officer.

I have attached a statement by the NRC General Counsel and Designated Agency Ethics Official which describes the conflict of interest laws and regulations applicable to my position as Commissioner of the Nuclear Regulatory Commission. I have received a briefing on the major ethics laws and regulations and will consult with the Office of the General Counsel on any conflict of interest matters during my service as an NRC Commissioner to ensure that I will comply with those laws and regulations.

Political affiliation and activities:

List all memberships and offices held in, or financial contributions (in excess of $1,000), and services rendered to any political party or election committee during the last 10 years.

NONE

Published writings:

List the titles, publishers and dates of any books, articles, or reports you have written. (Please list first any publications and/or speeches that involve environmental or related matters.)

I attach a bibliography of my publications, patents, and speeches.

Additional matters:

1. If there is any additional information which you believe may be pertinent to the Members of the Committee in reaching their decisions, you may include that here.

NO

2. Do you agree to appear before all Congressional Committees which seek your testimony?

YES

3. Having completed this form, are there any additional questions which you believe the Committee should ask of future nominees?

NO

AFFIDAVIT

Elva Bowden Berry) **ss**, being duly sworn, hereby states that he/she has read and signed the foregoing Statement for Completion by Presidential Nominees including the Financial Statement and that the information provided therein is, to the best of his/her knowledge and belief, current, accurate, and complete.

Subscribed and sworn before me this 8th day of February, 20 05.

Elva Bowden Berry
Notary Public

Elva Bowden Berry
NOTARY PUBLIC
Montgomery County, Maryland
My Commission Expires 12/1/07

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

January 26, 2005

Karen D. Cyr
General Counsel and Designated
Agency Ethics Official
United States Nuclear Regulatory Commission
11555 Rockville Pike
Rockville, MD 20852-2738

Dear Ms. Cyr:

The purpose of this letter is to describe the steps I intend to take to avoid any actual or apparent conflict of interest upon appointment to the position of Commissioner of the Nuclear Regulatory Commission.

As required by 18 U.S.C. § 208(a), I will not participate personally and substantially in any particular matter that has a direct and predictable effect on my financial interests or those of any other person whose interests are imputed to me, unless I first obtain a written waiver, pursuant to section 208(b)(1), or qualify for a regulatory exemption, pursuant to section 208(b)(2). I understand that the interests of the following persons are imputed to me: my spouse, minor children, or any general partner; any organization in which I serve as officer, director, trustee, general partner or employee; and any person or organization with which I am negotiating or have an arrangement concerning prospective employment.

Although I retired from the University of California on January 6, 2003, I continue to participate in the University's defined benefit pension plan and, therefore, pursuant to 18 U.S.C. § 208, I will not participate personally and substantially in any particular matter that will have a direct and predictable effect on the ability or willingness of the State of California to provide this contractual benefit, unless I first obtain a written waiver or qualify for a regulatory exemption.

Sincerely,

Peter B. Lyons

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

OFFICE OF THE
GENERAL COUNSEL

February 2, 2005

The Honorable James M. Inhofe, Chairman
Committee on Environment and Public Works
United States Senate
Washington, D.C. 20510

Dear Mr. Chairman:

This is regarding question 5 from the Committee to Commissioner Peter B. Lyons, which requests a statement from the appropriate agency official on laws and regulations on conflicts of interest.

As a Commissioner of the United States Nuclear Regulatory Commission (NRC), Commissioner Lyons is prohibited from engaging in any outside business, vocation, or employment under section 201(e) of the Energy Reorganization Act of 1974 or from receiving any earned income from any outside employment or activities under Executive Order 12731.

Commissioner Lyons is also subject to all the government-wide ethics regulations for Executive Branch employees issued by the United States Office of Government Ethics (OGE) (5 C.F.R. Parts 2634-2640), such as the standards of employee conduct, which prohibit receiving gifts from prohibited sources and misuse of his position and title. Those regulations require Commissioner Lyons to file annually a public financial disclosure report and receive annual ethics training. Additionally, he is subject to the criminal conflict of interest laws (18 U.S.C. 201-209), certain Hatch Act restrictions on political activities, and the NRC supplemental conduct regulations on security ownership (5 C.F.R. Part 5801).

We reviewed and signed Commissioner Lyon's recently-filed financial disclosure report. We provided him with an extensive briefing on the major ethics laws and regulations on February 2, 2005, and informed him that the Office of the General Counsel will always be available to advise him on any conflict of interest questions or matters, during his service as an NRC Commissioner.

Please contact me if you have any further questions or I can be of any service.

Sincerely,

Karen D. Cyr

Karen D. Cyr
General Counsel and
Designated Agency Ethics Official

PETER B. LYONS

PUBLICATIONS, TALKS, PATENTS

PATENTS

Enhanced Radiation Resistant Fiber Optics, U. S. Patent 5267343.

Radiation Detection System, U. S. Patent 4292527.

System for Testing Optical Fibers, U. S. Patent 4212537.

SELECTED TECHNICAL TALKS and PUBLICATIONS

"The Path Forward to an Energy Policy in the U.S." Congressional Panel Discussion, American Nuclear Society Winter Meeting, Washington, D.C., November 2004.

"The Role of Nuclear Power in National Energy Policy," 12th International Conference on Nuclear Engineering, ICONE-12, Arlington, VA, April 2004.

Congressional Panel, NEI Nuclear Energy R&D Summit, Washington, D.C., Feb 2004.

U.S. – Japan Workshop: Partnership for a New Nuclear Era. "Challenges to the Expansion of Nuclear Energy" Santa Fe Energy Seminar. Washington, D.C. November 2003.

Keynote Address. Advanced Fuel Cycle Initiative Meeting, Santa Fe, NM, August 2003.

Future Directions for Nuclear Power, Atoms for Peace Workshop, Civilian Applications of Nuclear Technology, Council for Global Strategic Research, Japan, May 2003.

Panel Chairman and presenter, Enhanced Proliferation Resistance and Safeguards Technology for Nuclear Energy Workshop, May, 2003

Legislative Outlook for Nuclear Energy, Nuclear Energy Institute Nuclear Fuel Supply Forum, January 28, 2003

Nonproliferation Challenges for Nuclear Technologies in the 21st Century, Technical Program Chair's Special Session, American Nuclear Society, November, 2002.

Nuclear Nonproliferation Act, 9th Annual International Nuclear Materials Policy Forum: Disposition, Stewardship & Utilization of Weapons Grade Materials and Spent Fuel, July 12, 2002

Energie Nucleaire: Sortie ou Relance: Aspects Internationaux. Symposium with French Parliament. The Future of Nuclear Energy: International View. November 6, 2001, Paris France

LA-UR-99-53-89 High Level Nuclear Waste Issues, American Chemical Society, San Francisco, March 26,2000

LA-UR-99-53-90 Global Nuclear Materials Management: Summary of the Closing Plenary Session, 40th INMM Annual Meeting, Tucson, AZ, July 1999

The Use of Optical Time Domain Reflectometers to Measure Radiation-Induced Losses in Optical Fibers, LA-UR-93-2017, and IEEE Journal of Lightwave Technology Vol 12, April 1994, p. 614.

Patent Application, "Enhanced Radiation Resistant Fiber Optics," Docket Number S-75049, September, 1992.

Transient Radiation Effects in Polarization-Maintaining Fibers, SPIE Vol. 1791 (1993), (LA-UR-92-481) p. 317.

Enhanced Radiation Resistance of High-OH Silica Optical Fibers, SPIE Vol. 1791 (1993), (LA-UR-92-2885) p. 286.

Support of the NATO Nuclear Effects Task Group by Los Alamos National Laboratory, 1992 NETG Annual Meeting, (San Diego 1992).

Development of Protocols for Measurements of Radiation-Induced Attenuation by Steady State and Transient Radiation Sources, to be presented at the DoD Fiber Optics Conference (March 1992), (LA-UR-91-3886).

Procedure for Measuring Transient Radiation-Induced Attenuation in Optical Fibers and Optical Cables, accepted by the NATO Nuclear Effects Task Group at the 1991 annual meeting as a standard protocol, (LA-UR-91-3845).

Support of the NATO Nuclear Effects Task Group by the Los Alamos National Laboratory, (Germany 1991), (LA-UR-91-2940).

Radiation-Induced Attenuation of High-OH Optical Fibers after Hydrogen Treatment in the Presence of Ionizing Radiation, RADECS '91 (France 1991), (LA-UR-91-1123).

Measurement of Radiation-Induced Attenuation in Optical Fibers by Optical Time Domain Reflectometry, SPIE (1991), (LA-UR-91-990) .

Radiation-Induced Transient Absorption: Inter-laboratory Calibration of Single Mode Fibers, NATO Nuclear Effects Task Group (UK 1990), (LA-CP-90-174).

Procedure for Measuring Steady State Gamma Radiation-Induced Attenuation in Optical Fibers and Optical Cables, accepted by the NATO Nuclear Effects Task Group at the 1990 annual meeting as a standard protocol, (LA-UR-90-1901).

Report of the 1990 Annual Meeting of the NATO Nuclear Effects Task Group, (LA-UR-91-0010).

Leveraging the Nation's Investment in DOE R&D: A New Paradigm for Work Supporting Other Federal Agencies, Report to SEAB (1990), (LA-UR-90-4276).

Inter-laboratory Comparison of the Transient Radiation-Induced Attenuation in Optical Fibres-NATO Defence Research Group report, AC/243 (Panel 4)TR/1, December 1990.

FY1990 LANL Annual Report to the Tri-Service Working Group on Cable/Con-Connector Technology for Military Environments, AFSC Phillips Lab (Feb 1991), (LA-UR-91-312).

Directed Energy Systems: Potential for International Collaboration, prepared for CREST Project (1991), (LA-UR-91-730).

Standardized Measurements for Determining the Radiation-Induced Attenuation in Optical Fibers, Symposium on Optical Fiber Measurements (1990), (LA-UR-900-1994).

Inter-laboratory Comparison of Radiation-Induced Attenuation in Optical Fibers. Part III: Transient Exposures, IEEE Journal. Lightwave Tech. Vol. 8 (1990), p. 977.

Development of Radiation Test Procedures for Fiber Optic Systems, SPIE Vol. 1314, (LA-UR-90-1264) p. 218. .

Influence of F-Doped Silica Cladding on the Radiation Hardness of SM-Fibers with Undoped Silica Core, SPIE Vol. 1314 (1990). p. 208.

Influence of Preform and Draw Conditions on UV Transmission and Transient Radiation Sensitivity of an Optical Fiber, SPIE Vol. 1174 (1990), (LA-UR-90-1302), p. 2.

1990 Annual Report of the NATO Nuclear Effects Task Group to, NATO AC/243(Panel IV), (LA-PC-90-234).

Radiation-Induced Transient Absorption of Single Mode Fibers, NATO Nuclear Effects Task Group (UK, 1990), (LA-CP-90-174).

Status and Future Plans of the Nuclear Effects Task Group, Report to NATO Panel 4(AC/243), (Belgium, 1989), (LA-UR-89-1872).

Report of the 1989 Annual Meeting of the NATO Nuclear Effects Task Group, (LA-PC-90-86).

Radiation Induced Transient Absorption: Inter-laboratory Calibration of Single Mode Fibers, NATO Nuclear Effects Task Group (France, 1988), (LA-CP-88-98).

Stress Related Phenomena in Transient Radiation-Induced Absorption in Optical Fibers, OPTO '88 Conference (Paris, 1988), (LA-UR-88-1458).

Progress in Understanding the Effects of Radiation on Optical Fibers-The Nuclear Effects Task Group, report to NATO RSG.12 (1988), (LA-CP-88-137).

Report of the 1988 Annual Meeting of the NATO Nuclear Effects Task Group, (LA-CP-89-74).

FY1989 Los Alamos National Laboratory Annual Report to the Tri-Service Working Group on Cable and Connector Technology for Military Environments, (LA-UR-89-526).

Radiation-Induced Transient Absorption in Single Mode Optical Fibers, SPIE Vol. 992 (1989), p. 82.

Radiation Effects, chapter in Photonics: High Bandwidth Analog Applications, SPIE Institute for Advanced Optical Technologies Vol. 3, (1987).

Report of the 1987 Annual Meeting of the NATO Nuclear Effects Task Group, (LA-CP-87-158).

Radiation-Induced Transient Attenuation in Optical Fibers at 800 and 1300 nm, SPIE Vol. 787 (1988), p. 44.

NATO Radiation Effects Test Program for Optical Fibers and Components, invited paper, SPIE Vol. 867 (1988), (LA-UR-87-200), p. 48.

Review of NATO Standardization Activities, invited talk at DoD Fiber Optics Conference, sponsored by AFCEA International (1988), (LA-UR-88-497).

Report of the 1986 Annual Meeting of the NATO Nuclear Effects Task Group, (LA-UR-86-3133).

Fiber Optic Applications in Hostile Environments, OPTO '86 (Paris, 1986) Proceedings of the Sixth European Symposium on Optoelectronics, (ESI Publications, Paris), p. 428.

Strategic Defense Technologies and Allied Participation, Conference on Strategic Defense and European Security (Germany, 1986), (LA-UR-86-2730).

Influence of Preform Variations and Drawing Conditions on Transient Radiation Effects in Pure Silica Fibers, SPIE Vol. 721 (1986). p. 37.

Radiation-Induced Time Dependent Attenuation in a Fiber, SPIE Vol. 584 (LA-UR-85-3708), p. 61.

Fiber Optics in Transient Radiation Fields, SPIE Vol. 541, (1985) p. 89.

Review of High Bandwidth Fiber Optics Radiation Sensors, invited paper, SPIE Vol. 566 (1986), (LA-UR-85-2863), p.166.

Fiber Optic Radiation Sensors, invited review paper, 1985 IEEE Optical Fiber Sensor Conference (1985), (LA-UR-85-517).

Prometheus Program at the Los Alamos National Laboratory, Journal of Defense Research (1985), (LA-CP-85-89).

Crossfire Program at the Los Alamos National Laboratory, Journal of Defense Research (1985), (LA-CP-85-88).
Perseid Program at the Los Alamos National Laboratory, Journal of Defense Research (1985), (LA-CP-85-90).

Report of the 1985 Annual Meeting of the NATO Nuclear Effects Task Group.

Fast Liquid Scintillators: Recent Developments at EG&G/Santa Barbara, invited paper at American Nuclear Society (1985), EG&G-10282-2071, (LA-UR-85-2488).

Scintillation Compound (BHP), IR-100 award winner, Research and Development (October, 1985), p. 96.

Fibers, Cables, and Connectors: Annual Report to the Tri-Service Committee on Optical Fiber (1984), (LA-UR-84-1619).

Optical Characterization of Radiation-Resistant Fibers, SPIE Vol. 506 (1985), p. 22.

Transient Attenuation in Optical Fibers, SPIE Vol. 506 (1985), p. 209.

Study of Nevada Test Site Costs, 1984, P-14-84-U-205.

Overview of Fiber Radiation Effects Testing at Los Alamos National Laboratory, to NATO Nuclear Effects Task Group (Panel IV, RSG.12), (Paris 1983), (LA-UR-83-542).

A High-Z Organic Scintillation Solution, Advances in Scintillator Counting Conference (Canada, 1983), (LA-UR-83-354).

Thermal Quenching of some Liquid Scintillators, Advances in Scintillator Counting Conference (Canada, 1983), (LA-UR-83-1319).

Interactive Modeling of Scintillation Pulses by Visual Overlay of Computed Pulse Shapes with the Raw Data, Advances in Scintillator Counting Conference (Canada, 1983),
(LA-UR-83-1391).

Development of High-Speed Microchannel Plate Photomultiplier, Los Alamos Conference on Optics (1983), SPIE Vol. 380 (LA-UR-83-918), p. 282.

New Fast Organic Scintillators Using Intramolecular Bromine Quenching, Nucl. Instr. Meth. in Phys. Res. Vol. 225 (1984), p. 78.

Radiation-Induced Transient Attenuation of PCS Fiber, PHOTON '83 (Paris 1983), SPIE Vol. 404 (1983), (LA-UR-83-1314), p. 68.

Radiation Damage in Optical Fibers, Los Alamos Conference on Optics (1983), SPIE Vol. 380, (LA-UR-83-1313), p. 116.

Gas Cerenkov Detector for Measuring 16.7 MeV Gamma Rays from the D(T,g)5He Reaction, Los Alamos Conference on Optics (1983), SPIE Vol. 380, p. 256.

Applications of Optical Fibers to Analog Telemetry Delay Lines and Sensing Systems, IEEE Journal on Selected Areas in Communications, SAC-1 (1983) p. 555.

Fiber Optics Radiation Damage Program at Los Alamos, Tri Service Committee on Radiation Effects, 1983.

Fiber Optics for Analog Telemetry, invited paper at Optical Fiber Communications Conference (1983), (LA-UR-82-2710), paper TUK1, p. 74.

Single Transient Radiation Damage on Optical Fibers from a Fission Source, Optical Fiber Communication Conference (1983), paper TUG3, p. 48.

Chairman of SPIE Symposium and Editor of Proceedings, Fiber Optics in Adverse Environments (1981), , SPIE Vol. 296.

Preparation, Installation, and Calibration of a 152 Fiber Imaging Experiment at the Nevada Test Site, SPIE Vol. 296 (1981), p. 191.

Scintillators for Fiber Optics: System Sensitivity and Bandwitdh as a Function of Fiber Length, SPIE Vol. 296 (1981) p. 156.

Radiation-Induced Transient Absorption in Optical Fibers, SPIE Vol. 296 (1981), p. 17.

Improvements to a High-Frequency Fiber-Optic System for Plasma Diagnostics, SPIE Vol. 296 (1981), p. 177.

New Liquid Scintillators for Fiber Optics Applications, SPIE Vol. 288 (1981), p. 322.

Fast Transient Absorption in Optical Fibers, Integrated Optics and Optical Communications Conference (1981), (LA-UR-80-3348).

High Speed Photodetectors for Plasma Diagnostics, SPIE Vol. 88, (1981), p. 404.

Spectral Equalization of High Frequency Broadband Signals Utilizing Wavelength-Division Multiplexing Techniques, CLEO (1981).

Time Resolved X-Ray Diagnostics, invited paper at Low Energy X-Ray Diagnostics Conference, AIP Conf. Proc. Vol. 75 (1981), p. 59, DOE CONF-810651.

Signal Enhancement by Spectral Equalization of High Frequency Broadband Signals Transmitted Through Optical Fibers, Fiber Optics Communications Conference (1980), (LA-UR-80-506), and SPIE Vol. 288 (1981), p. 317.

A Device for Signal Enhancement by Spectral Equalization for Optical Fiber Applications, DOE Docket No. S-50464, (1980).

Characterization of Low-Loss Multimode Optical Fibers for Nuclear Diagnostics, DNA Symposium on Fiber Optics in the Nuclear Environment (1980), (LA-UR-80-915).

Short Term Radiation Effects in Optical Fibers, DNA Symposium on Fiber Optics in the Nuclear Environment (1980), (LA-UR-80-715).

Applications of Optical Fibers in Nuclear Test Diagnostics, DNA Symposium on Fiber Optics in the Nuclear Environment (1980), (LA-UR-80-620).

Fiber Optic Technology Review, invited paper at DNA Symposium on Fiber Optics in the Nuclear Environment (1980), (LA-UR-80-607).

Radiation Response Measurement of Fibers in the Picosecond Region, Proceedings of the DNA Symposium on Fiber Optics in the Nuclear Environment (1980), DNA 5308P-2, Vol II. p. 117.

Boost Alpha Measurements with Fiber Optics, Nuclear Explosives Design Physics Conference, 1979.

Development of Fast Liquid Scintillators for Fiber Optics Applications, International Conference on Liquid Scintillation Counting/Recent Applications and Developments (1979), published by Academic Press, (LA-UR-78-3209).

Characterization of Low Loss Multimode Optical Fibers for Nuclear Diagnostics, Los Alamos Conference on Optics, SPIE Vol 401 (1979), (LA-UR-79-753), p. 190; and IEEE Conference on Optical Fiber Transmission, (1979), (LA-UR-78-3209).

Fiber Optic Applications in Nuclear Testing, 11th Annual Electro Optics/Laser Conference (1979), (LA-UR-79-998).

High Speed Detector for Plasma Diagnostics, IEEE International Conference on Plasma Science (1979), Canada, (LA-UR-79-2347).

Short Term Transient Radiation Effects in Optics Fibers, Topical Meeting on Optical Fiber Communication (1979), LA-UR-78-3092).

A Neutron Imaging Experiment Using Optical Fiber Data Transmission, CLEOS (1980), (LA-UR-79-2580).

Ultra Fast Detectors for Laser Fusion Diagnostics, (LA-UR-79-2347), Nuc. Inst. Meth. Vol. 171 (1979), p. 459.

Fiber Optic Applications in Plasma Diagnostics, SPIE Vol. 190 (1979), p. 388.
Characterization of Micro-Channel Plate Photomultipliers for Plasma Diagnostics, IEEE Trans. Nuc. Sci. Vol. NS-26 (1979), (LA-UR-78-2664), p. 356.

Fluors with Improved Characteristics for Optical Fiber Applications, DOE Invention Disclosure, 1978.

Fiber Optic Utilization at the Nevada Test Site, Los Alamos National Laboratory Report LA-7029-MS (1978) and Electro-Optics (1977), (LA-UR-77-2201).

Utilization of Fiber Optics in Radiation Diagnostics, Fiber Optics and Communications Exposition (1978), (LA-UR-78-1866).

Neutron- and Gamma-Induced Transient Effects in Optical Fibers, Plenum Press (1978), Proc. of Conf. on Physics of Fiber Optics, (LA-UR-78-1930), p. 379.

X-Ray Measurement Techniques, Nuclear Explosives Design Physics Conference, 1978.

A Fiber Optic Time Domain Reflectometer, Optical Engineering Vol. 18 (1978), p. 5; SPIE Vol 139 (LA-UR-78-824); and CLEOS (1978).

Use of Time Dispersion in a Delta Function Light Pulse to Determine Optical Fiber Transmission, CLEA (1977), (LA-UR-77-1125).

Technique for Measuring Optical Fiber Transmission using the Time Dispersion of Cerenkov Radiation, Jrnl. Appl. Phys. Vol. 48 (1977), (LA-UR-77-1014) , p. 3639.

High Bandwidth Radiation Diagnostics with Scintillators and Fiber Optics, CLEOS (1977), (LA-UR-77-2189).

Development of Long Wavelength-Emitting Scintillators with Improved Decay Time Characteristics, IEEE Trans. Nuc. Sci. NS-25 (1978), (LA-UR-78-533), p. 1024.

Technological Update on Fast Plastic Scintillators for Medical Applications, invited paper for IEEE Nuclear Science Symposium, IEEE Trans. Nuc. Sci. NS-24 (1977), (LA-UR-77-347), p. 904.

Transient Radiation Effects in Low Loss Optical Waveguides, IEEE Trans. Nuc. Sci. NS-24 (1977), (LA-UR-77-1564), p. 2164.

Sub-Nanosecond Plastic Scintillator Time Response Studied using Laser Produced X-Ray Pulsed Excitation, IEEE Trans. Nuc. Sci. NS-24 (1977), p. 250.

Multichannel Plate Photomultipliers, LBL Workshop on High Speed Photomultipliers, (LA-UR-76-1441).

Sub-Nanosecond Plastic Scintillators, IEEE Trans. Nuc. Sci. NS-24 (1977), (LA-UR-76-2303), p. 177.

X-Ray Calibration of RAR 2490 Film for Application to Laser Plasma Experiments, Appl. Optics Vol 16 1977), (LA-UR-76-1502), p. 393.

Sensitivity of X-Ray Film: Part II, Kodak No-Screen Film in the 1 to 100 keV Region, Jrnl. Appl. Phys Vol. 47 (1976), p. 3732.

Sub-keV X-Ray Calibration of Plastic Scintillators, ERDA Symposium on Low Energy X- and g-Ray Sources (1976), (LA-UR 76-189).

X-Ray Continuum and Line Radiation from Plasmas Produced by a 10.6 mm Laser Focused on Flat Targets, Bul. Am. Phys. Soc. Vol. 20 (1975), (LA-UR-75-1917), p. 1303.

Sub-nanosecond Plastic Scintillators, Nucl. Instr. and Meth. Vol 133 (1976) p. 175.

Micro-Channel Plate Collimators for Laser Plasma Diagnostics, Bul. Am. Phys. Soc. Vol. 20 (1975), p. 1294.

Fabrication and X-Ray Calibration of Thin Plastic Scintillator Detectors, IEEE Trans. Nuc. Sci. NS-22 (1975), p. 88.

Micro-Channel Plate as a Parallel-Bore Collimator for Soft X-ray Imaging, Nuc. Instr. Meth. Vol. 125 (1975), p. 553.

Gamma Initiated HF Laser, Eighth International IEEE Quantum Electronics Conference Digest (1974) CHO-858-1-QECON, (LA-UR-74-800 and 74-94), p. 60.

Time Response of Plastic Scintillators, Nucl. Instr. Meth. Vol. 114 (1974), (LA-UR-73-771), p. 313 and Bul. Am. Phys. Soc. Vol. 18 (1973), p. 57.

Efficiency of Xenon Ionization Chambers from 10 to 80 keV, Los Alamos National Laboratory Report LA-4886-MS (1972).

Stellar Rates for the 28Si(a,g)32S and 16O(a,g)20Ne Reactions, Astrophys. Jrnl Vol 169 (1971), p. 421.

A Total Absorption Ionization Chamber for 1.5-10 keV X Rays, Nucl. Instr. Meth. Vol. 95 (1971), (LA-4568), p. 571.

An Energy Flux Meter for 1 to 10 Å X Rays, Third Symposium on Low Energy X- and Gamma-Ray Sources and Applications, published by Gordon and Breach Science Publishers (1971), p. 409.

Stellar Reaction Rates for 28Si, Astrophys. Jrnl. Vol. 159, (1970), p. 913.
Total Yield Measurements for the 24Mg(a,g)28Si and 27Al(p,g)28Si Reactions, Dissertation, California Institute of Technology (1969).

Total Yield Measurements in 24Mg(a,g)28Si, Nucl. Phys. Vol A130 (1969), p. 25.

Total Yield Measurements in 27Al(p,g)28Si, Nucl. Phys. Vol A130 (1969), p. 1.

Radiative Capture Reactions in the Silicon Burning Process: I. Astrophysical Motivation and Experimental Technique, II. Photodisintegration of 28Si from the 24Mg(a,g)28Si and 27Al(p,g)28Si Reactions, Bul. Am. Phys. Soc. Vol 13 (1968), p. 1663, papers DB3 and DB4.

INDUSTRIAL INTERACTION TALKS/PUBLICATIONS

"Industrial Interaction Issues," presented at the IRI ROR Subcommittee meeting on Accessing External Technology, December 10, 1996, Murray Hill, NJ (LA-UR-96-4609).

"Strategic Partnerships Among Universities/Laboratories/Industry: A Perspective from Los Alamos National Laboratory," presented at Meeting the Challenge, Research & Technology in the 21st Century Conference, December 6, 1996, Tucson, AZ (LA-UR-96-4526).

"Promotion of Laboratory/Industry Partnerships at Los Alamos National Laboratory," talk presented at the Technology Partnering:New Challenges, New Opportunities Conference, February 26-27, 1996, Washington, DC (LA-UR-96-506).

"Development of the Internal Constituency for Indusrtrrial Partnering at Los

Alamos National Laboratory," presented to the AFTTE Winter Conference, January 31-February 1, 1996, San Jose, CA (LA-UR-96-195).

"Industrial Interactions with Los Alamos National Laboratory in Environmental Technologies," presented to the Global Perspectives Conference, World Trade Center, September 29, 1995, Phoenix, AZ (LA-UR-95-3286).

"University of California Technology Transfer Advisory Committee," presented to the Industrial Partnership Advisory Council, September 14-15, 1995, Los Alamos, NM (LA-UR-95-3227).

"IPO Structure, Budget, and Operations Issues," presented to the Industrial Partnership Advisory Council, September 14-15, 1995, Los Alamos, NM (LA-UR-95-3219).

"Opportunities for Technology Transfer and Partnering," presented at the Opportunity for Technology Transfer Conference, June 27-28, 1995, Santa Fe, NM (LA-UR-95-2168).

"Testimony to Joint Hearing on Technology Transfer," presented to the US House of Representatives, Committee on Science, Subcommittee on Basic Research, and Subcommittee on Technology, June 27, 1995, Washington, DC (LA-UR-95-2209).

"Modeling and Simulation of Industrial Challenges through High-Performance Computing at the Los Alamos National Laboratory," presented at the National Center for Manufacturing Sciences Technical Conference, May 21-23, 1995, Orlando, FL (LA-UR-95-1742).

"Overview of the Galvin Report and the Department of Energy Response," presented at the Industrial Research Institute, Inc. 1995 Federal Science & Technology Committee meeting, May 7-9, 1995, Marco Island, FL, (LA-UR-95-1573.

"Industry and Laboratory:Building Toward the Future," presented at the Dual-Technologies Conference and published in their proceedings, Washington, DC, June 13-14, 1995,
(LA-UR-94-1680).

"Modeling and Simulation of Industrial Challenges through High-Performance Computing at the Los Alamos National Laboratory," presented at the 1995 National Center for Manufacturing Sciences Technical Conference May 21-23, 1995, Orlando, FL, (LA-UR-1448).

"Progress in Industrial Partnerships at Los Alamos," presented at the ASME Industry/Laboratory Technology Transfer committee meeting, December 2, 1994, Albuquerque, NM, (LA-UR-94-4261).

"Advances in Industrial Partnerships," presented at the Technology Transfer Process workshop, Oak Ridge Institute for Science and Technology, December 12-15, 1994, Oak Ridge, TN, (LA-UR-94-4180).

"Los Alamos Industrial Partnership Initiatives," presented at the Economic Conversion Conference, UNM, October 20-21, 1994, Albuquerque, NM, and at the NM Equity Capital Symposium, October 12-13, 1994, Albuquerque, NM (LA-UR-94-3560/ LA-UR-94-3414).

"Briefing for Industry, " presented at the Briefing for Industry-94 Conference, August 9, 1994, Albuquerque, NM, (LA-UR-94-2601).

"Los Alamos Laboratory-Industry Partnerships for Industrial Competitiveness, " presented at the R&D Opportunities conference, March 24, 1994, Washington, DC, (LA-UR-94-628).

RESPONSES BY COMMISSIONERS JACZKO AND LYONS TO ADDITIONAL QUESTIONS FROM SENATOR LAUTENBERG

Question 1. The new National Academy of Sciences report is very clear about the threats posed from the storage of spent fuel rods in pools of water. Please explain why the NRC has taken the opposite position on this question.

Response. In general, the NRC is in broad agreement with the principal findings of the NAS study. We think the study reinforces the validity of our own studies and mirrors many of our previous conclusions. Many of the recommendations for additional spent fuel storage improvements are items we have identified and have concluded warrant further investigation.

For example, the NAS has recommended NRC perform additional analyses to more fully understand the vulnerabilities and consequences of loss-of-pool-coolant events. The NRC agrees that the phenomena and consequences associated with potential attacks on spent fuel pools requires further analysis and is taking the following actions:

The NRC is continuing to refine analytical models used to analyze the complex phenomena associated with cooling fuel in the spent fuel pool under severe circumstances.

The NRC also is performing additional analyses of spent fuel cooling for both pressurized and boiling water reactor fuel.

The NRC has contracted with Sandia National Laboratory to perform experimental work to confirm analytical modeling.

The NRC is participating in an international cooperative testing program to examine fuel heat-up behavior in an air environment. This effort is a long term research project that is expected to take 5 years to complete.

The NRC will independently perform site-specific assessments to identify additional mitigation strategies using readily available or beyond readily available equipment for a range of loss-of-pool-coolant events. This effort will be completed in Fall 2005.

Spent fuel pools are inherently robust structures designed to safely contain the spent nuclear fuel under a variety of normal, off-normal, and hypothetical accident conditions (e.g., loss of electrical power, floods, earthquakes, or tornadoes). Studies of spent fuel pool safety typically focus on events where the fuel pool walls are damaged and the cooling water drains away. It has long been recognized that spent fuel, if it is sufficiently old, can be kept cool by the natural circulation of air. That is the basic premise behind "dry" cask storage where fuel is stored in an inert gas environment. However, there is no necessity, from a safety or security viewpoint, for removing fuel from pools and loading it into casks.

Based on previous evaluations, the Commission continues to believe that both spent fuel pools and dry storage casks provide reasonable assurance that public health and safety, the environment, and the common defense and security will be adequately protected.

Question 2. The scientists who wrote the NAS report identified the Oyster Creek Plant in my state as particularly vulnerable to terrorist attack since the pool of spent fuel rods sits on top of the plant and is not protected by the three-foot walls that surround the reactor. Does the NRC now plan to require that these rods be moved to dry casks, which are far safer than the pool?

Response. Oyster Creek Nuclear Generating Station is a General Electric Type 2 Boiling Water Reactor. The containment is a Mark-I design, which consists of a primary and a secondary containment. The secondary containment, or reactor building, is a physical boundary which encloses the primary containment.

The reactor building also houses the new and spent fuel storage facilities including the spent fuel pool. The reactor building substructure consists of reinforced concrete which extends up to and includes the refueling floor. The superstructure of the reactor building, above the refueling floor, is a structural steel frame. The reinforced concrete exterior walls and the structural steel for the superstructure are designed for a variety of normal, off-normal, and hypothetical accident conditions (e.g., loss of electrical power, floods, earthquakes, or tornadoes). Therefore, the spent fuel pool is protected by the secondary containment.

As described above, the spent fuel pool is an inherently robust structure designed to safely contain the spent nuclear fuel. Studies of spent fuel pool safety typically focus on events where the fuel pool walls are damaged and the cooling water drains away. It has long been recognized that spent fuel, if it is sufficiently old, can be kept cool by the natural circulation of air. That is the basic premise behind "dry" cask storage where fuel is stored in an inert gas environment. However, there is no necessity, from a safety or security viewpoint, for removing fuel from pools and loading it into casks.

The NRC, however, is reviewing the phenomena and consequences of potential attacks on spent fuel pools. As discussed in our response to your first question, the NRC will independently perform site-specific assessments to identify additional mitigation strategies using readily available or beyond readily available equipment for a range of loss-of-pool-coolant events. This effort will be completed in Fall 2005.

To enhance protection of spent fuel pools at reactors while the above-mentioned security assessments are underway, the NRC advised licensees on July 29, 2004, to evaluate implementing additional mitigative measures, as appropriate, to each specific facility.

These mitigative measures fell into two areas: fuel management and emergency water makeup.

It should be noted that licensees have already addressed pre-planning efforts for spent fuel pool make-up water supplies under severe accident management guidelines, for example, the loss of spent fuel pool water due to nature events (e.g., earthquakes).

The NRC is working with licensees to further improve defense-in-depth strategies at spent fuel storage facilities, which, in addition to layered security measures to protect nuclear facilities against the terrorist threat, emphasizes mitigation measures to minimize an adverse effect of a possible terrorist attack on the plant's safety systems; and emergency-preparedness and response measures in the unlikely event of possible radioactivity release into the environment.

The NRC believes that fuel storage in wet pools is safe and secure. The probability of a successful terrorist attack on a spent fuel storage facility is low, as spent fuel storage structures are inherently robust, and nuclear power facilities are well protected. There is no necessity, from a safety or security viewpoint, for removing fuel from pools and loading it into casks.

Question 3. New Jersey has significant health and safety concerns about the "decommissioning" of the Shieldalloy Metallurgic Corporation (SMC) in Newfield. The NRC's plan that would allow SMC to leave 28,000 cubic meters of radioactive slag onsite in Newfield for over 1,000 years because it's too expensive to dispose of properly. This is unfair to burden the Borough of Newfield because they may not be able to attract developers to their available land due to the stigma associated with the presence of radioactive waste. SMC covers 70 acres—or seven percent of the borough. The NRC has allowed radioactive wastes at the Shieldalloy Metallurgic Corporation (SMC) in Newfield to build up to unacceptable levels and now plans to leave 28,000 cubic meters of radioactive waste at the decommissioned site. It seems the NRC is more concerned about this company than about the families who live in Newfield. Will both of you promise me that this radioactive waste will be moved out of this town?

Response. The NRC is fully committed to ensuring that the decommissioning of the Shieldalloy Metallurgical Corporation (SMC) site in Newfield, New Jersey will protect the public health and safety. At the present time, SMC is conducting environmental monitoring, including groundwater, surface water and air sampling. NRC inspectors conduct an annual inspection to review SMC's monitoring program and to conduct independent measurements. All monitoring data continue to indicate safe levels that are well below NRC's regulatory limits.

With respect to future decommissioning, SMC is required to follow our regulations and an established process used by all of our licensees to ensure safe and appropriate decommissioning. NRC's regulations provide for the restricted use option for decommissioning, where residual radioactivity could remain onsite with institutional controls to restrict future uses. Although this option is available for any licensee, approval would be based on compliance with stringent regulatory requirements.

SMC currently plans on submitting its decommissioning plan to NRC in November 2005. Pursuant to NRC regulations, NRC will publish a notice announcing receipt of the decommissioning plan in both the Federal Register and in local media. The notice will offer the opportunity for a hearing, and solicit public comments. Before a decision is made on the plan, NRC would conduct a detailed review to determine if SMC has demonstrated compliance with the regulatory requirements as well as an environmental review. During the review of the decommissioning plan, NRC will also consider the need for holding a public meeting in the vicinity of the site based on input received from stakeholders.

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