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NUCLEAR REGULATORY COMMISSION OVERSIGHT: SECURITY OF OUR NATION'S NUCLEAR PLANTS

HEARING

BEFORE THE

SUBCOMMITTEE ON CLEAN AIR AND NUCLEAR SAFETY

OF THE

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
UNITED STATES SENATE

ONE HUNDRED TENTH CONGRESS

SECOND SESSION

FEBRUARY 28, 2008

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NUCLEAR REGULATORY COMMISSION OVERSIGHT: SECURITY OF OUR NATION'S NUCLEAR PLANTS

WEDNESDAY, FEBRUARY 28, 2008

U.S. SENATE,
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS,
SUBCOMMITTEE ON CLEAN AIR AND NUCLEAR SAFETY,
Washington, DC.

The subcommittee met, pursuant to notice, at 10 a.m. in room 406, Dirksen Senate Office Building, Hon. Thomas R. Carper (chairman of the subcommittee) presiding.

Present: Senators Carper, Cardin, Craig, Inhofe, Specter and Voinovich.

Senator CARPER. Welcome everyone.

Normally, we don't swear in our witnesses, but I would just suggest to Senator Voinovich, we talked earlier and we were thinking about swearing in our first witness to get the straight skinny here.

[Laughter.]

Senator CARPER. We are delighted our colleague Senator Casey is here from Pennsylvania. Since Peach Bottom is in your State, one of your corporate constituents, and a lot of your constituents actually work there, it is great that you are here to testify. I know you have been to visit Peach Bottom in the last week or two. We look forward to hearing from you.

I would invite you to come and join us and to sit on this side of the dais once you have concluded your statement, and after we have the opportunity to grill you with a whole lot of questions of your own. We are happy that you are here, and we look forward to hearing from you and then from our other witnesses who have joined us.

Please proceed.

OPENING STATEMENT OF HON. ROBERT P. CASEY, JR., U.S. SENATOR FROM THE STATE OF PENNSYLVANIA

Senator CASEY. Mr. Chairman, thank you very much. We appreciate this opportunity to testify and I am grateful for the time that you have given me and other witnesses who will be here today. I want to thank you and also thank Senator Voinovich and Senator Inhofe and Senator Craig for being with us today.

I especially appreciate this because of the importance of this issue, the issue of nuclear security, not only to the Commonwealth of Pennsylvania, but indeed to the Country. I come from a State that has 5 nuclear plants and 9 reactors, and we have 10 million

people in Pennsylvania that live within 50 miles of those reactors, so nuclear safety and nuclear security is extremely important to our State and the Country.

The recent incident with a team of sleeping guards at the Peach Bottom atomic power station in York County, Pennsylvania has raised the profile of nuclear security across the Country. The incident, in a word, was inexcusable. There is no other way to say it than that, but it has highlighted some of the problems with the way security is implemented in our Country and overseen. So I think it is our duty as members of the U.S. Senate, but also as citizens, to learn from this mistake.

We know that the Nuclear Regulatory Commission recently reported a "white" Peach Bottom incident. The finding, as many people here know, is based upon the agency's color coded threat analysis. A white finding means that the problem with the sleeping security team presented a low to moderate safety significance. But I would argue, and I think anyone on this panel would argue, that the 10 million Pennsylvanians living near nuclear plants, for them a low or moderate safety threat is still too great a threat to those families.

But for good fortune in this case, a serious security issue could have occurred at the Peach Bottom plant while security guards who were supposed to standing ready to provide rapid response were in fact sleeping. I don't think anyone here is willing to leave the safety of people in Pennsylvania or the safety of Americans and the peace of mind of Americans to something as unpredictable and as unreliable as luck, pure luck in some instances.

So we need to do a couple of things to address this problem. I think there are at least five. First of all, what I believe we must do is make sure that we fully understand what happened in this instance. Today's hearing is a good first step to do that, and that is why I am so grateful that we have the opportunity to talk about what happened at Peach Bottom, but also to take steps to prevent it from happening there and in other places across the Country.

My staff and I personally have met with many of the witnesses who will testify today. I also met this past Monday with Mr. Kerry Beal, who is a constituent of mine, but also was the whistleblower who alerted us to the sleeping guards in the first place. This past Monday, I toured the Peach Bottom plant to get a better understanding of what happened, and also what Exelon, the company that runs that plant, what they have changed in their own security operations. Senator Carper, I know that you were there not too long ago, and I think you were actually at the plant longer than I was. We are grateful for the time you spent there. I was there about 2 hours, and I know you were there even longer than that. I think as a Senator from a neighboring State, to take that kind of time to come to Pennsylvania to visit Peach Bottom, we are grateful for that. I think it speaks volumes about the commitment of this Subcommittee and your leadership to this issue. We are grateful that you did that.

I think the second thing we have to focus on here is restoring faith, the faith of the American people in our Nation's nuclear security. I say that not extrapolating from one incident, but I think what happened here is serious enough that it bears scrutiny and

attention from the Country overall. So even though in this case no imminent security threat took place, the knowledge that those in charge of guarding a potential target and securing the surrounding communities has caused a lot of local residents to ask questions about what happened here.

So I think a lot of work is ahead of us at public officials to earn the trust of the public with regard to public safety and in particular nuclear safety.

No. 3, we must make changes to a system that allows a serious security problem to go undetected for many months, even after it was brought to the attention of the Federal agency, the plant owner and the security contractor. I am pleased that the NRC, Exelon and Wackenhut Nuclear Services, the three parties that have responsibility here, have taken actions to correct the problems that occurred at Peach Bottom, but we have to make sure these actions actually do the job as they must do to ensure this doesn't happen again.

Finally, I think we must do this: We must ensure that the people who report incidents at our nuclear plants, whatever they are reporting, whether it is security or otherwise, but especially if it is a security matter, can do so freely and with peace of mind when they make those reports. These whistleblowers must know that if they make the difficult decision to report a safety or security problem, they will be treated with respect and that their concerns will be carefully and thoroughly investigated.

As the Chairman knows, I was an elected official in Pennsylvania for a decade, basically being a CEO of two State agencies, one with about 800 employees and the other with 500 employees. So I have a sense in the context of government how difficult it is to balance a budget, to run an agency, and to deal with all of the difficulties that you face running an agency. I think the same is true in private industry. Running Peach Bottom or running a nuclear plant is a difficult assignment.

But when an employee of a company or a government agency reports a problem, whether it is a personnel matter or a security matter, whatever it is, there must be a procedure in place for that employee to follow and for the company to follow or the agency. And also, there must be followup to ensure that that problem is indeed addressed. That is the responsibility of the leadership, the leadership of a government agency, the leadership of a private company, and certainly the leadership of a nuclear power plant. That agency must ensure that every employee has the peace of mind to know that they can report confidentially and that action will be taken.

That is what we need to implement here, and I am looking forward to listening to the witnesses today to bring some light to what happened, but more importantly in the long run, to make sure that this never happens again at Peach Bottom or any other nuclear power plant.

Mr. Chairman, I will take any and all questions that you or the other members of the panel have.

[The prepared statement of Senator Casey follows:]

Statement of Senator Bob Casey
Committee on Environment and Public Works
Subcommittee on Clean Air and Nuclear Safety
Hearing on Nuclear Regulatory Commission Oversight:
Security of Our Nation's Nuclear Plants
February 28, 2008

I want to thank the members of the Subcommittee for holding this morning's hearing. I also want to thank Chairman Carper and Ranking Member Voinovich for the opportunity to both testify and participate as a guest of the Subcommittee.

As a senator from a state with 9 commercial reactors and 10 million people living within 50 miles of those reactors, I can tell you that nuclear security is extremely important to Pennsylvanians. The recent incident involving a team of sleeping security guards at the Peach Bottom Atomic Power Station in York County, Pennsylvania has certainly raised the profile of nuclear security. The incident was inexcusable. But it has served to highlight some of the problems with the way security is implemented and overseen. I believe it is our duty to take the opportunity to learn from this mistake.

The Nuclear Regulatory Commission recently reported a "white" finding for the incident at Peach Bottom based on their agency's color-coded threat analysis. This white finding means that the problem with the sleeping security team presented a low to moderate safety significance. But I think it is important to point out that for the 10 million Pennsylvanians living near nuclear plants, a low to moderate safety threat is still too great of a threat.

We need to be honest about the fact that good fortune is a big part of the fact that serious security issues did not occur at Peach Bottom while security guards who were on duty to provide rapid response were sleeping in the ready room. I am not willing to leave the safety and peace of mind of Pennsylvania families to luck, and I will not be satisfied until I can tell my constituents with confidence that what occurred at Peach Bottom will never happen again.

So what do we need to do to fix this serious problem at our nation's nuclear security plants?

First, we need to make sure that we fully understand what happened. Today's hearing is a good step in that direction. My staff, and in some cases I personally, have met with many of the witnesses who will testify today. I have also personally met with Mr. Kerry Beal, the whistleblower who alerted us to the sleeping guards in the first place. And I toured the Peach Bottom plant three days ago to get a better understanding of what happened and what Exelon has changed in their security operations. I know Senator Carper also visited Peach Bottom, and I thank him for taking the time to do so. It is not easy for a senator to clear a full day from his schedule for an event in his own home state. So we in Pennsylvania certainly appreciate his attention and commitment.

Second, we must restore the faith of the American families living near nuclear plants in our nation's nuclear security. Even though there was no imminent security threat at the Peach Bottom plant, the knowledge that the people in charge of guarding a potential target and securing the surrounding towns has caused local residents to question their safety. We have a lot of work ahead of us to rebuild the trust of the public in our ability to do our jobs and safeguard their communities.

Third, we must fix a system that allows a serious security problem to go undetected for months, even after the problem was brought to the attention of the NRC, the licensee, and the security contractor at Peach Bottom. I am pleased that the NRC, Exelon, and Wackenhut have all taken action to make sure that they correct the mis-steps that occurred at the Peach Bottom plant. But I want to make sure that these actions actually do the job.

Finally, we must rebuild the confidence of people in positions to report incidents at our nuclear power plants. They must know that if they make the often difficult decision to report a security or safety problem, they will be treated with respect and their concerns will be carefully investigated.

As an elected state official for the past decade, and the "CEO" of two Pennsylvania state agencies, one with 800 employees and the other with 500 employees, I know how difficult it is to manage people and budgets. But when an employee of a company or govt. agency starts to report a problem – personnel, security, whatever it is – there must be a procedure in place and the follow up to ensure that the problem is addressed. The leadership of that company or agency must ensure that every employee has the peace of mind to know that they can report confidentially and that action will be taken.

I look forward to hearing from all of the witness today, and I appreciate the opportunity to participate in this hearing and get answers to some of my questions.

Thank you.

Senator CARPER. Just one quick question. Of the five factors you listed, which is most important in your judgment?

Senator CASEY. I think making sure going forward that we put in place procedures, especially with regard to what the NRC does, but also to demand that companies put procedures in place to prevent this from happening again. So literally, it is almost as if you have to look into the mind of a whistleblower and create conditions for them so that when they have a concern, it may be unfounded, it may be something that is not that serious, but especially if it something serious, they have to, in their own mind, feel that their complaint or their concern is addressed and addressed quickly, not months down the road, not weeks down the road, but very quickly, especially if it involves security.

Part of that is creating a culture that foster this. My sense of this, having read news articles, having talked to some people involved, this is my sense, and I don't profess to be an expert on what happened there, but my sense of this is the culture was contrary to everything I just said, that the culture was not such that this employee felt free to report it, and that he had a sense that it would be followed up on very quickly and very thoroughly. In fact, it was resistance the other way. Don't be a team player, that was one of the phrases that came out of this. So I think that is really the most important.

Senator CARPER. I will just say to my colleagues, one of the things that I learned on our visit there with Chairman Klein and others was I think there was a policy in place with Wackenhut of zero tolerance. One screw-up and you are fired from the security force. As a result, there was a reluctance on the part of some who were behaving appropriately to turn in the others because they knew that their colleagues would be out of there right away. I think that kind of reduced the likelihood that people would step forward and blow a whistle because it would mean somebody's career and livelihood and so forth.

Other questions of Senator Casey?

Senator INHOFE. Yes, just out of curiosity, Bob, you mentioned that in Pennsylvania that your elected position put you in two groups. What were they?

Senator CASEY. Auditor General and State Treasurer.

Senator INHOFE. I see. OK.

Senator CRAIG. Mr. Chairman, I have no questions of the Senator. I have some brief opening comments.

Senator CARPER. We will have an opportunity to do that.

Senator CRAIG. That is what I thought, so I will wait. Thank you. Thank you, Bob.

Senator CARPER. I would just say before you come up to join us, Senator Casey, one of the reasons why I felt a sense of ownership and wanted to come to our neighboring State, to Peach Bottom, is there was a time in the history of Pennsylvania and Delaware when we were the same State, as you may know.

[Laughter.]

Senator CARPER. And you never know how some of this history repeats itself, so it was an early excursion.

Senator CRAIG. And Bob, we also must remember he was once a Governor. He is probably looking for territory.

Senator CARPER. That is true.

Senator INHOFE. When that was true, we weren't a State.

Senator CARPER. People used to say to me, when you are no longer Governor of Delaware, what would you like to do next when your term expires. I don't know what George used to say, but I used to say I want to move to another State and be their Governor, too.

[Laughter.]

Senator CARPER. We didn't have any takers so I had to find another job.

Senator CASEY. We would love to have you move the entire population of Delaware into Pennsylvania.

Senator CARPER. Three great counties.

Well, please feel free to join us.

We are going to take a few minutes and have opening statements. I am going to ask my colleagues and I to try to hold ourselves to maybe 5 minutes.

OPENING STATEMENT OF HON. THOMAS R. CARPER, U.S. SENATOR FROM THE STATE OF DELAWARE

Senator CARPER. I think along with everyone who is sitting up here on the dais with me, I have been a long-time supporter of nuclear power. I believe clean, safe energy is what this Country needs and what nuclear power has to offer.

Nuclear power provides solutions to a number of the challenges that face our Country today. It can help to reduce our growing reliance on foreign oil and to unchain our economy from the whims of hostile governments. It can also reduce air pollution that damages our environment, harms our health, and contributes to global warming.

In short, our Country needs nuclear power, and luckily nuclear power just might be on its way, more new nuclear power just might be on its way. The Nuclear Regulatory Commission, as represented here today by three of its commissioners, has already received five license applications for the first new reactors to be built in some 30 years and the Nuclear Regulatory Commission is expecting several more applications this year. If all goes well, we will have the first of possibly 30 new reactors built within the next seven or 8 years, not only providing clean electricity, no emissions, no increased reliance on foreign oil, but also providing extraordinary employment opportunities for tens of thousands of people throughout our Country to work to build those plants and then to turn around and to operate them.

While that one reactor 7 years down the road is important, and the others that might be built are important, the 104 reactors that are currently operating in the United States must remain our top priority. If any one of our current reactors fails to continue to operate safely and securely, it will undermine the nuclear renaissance we are beginning to witness.

In short, we have to get it right every day at every plant. Perfection cannot just be a lofty goal. It has to be a goal that is diligently pursued every single day. I said to Chairman Klein and the folks up at Peach Bottom when we were up there, I often say to my teenage boys, there is nothing wrong with making a mistake. We all

make mistakes. In this industry, there is less margin for error and mistakes can have extraordinary consequences. But when there are mistakes, we have to learn from them and fix them.

When it comes to the Peach Bottom incident last fall, we failed to get it right. Last year, the NRC and Exelon were warned that security guards were sleeping on duty and failed to address the issue until video evidence was leaked to the press. Obviously, the security guards implicated in this incident failed to properly carry out their jobs, but the reason we are here today is because the NRC apparently failed to carry out its job. By its own admission, the NRC, and I commend the NRC for basically saying, we screwed up, too. We all make mistakes and I appreciate the spirit that you have brought to this, Mr. Chairman and commissioners. But the NRC failed to adequately respond to the concerns that were raised, and the Commission was overly reliant on Exelon to investigate these concerns.

The role of the NRC is to regulate the nuclear industry, not just ask the industry to do it for them. When the NRC is perceived to be weak or passive, there is opportunity to cut corners and to do things outside the lines. A strong, robust future for the nuclear industry requires a strong and robust Nuclear Regulatory Commission. Chairman Klein and the commissioners have made that clear to me. We understand that and they do, too.

Two weeks ago, as others have suggested, I went to the Peach Bottom plant to personally see what happened and to find out how it is being addressed. While there, I had a chance to talk with the facility's employees. In closing, let me repeat what I said to them. I told them that I will do all that I can to promote safe nuclear power and to provide the NRC with the resources and tools necessary to do its job and do it well. I know my colleagues take the same spirit to their responsibility here, too. But all of our efforts on this Subcommittee will be meaningless without a commitment to excellence from the industry and from the Nuclear Regulatory Commission.

I will now recognize my colleague, Senator Voinovich, with whom it is a pleasure to serve in this oversight capacity.

Senator Voinovich.

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

Senator VOINOVICH. Thank you, Mr. Chairman.

I would like to welcome the witnesses. I want to thank you for being here to examine the status of security at our Nation's nuclear power plants.

With increasing environmental constraints, particularly the desire for limits on carbon emissions, expanding nuclear power's share of the baseloading generating capacity is both logical and necessary. The 104 nuclear power plants operating today represent over 70 percent of the Nation's emission-free electric generation portfolios, avoiding 681 million metric tons of carbon dioxide. By comparison, wind power avoids about three million tons and solar energy avoids about a half million tons.

Indeed, the Clean Air Task Force modeling of the Warner-Lieberman climate bill which passed out of this Committee, indi-

cates that 117,000 megawatts of new nuclear generation must be in operation by 2030 to meet the objectives of the bill. That is the equivalent of doubling the number of nuclear plants we have today within the next 22 years, which obviously, I think from many of our perspectives, is a little unrealistic.

Nevertheless, I think we can agree on one thing. If we are to meet the growing electricity needs in this Country and also address global climate change, nuclear power has a crucial role to play. That is why we focused a great deal of effort on ways to achieve secure and safe growth of nuclear power. Last fall, Senator Carper and I held a nuclear energy roundtable with representatives from organized labor, industry, academia, professional societies and government agencies, along with Senators Isakson and Domenici, to talk about what it is that we need to do to make the nuclear renaissance a reality. I have worked on a paper with several people in this room and copies of it are available at the back table, which outlines the things that we need to do in terms of making sure the renaissance takes place.

But there is an old challenge that has been dogging both the NRC and the nuclear industry for a long time. That is public confidence. Without public confidence in NRC as a strong and objective regulator, and without public confidence in the nuclear industry workers as highly competent and safety-conscious professionals, I am afraid the future of the nuclear renaissance is in doubt. Without public confidence, we can't get there from here to there.

In my view, nothing will damage public confidence more than giving the appearance of not taking each employee-raised concern seriously. A video message of sleeping security guards at a nuclear power plant airing on CNN certainly doesn't help.

Mr. Chairman, that is why this hearing is so important and timely. We need to better understand exactly what happened and the extent of the problem which led to the situation, and what is being done to make sure that it doesn't happen again.

This Committee has held 10 NRC hearings since September 11, in which security enhancements at the Nation's nuclear facilities and protection and control of radioactive materials was examined. Through these hearings, we learned the NRC issued interim compensatory security measures and numerous orders to enhance security at these facilities. One of these orders specifically restricted security officer work hours, established new security force training and qualification requirements, and increased the design basis threat the nuclear forces must be able to defend against. We understand that nuclear power plant operators spent about $1.5 billion to implement these new NRC regulations.

I have toured two plants in Ohio, at Davis-Besse and Perry. I was very impressed with what they have in place at those two facilities. I should also note that the safety record of the Nation's nuclear power plants has steadily improved. NRC oversight of these plants has improved by applying lessons learned from Davis-Besse back in 2002, understanding that public perception and confidence in the industry is only as good as its weakest link.

I was recently pleased to meet with the President of the Institute of Nuclear Power Operation, Jim Ellis, concerning his efforts in the industry to control the whole industry. In other words, this is a

watchdog within the industry. The industry understands that things like Peach Bottom hurt everyone. The industry is doing everything they can to make it clear to the people that run these operations, what you do impacts on us and you had better do the job that you are supposed to be doing, not only for yourself, but for the entire industry.

I think that is it. The NRC, the industry itself, and then oversight from this Committee is going to really make the difference in terms of restoring people's confidence in this industry.

Senator CARPER. Senator Voinovich, thank you.

Under early bird rules, Senator Cardin would be recognized next, but he has been graciously willing to defer.

Senator INHOFE. I would defer also to Senator Specter.

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

Senator CARPER. Thanks for joining us.

STATEMENT OF HON. ARLEN SPECTER,
U.S. SENATOR FROM THE STATE OF PENNSYLVANIA

Senator SPECTER. I want to thank you for the deference. I have never had that much deference in the Senate.

[Laughter.]

Senator SPECTER. I think I may come to this Committee more often, with the congeniality.

[Laughter.]

Senator CARPER. We will leave the light on.

Senator SPECTER. I would ask consent that my full statement be made a part of the record, and I will summarize it in a brief way.

Senator CARPER. Without objection.

Senator SPECTER. I think there is no doubt that we need to develop nuclear energy in America because of the grave problems associated with dependence on foreign oil. The issues about safety are in pretty good shape as long as people stay awake.

I recall the days very vividly back in 1978, March 28, when there was the Three Mile Island incident in Pennsylvania. There was really a lot of worry that day. I was in Philadelphia at the time and reports were being given as to how long it would take the air to come back in a contaminated form and what the risks were. But I think we are a long way from that, with that kind of a mechanical breakdown over at Chernobyl, but I think we need to look to nuclear.

Also in the context of the issues on global warming which we are talking about. Legislation has been proposed in this Committee. Senator Lieberman, Senator Warner, Senator Bingaman and I have proposed legislation, and nuclear has a lot to offer because it is clean, so it would ease up on our problems of global warming as well.

We have problems at Yucca Mountain which we have not yet solved, and the waste matters have to be taken care of, but there is nothing as fundamental as safety. I have made it a point to visit the facilities in my State. I couldn't make the last one because we were at a Republican convention in Harrisburg at the same time and we had to endorse a Presidential nominee. But what happened at Peach Bottom is inexcusable, inexcusable.

That is especially troublesome, not only because of the inherent dangers in nuclear, but because of the terrorism factor. That is a prime target in a prime location. I commend the Chairman and others, Senator Casey, for focusing attention on the issue. We can't emphasize too strongly the importance of having the security operational, especially where you have a professional organization and the issue in the area where the guards were located was very bad. They have to stay awake. That is the issue not only for the contracting party, but for the principal.

We are really dealing here with matters that are so serious, they are really in the non-delegable category. The law makes a sharp distinction, depending on the nature of the danger, as to what can be delegated. These are really non-delegable items.

My distinguished colleague, Senator Casey, has taken the lead on legislation, which I expect to join him on. I am very glad to see this Committee very much on top of this issue.

I am going to excuse myself because the Judiciary Committee is meeting at this time.

Thank you for the deference, colleagues.

[The prepared statement of Senator Specter follows:]

STATEMENT OF SENATOR ARLEN SPECTER BEFORE THE COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS, SUBCOMMITEE ON CLEAN AIR AND NUCLEAR SAFETY

Chairman Carper, Ranking Member Voinovich and members of the Subcommittee, I appreciate you having me here today and thank you for holding this important hearing to look into the security apparatus in place to protect our nation's nuclear power infrastructure. I have personally made multiple visits to many of Pennsylvania's nuclear facilities, including a series of trips after September 11th, 2001. I have long advocated for adequate nuclear safety and security, particularly given Pennsylvania's role as the nation's second largest state in nuclear energy production and with the history of the Three Mile Island incident on March 28, 1979.

Projected growth in energy demand necessitates improvements to our nation's energy infrastructure, as well as increased generation capacity. At the same time, the threat of climate change is such that this demand must be met with cleaner, more efficient sources of power. I believe that Congress should enact policies which promote a well-balanced approach to meeting energy demands, and that such an approach must include nuclear power. It appears that the Senate is poised to act on climate change legislation as early as this spring. I applaud this committee for acting on legislation last fall and as a lead cosponsor with Senator Bingaman of S. 1766, the Low Carbon Economy Act, I look forward to working with my colleagues in addressing this issue. Of course, meeting our energy demands and climate change are related, and it is in this respect that I believe

nuclear power can prove particularly beneficial as it possesses the advantages of being both clean and reliable.

However, as with the other options we have for meeting our energy needs, nuclear power is not without its own drawbacks. It was in my state of Pennsylvania that the most serious commercial nuclear accident in United States history occurred. On March 28, 1979 an equipment failure at the Three Mile Island Unit 2 nuclear reactor led to what the Nuclear Regulatory Commission called "a severe core meltdown, the most dangerous kind of nuclear power accident." Fortunately, the worst case scenario of massive radiation exposure did not occur. Unfortunately, the accident caused an already skeptical and frightened public to grow increasingly concerned with the safety of nuclear power. Although the nuclear industry and the Nuclear Regulatory Commission responded to this accident by implementing wide ranging changes to address the issue of nuclear safety, the event at Three Mile Island essentially capped the growth of nuclear power in the United States with no nuclear plants having been ordered since 1978.

Recently, however, there has been talk of a "nuclear renaissance" as it has become apparent nuclear power could produce baseload power in a carbon-constrained environment. Accordingly, electric utilities and other firms have announced plans to apply for combined construction permits and operating licenses for about 30 new reactors since the beginning of 2007. The potential for a resurgence of the nuclear industry in the United States is a positive development, but also presents a set of challenges that must be overcome if the so-called nuclear renaissance is to occur. First, there is the issue of high

capital costs of building new nuclear plants, but the recently enacted loan guarantee program holds the promise of ushering in a new era of nuclear power expansion in our country. Furthermore, we must address the issue of radioactive waste management which has been languishing with the delay of development of Yucca Mountain. Finally, there is the concern of nuclear power plant safety, security and regulation which is the topic of today's hearing.

A more recent incident, also in my state, occurred last fall which prompted enhanced attention to the safety and security of our nation's nuclear fleet. The news of contracted security guards caught sleeping on duty at the Peach Bottom Atomic Power Station in York County, Pennsylvania alarmed many, as the security of these facilities is a matter of great public concern. The nature of these facilities makes them attractive terrorist targets, thus it is imperative they are operated with the highest level of security.

While it was a relief to know that the Nuclear Regulatory Commission determined there was no immediate security threat due to the incident at Peach Bottom, the nature of the incident and the events leading up to it are cause for ongoing concern. That multiple security officers were found to be inattentive on four separate occasions is troubling, but even greater so is the fact that security supervisors were made aware of the situation, yet failed to correct the inattentive behavior. Furthermore, the inattentiveness at Peach Bottom only received attention from the Nuclear Regulatory Commission (NRC) after the NRC received videotaped evidence of the behavior by the news media. Thankfully,

the NRC promptly responded by conducting what seems to be a thorough and complete investigation.

However, I believe the investigation has brought to light items that must be corrected. First of all, it is my understanding the management at Peach Bottom failed to address poor environmental conditions in the ready room, where guards were found to be sleeping, and that it failed to provide adequate attentiveness stimuli. At a time when vigilance is absolutely necessary, sleeping security guards cannot be tolerated. It is the responsibility of the management to ensure that each plant's security force have proper access to quality facilities and equipment to guarantee their productivity. Furthermore, it is critical there is a mechanism by which complaints and comments by plant employees can be fully and fairly vetted by both management and the regulatory overseers, the Nuclear Regulatory Commission.

Although the Nuclear Regulatory Commission reported that at no point was the security of the plant in jeopardy, events such as that at Peach Bottom seriously undermine public confidence in our ability to safely and securely operate a nuclear power industry in the United States. Previously, I touched on the idea of a new era of nuclear energy in our country. For such a policy to take shape there must be no question that nuclear power plants are both safe and secure.

Senator CARPER. Thank you so much for coming and for your testimony.

Senator Cardin, you are recognized, and then we will turn to Senator Inhofe.

OPENING STATEMENT OF HON. BENJAMIN CARDIN, U.S. SENATOR FROM THE STATE OF MARYLAND

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

I want to thank our colleagues from Pennsylvania for joining us, Senator Specter and Senator Casey.

It is a pleasure to have Chairman Klein here. I appreciated his hospitality when I recently visited the Nuclear Regulatory Commission and was very impressed by the dedication of the men and women who serve at that Commission and the work that they are doing in order to carry out a very challenging mission not only dealing with the safety of our nuclear facilities, but also the application process that is moving forward to deal with the energy policies of this Country.

Mr. Chairman, I want to agree with you in your statement. I think nuclear energy is very important for this Country, but it must be done in a safe manner. We have had lapses. We need to learn from those lapses to make sure that that does not take place in our Country.

What happened at Peach Bottom is inexcusable. Peach Bottom may be located in Pennsylvania, but it is right near the people of Maryland. If there had been an incident there, it would have affected the health of the people in my State of Maryland and as far as the entire region. So we all have an interest in what is happening in regards to security issues.

I am also concerned about the GAO undercover operation that was able to get a license. That is something that we need to make sure never happens and that we have the right protections in place.

So I would ask that my full statement be made part of the record. I just really want to join in thanking you, Mr. Chairman, for holding this hearing to make sure that we do everything we can as a Congress to support efforts for the safety of our communities.

I was in Chernobyl last year and saw the consequences of the most extreme circumstances of failure of government to properly protect not only the citizens of Ukraine, but basically the international community. We have a major responsibility. The NRC is our principal agency that has that responsibility. We need to work together to make sure that every safety precaution is taken as we deal with this most important subject.

I thank you for holding this hearing.

[The prepared statement of Senator Cardin follows:]

STATEMENT OF HON. BENJAMIN CARDIN, U.S. SENATOR FROM THE STATE OF MARYLAND

Mister Chairman, thank you for holding this hearing and for allowing me to join your subcommittee for the day. I am grateful for your courtesy. Because we have so many important witnesses to hear from today, I will keep my opening statement brief.

For the first time in 30 years, the nuclear industry is moving forward with plans to construct and activate a new generation of nuclear power plants. Already, TVA has begun to expand its nuclear capacity with the recent restart of a reactor at

Browns Ferry Nuclear Plant in Athens, Alabama. In his testimony today, NRC Chairman Klein states that, just over the last few months, the Commission has received five complete combined license applications for new nuclear power plants. Dozens of new plants could be online by 2015.

If we are to going to expand the nuclear power industry in the United States, then Americans need to have confidence that the nuclear plant operations are dependable and plant operations must, in fact, be secure. I want to impress just how weighty this matter is.

NRC's No. 1 priority must be to ensure that adequate security systems and processes are in place, and that they are working properly and efficiently at all times.

We have seen two recent instances in which security shortcomings have come to light. The first of these was uncovered in July •07 after investigators from the Government Accountability Office fraudulently secured a license from the NRC which would have allowed them to buy the radioactive materials needed to make a dirty bomb.

The only portion of the GAO's security test that did not work was when it attempted to obtain a license from the State of Maryland, which said it would require a visit to the business first. While I am proud of Maryland regulators, I am disappointed that my State government could recognize a danger my national government overlooked.

The second instance of security failures was the unsettling scenes of security guards at Peach Bottom Nuclear Plant in Pennsylvania asleep on the job when they should have been protecting the plant from security breaches.

Peach Bottom is only a matter of miles from the border of my home State of Maryland. The consequences of a security failure there could be catastrophic for Maryland residents and many others.

I am glad to hear Chairman Klein has instituted Maryland's licensing procedures at the national level to prevent the type of licensing fraud GAO was able to undertake. And I am pleased to see the NRC's thorough evaluation of its response to the Peach Bottom allegations.

I want to hear assurances from the Commissioners that the review team's recommendations will be implemented. I want to hear that the Commission is developing ways to expand on those recommendations and share those lessons beyond the region that surrounds the Peach Bottom facility. I want to hear that all that can be done is being done to ensure that the nation's Nuclear Plants are being well run and adequately protected.

In my home State of Maryland, 28 percent of electricity generation is in the form of nuclear energy. The Energy Information Administration is forecasting output of nuclear energy will grow by 42 percent by 2030.

It is essential that we be 100 percent confident in our assertions that the public in Maryland and across the United States are secure, and will remain secure as we move forward with plans to expand our nuclear energy infrastructure and capacity. I look forward to hearing answers today to their concerns and my own.

Thank you, Mister Chairman.

Senator CARPER. We are delighted that you are here. Thanks so much for your statement. Your entire statement will be made part of the record, without objection.

Senator Inhofe.

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

Senator INHOFE. Thank you, Mr. Chairman. I will make the same request that my statement be made a part of the record.

Senator CARPER. Without objection.

Senator INHOFE. Let me say that I have another reason for appreciating your holding this hearing today, and that is that it is continuing this vigorous oversight that we started. It is hard for me to believe it was a little over 10 years ago I became Chairman of this Subcommittee. At that time, we had gone something like 12 years since we had any kind of oversight. We started a tradition. And even those who are here today, they want the oversight. So I think that is good.

I know the purpose of this hearing is to talk about the safety problems that are out there. I think that we probably will be able to do that.

Let me agree with the comments that were made by Senator Voinovich on the necessity of nuclear. You just can't run this machine called America without the component of nuclear energy. This is a time when we have to accelerate our activity there. The question that I am going to ask, in fact, some members of the NRC might want to do this in their opening statement, is respond to a concern that I have on the budget request. Maybe you did or maybe you didn't hear.

I was a little bit critical when we had the EPA hearing on their budget request, that there are some things like the SRF, some things that are very popular, that they fund way low knowing that we are going to raise it up. This has been happening in the 22 years since I have been here, so I don't think it is going to stop overnight, but I suspect that is what is happening here with the budget request.

You have a budget increase in the reactor licensing of only $3.1 million. Everything that we have seen indicates to us that it is going to have to be more than that if you are going to stay on the track that we, as oversighters, want you to stay on and continue to be aggressive. So I suspect that that is happening again and I hope that you will address that because if we are going to be as aggressive and ambitious as we need to be, and as I think every member of this Committee wants to be, we are going to have to be willing to fund it and make it happen.

Thank you, Mr. Chairman.

[The prepared statement of Senator Inhofe follows:]

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

I commend Senators Carper and Voinovich for holding this hearing today, continuing the tradition of rigorous oversight that I started when I assumed the Chairmanship of this Subcommittee over 10 years ago. The safety and security of our nation's nuclear plants is essential. Responsibility for maintaining security rests not only with the industry's security forces, as they are vigilant and thorough in their protection of the facilities, but with the NRC as a regulator and with this Committee in its oversight role. It is our job today, as Members of this Committee, to ensure that the NRC remains a strong and independent regulator, true to its mission of protecting public health and safety, and promoting the common defense and security.

The NRC cannot condone, and this Committee cannot ignore, security guards sleeping on duty in violation of procedures. I appreciate that Mr. Crane shares my extreme disappointment to learn that a group of security officers did just that. I am eager to learn what conditions created this situation and what has been done to prevent it from happening again. Inappropriate behavior on the part a few guards should be firmly addressed but it should NOT be allowed to tarnish the reputation of the dedicated, vigilant professionals that comprise the vast majority of these security forces or to undermine public confidence in them.

In addition to security issues, I'm glad to have this opportunity to ask questions about the NRC's budget proposal. The NRC has repeatedly acknowledged the challenges associated with the growing number of new reactor license applications that will likely be filed. Yet, the requested budget increase for new reactor licensing is only $3.1 million. There are reports that NRC staff recommended an additional $22 million for new reactor licensing that was NOT included in the final budget request and that the shortfall will lead to delays of 8 months or more in reviewing applications filed in FY'09. If this is true, then I am very concerned to hear that the NRC may already be jeopardizing its ability to conduct thorough reviews in a timely fashion by setting the stage for a funding shortfall.

In contrast, the requested budget increase for reactor oversight—a process that even GAO has found to be logical and well-structured—is $16.1 million, over 5 times the increase for new reactor licensing. Testimony from our October hearing certainly didn't indicate program shortcomings requiring a strong funding increase as a remedy.

I'm concerned by this disparity and I'm eager to understand the basis for it.

Senator CARPER. You bet. Thank you very much, and thank you for your leadership and for setting a good example that we have tried to follow under Senator Voinovich's leadership and for the last year under mine.

Senator Craig, thank you for being here today.

OPENING STATEMENT OF HON. LARRY E. CRAIG, U.S. SENATOR FROM THE STATE OF IDAHO

Senator CRAIG. Mr. Chairman, let me join the chorus of all of us thanking you for due diligence in oversight. That is a critical tool that we have and can use and oftentimes don't use across the face of Congress when we should be using it. I thank you for that.

Let me track on where Senator Inhofe is coming from, but in a slightly different way. Let me not address this to the Commission, but to us.

Fellow Senators, let me approach this by saying, where is the outrage? Listen to me. Where is the outrage? Senator Casey has said, no security threat took place, but there should be an outrage that people who were prepared and ready and alert to go out on a moment's notice were asleep. That is a part of the outrage.

But there is something else here that is not being addressed today that we are politically letting slide. By June, Greg Jaczko, if we don't act, his term will expire and there will be two commissioners left in a five commissioner body. There are two commissioners, Greg is one, or proposed renomination, and another one, Kristine Svinicki, sitting at the desk in our Senate and we will not act. We won't act because of politics. It is blunt and it is simple and it is direct and we ought to be honest about it.

Now, there is even a suggestion that we won't act until after the Presidential elections because maybe we can get three Democrats instead of two Democrats and one Republican. Where is the outrage on that? If we are so hand-wringingly concerned that this Commission do its job and get its budgets, then we ought to fully staff it with responsible, knowledgeable Americans, and we are not doing it, and I will be honest, because the majority leader isn't allowing it to come to the floor for a vote. So where is the outrage there?

A major utility came to my State not long ago, spent $10 million, bought property and 25,000 acre feet of water to build a new 1,500 megawatt reactor. They chose not to proceed, and their pockets are as deep as anybody's in America. They don't have to go to Wall Street to finance it. And the reason they chose not to proceed was the uncertainty of licensing over a five or 6 year period of time because time was critical to them. They wanted to be in production in 10 yeas, and not 15 years, to meet their needs. They chose to stop. That is a little bit of the secrecy behind what is going on now, or the reality of timeliness.

That is not a criticism of the Commission. That is a criticism of us. We are not allowing the Commission to be fully operational

based on its total load of commissioners, and yet we are asking more of it today, to be more responsible, more effective than they demonstrated possibly at Peach Bottom.

I will stop. Mr. Chairman, where is the outrage? We are quietly letting politics dictate to us a Commission unfilled at a time when we are speaking glowingly about nuclear renaissance, 30 plus reactors on the drawing boards, the need for 115,000 new megawatts of power by a given time to keep our climate and our globe from warming. And yet we will not staff, because of political purposes, a full Commission.

Thank you.

Senator CARPER. I will just respond very briefly.

As Chairman of the Subcommittee responsible for oversight, I have no interest in seeing this Commission trying to operate with two members. It is not good for them and even more it is not good for our Country. We just need to work together to make sure that when Commissioner Jaczko's term is going to expire, he will be in a position to be reconfirmed and have at least one person to join him, maybe two. Thank you.

Senator CRAIG. He is in position right now. All we have to do is have one vote on the floor of the U.S. Senate and it would happen tomorrow, two new commissioners.

Senator CARPER. I understand.

All right. I think that is it for opening statements.

I am going to invite our commissioners to come forward, led by Chairman Klein at this time.

Chairman Klein, I understand that you are joined today by your boss. I am going to ask you to introduce her. If any other commissioners have a family member they would like to introduce, you are welcome to. It is not every day that the spouse of the Chairman of the Commission comes by, so we would like to certainly recognize and welcome her.

I will be watching carefully to see if her lips move while you speak. That is usually the way it works with my family.

STATEMENT OF DALE E. KLEIN, CHAIRMAN, NUCLEAR REGULATORY COMMISSION

Mr. KLEIN. Thank you, Mr. Chairman. It is always a pleasure to introduce my real boss, my wife Becky is in the audience today. As we have said, we have been living together separately since 2001 when I came up at the Department of Defense, so we have been commuting. So it is nice that she is able to join today.

Senator CARPER. Mrs. Klein, thank you for sharing your husband with our Country, literally.

Mr. KLEIN. Mr. Chairman, Ranking Member Voinovich, and members of the Subcommittee, it is a pleasure to appear before you today with my colleagues, Mr. Jaczko and Commissioner Lyons. On behalf of the Commission, I would like to thank you for your continued support of the NRC as we work to protect the public health and safety, common defense and security, and the environment. We are particularly grateful for your help recently in addressing our space needs as we continue to grow and accommodate our increasing workload.

Let me first say a comment about Tuesday's power outage in Florida before I begin. Contrary to the early press reports, the nuclear plants at Turkey Point were not the initiating event of the outage in Florida. The automatic trip of the reactors, which was observed by the NRC resident inspectors, is a standard safety measure. The automatic trip at Turkey Point worked exactly as it should. So it is nice to know that contrary to the report, the nuclear plants were not the initiating event.

Mr. Chairman, I ask that my written testimony be entered into the record.

Senator CARPER. Without objection, your full testimony will be entered into the record, as will the testimoneys of each of the commissioners who joined you.

Mr. KLEIN. Thank you.

This statement describes a number of security issues in detail, but the important message I wish to convey to you today is that the NRC is aware that there are things we need to fix. As I have heard you say before, Mr. Chairman, if it isn't perfect, make it better.

Senator CARPER. You have been listening.

[Laughter.]

Mr. KLEIN. We know we are not perfect, and we are identifying and implementing steps to become better.

First, on the matter of security officers at the Peach Bottom plant who were found to be inattentive in the ready room. I want to make it very clear that this behavior is unacceptable. The NRC has taken actions to address the specific issues at Peach Bottom and is taking appropriate action aimed at precluding similar incidents from occurring at any nuclear plant.

Let me emphasize that at no point did we have reason to doubt that the overall security at Peach Bottom was adequate. Nuclear power plants have redundant and overlapping security measures based on defense in depth principles and the security program at Peach Bottom continued to ensure that the health and safety of the public was adequately protected at all times.

The NRC takes allegations very seriously. To provide some perspective, our agency receives between 500 and 600 allegations every year. Only about one in ten is substantiated and warrants enforcement action. Nevertheless, we are reviewing our own procedures and are taking actions to position us to detect inattentiveness better and to evaluate the effectiveness of our response to these allegations.

Mr. Chairman, my written testimony also addresses the issue of possible aircraft impacts. As part of a comprehensive review of security of NRC-licensed facilities, the NRC conducted detailed, specific engineering studies at each site, which confirmed that the likelihood of both damaging the reactor core and releasing radioactivity that could affect public health and safety is low.

Nevertheless, in response to the orders from the NRC, operating owners have implemented mitigating strategies that further reduce any effects of any aircraft impact on public health and safety.

Mr. Chairman, another issue is source control for medical, industrial and research applications of radioactive materials. After 9/11, the NRC worked with Federal, State and international partners to

identify which radioactive sources would be the first to receive increased regulation and orders were issued to accomplish that.

Furthermore, the NRC is implementing a comprehensive action to address concerns identified by the GAO, the Senate Permanent Subcommittee on Investigations, and NRC's Office of Inspector General regarding all of the security of radioactive sources. The NRC is also considering the recommendations of the National Academy of Sciences' report that was issued this month.

In addition, the Commission has been developing a national source tracking system that we expect to be implemented by December 2008 for these high-risk sources. The NRC is also conducting a series of rulemakings to establish a clear regulatory basis for the security of new power plants. This includes specific revision to the design basis threat requirements, which was published as a final rule in March 2007.

An ongoing rulemaking would revise a number of security requirements applicable to both current and future nuclear power plants, including the requirements for physical security, access authorization, fitness for duty, and training and qualification of security officers.

Finally, allow me to say a word about research and test reactors in light of the recent report by the GAO that raised questions about the adequacy of the security at these facilities. As we communicated to GAO, we believe that the report provides a misleading and incomplete picture of our actions to ensure the safe and secure operation of research and test reactors. NRC's assessment of research and test reactor security is based on well-founded technical and security practices, as well as expertise from numerous outside sources.

Of course, the NRC will continue to evaluate the threat environment and the effectiveness of these security measures and will take additional steps if necessary.

Mr. Chairman, in closing, let me emphasize that the Commission remains dedicated to ensuring public health and safety and that the conduct of all our activities flows from that fundamental commitment.

Thank you very much, and I look forward to your questions, and I also will answer Senator Inhofe's questions about the budget at that time.

[The prepared statement of Mr. Klein follows:]

STATEMENT
BY DALE E. KLEIN, CHAIRMAN
UNITED STATES NUCLEAR REGULATORY COMMISSION
TO THE
SENATE COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
SUBCOMMITTEE ON CLEAN AIR AND NUCLEAR SAFETY

FEBRUARY 28, 2008

Mr. Chairman and Members of the Committee, it is a pleasure to appear before you today along with my colleagues, Commissioners Jaczko and Lyons. On behalf of the Commission, I would like to thank you for your continued support of the NRC's work to protect public health and safety, common defense and security, and the environment. We are particularly grateful to the Members of the Committee for your help in securing the language granting us the additional office space we badly need as we grow to accommodate our increasing work load.

This is a busy time for the NRC. Over the last several months, we have received five complete and one partial combined license (COL) application for new nuclear power plants, including one that was just received last week As a consequence of industry's expressed desire to build new plants, there is renewed interest in uranium mining, milling, and processing operations. Therefore, the NRC is faced with a substantial increase in licensing activity. The Commission would be pleased to provide Congress with detailed information on these activities at any time. I want to assure you that our preparations to review new license applications has in no way decreased our focus on security at nuclear power plants. Since the terrorist attacks of September 11, 2001, we have required licensees to make numerous security enhancements at the nation's nuclear facilities. We have devoted significant resources to nuclear security, but recent events demonstrate there is still more work to be done. Today, I would like to update the Members of the Committee on some of the most significant security-related issues confronting the agency.

Peach Bottom Inattentive Security Officers

As the Members of the Committee are no doubt aware, security officers at the Peach Bottom plant were found to be inattentive, apparently sleeping in a security staging area called a "ready room". I want to make it very clear that this behavior is unacceptable. The NRC requires that security personnel, along with other personnel, be attentive at all times. The NRC has taken actions to address the specific issues at Peach Bottom and is taking appropriate action aimed at precluding similar incidents from occurring at other nuclear plants.

The issue of security officer inattentiveness at the Peach Bottom Atomic Power Station came to the NRC's attention on March 27, 2007, when the NRC received an allegation that some security officers at Peach Bottom were sleeping on duty while in security watch towers and other areas. When NRC received the allegation, we convened an Allegation Review

Board, which reviewed the allegation and determined that Exelon, the company that operates the reactor, needed to investigate the allegation and provide the results of its investigation to the NRC for review. The NRC did not contact the person who made the allegation for additional information because the individual clearly stated in the allegation letter that he did not want to be contacted by the NRC about the matter. Although not directly related to the allegation, our Region I office conducted a scheduled baseline security inspection at Peach Bottom from April 30 to May 4, 2007. During this inspection, four regional inspectors made unannounced tours of security posts, including several watch towers, and did not find any security officers to be inattentive.

In June, Exelon reported to the NRC that its investigation did not uncover instances of inattentive security personnel. The NRC reviewed the information provided by Exelon regarding their investigation of the allegation and asked Exelon to respond to a follow-up question. Based on Exelon's initial response and its response to the follow-up question, we could not substantiate the allegation regarding sleeping security officers in watch towers.

In September 2007, when videotaped footage provided verifiable information of inattentive security officers in the ready room, NRC promptly addressed the issue at Peach Bottom and sought to prevent similar incidents at other sites. NRC senior managers discussed this with the plant Chief Nuclear Security Officers, and NRC issued a Security Advisory to emphasize the importance of security officer attentiveness. We also issued a Security Bulletin to gather information about licensees' programs to prevent and correct inattentiveness and complicity in other's inattentiveness, and to ensure that employees report security concerns. NRC Resident Inspector oversight of the security forces at power plants has been enhanced through additional random checks and unannounced inspections at security posts, including inspections on nights and weekends. The NRC continues to monitor security force performance at all sites.

Let me emphasize that during this entire time we were confident—and we remain confident—that overall security at the Peach Bottom plant was adequate. Nuclear power plants have redundant and overlapping security measures based on defense-in-depth principles, and the security program at Peach Bottom continued to ensure that the health and safety of the public was adequately protected at all times.

NRC takes allegations very seriously. To provide some perspective, let me note that our agency receives between 500 and 600 allegations every year, a number of which raise multiple concerns. Only about one out of ten is substantiated and warrants enforcement action. Nevertheless, our procedures regarding handling allegations and conducting inspections can undoubtedly be improved. We are reviewing our own procedures and are taking actions to position us to detect inattentiveness better, and to evaluate the adequacy of licensee responses to allegations.

The NRC staff has completed two of four ongoing internal assessments that have identified a number of lessons learned from this event, and has developed several recommendations for improving the way we handle allegations and conduct inspections. Those recommendations are currently under review as part of our strategy to make meaningful

improvements. The areas we are examining include how we deal with allegations that come to us, how we work with the individual who raises the concern, and how we work with a licensee and evaluate the licensee's response. Some enhancements to the NRC's allegation program have already been made. We are also examining how we can improve the NRC inspection process to detect inattentiveness better and make certain our on-site resident inspectors, as well as region-based inspectors, are kept aware of allegations that a regional office may be reviewing.

In addition, this event at Peach Bottom, and other security-related incidents at some nuclear plants in recent years, suggest that there may be a disconnect between safety and security culture. NRC staff has been reviewing how best to modify the oversight process for security functions to ensure that establishing and maintaining a sound safety culture also encompasses a healthy security culture. Furthermore, the Commission has decided to expand its policy on safety culture to explicitly address security and to widen its scope of applicability to all NRC licensed facilities.

I want to assure you that the Commission shares your concern about the implications of this incident, that the NRC is addressing this issue at Peach Bottom, and that the agency is taking appropriate action to ensure that our licensees take steps to preclude similar incidents from occurring at other nuclear power plants.

Post-9/11 Aircraft Impact Research

Since 9/11, the NRC has ordered nuclear power plant licensees to develop specific plans and strategies to mitigate or prevent the effects of a wide range of events, including an aircraft crash. Even before these actions, nuclear power plants were designed to protect public health and safety. The plants achieved this through their robust structural designs, redundant safety systems, and highly trained operators. Nuclear power plants are designed to withstand extreme events, such as hurricanes, tornadoes, and earthquakes.

As part of a comprehensive review of security for NRC-licensed facilities, the NRC conducted detailed site-specific engineering studies of a limited number of nuclear power plants to assess potential vulnerabilities to deliberate attacks involving large commercial aircraft. In conducting these studies, the NRC drew on national experts from several Department of Energy (DOE) laboratories using state-of-the-art structural and fire analyses. The agency also enhanced its ability to predict accident progression and radiological consequences realistically. For the facilities analyzed, the vulnerability studies confirm that the likelihood of both damaging the reactor core and releasing radioactivity that could affect public health and safety is low. Even in the unlikely event of a radiological release due to terrorist use of a large aircraft, there would be time to implement mitigating actions and off-site emergency plans such that the NRC's emergency planning basis remains valid.

The NRC has used defense-in-depth to define both its safety and security philosophies at nuclear power plants. Defense-in-depth means there are multiple measures that could prevent an accident or lessen the effects of damage if a malfunction or accident occurs at a nuclear

facility, and multiple layers of defense in securing the facility from radiological sabotage. The NRC's safety philosophy is designed to protect the public. In that regard, NRC-licensed nuclear power plants and other licensed facilities have detailed, well-coordinated, and tested emergency response plans. These plans are designed to minimize the impact on the public in the unlikely event of an accident that would result in a radiation release.

In response to Orders from the NRC requiring licensees to improve their capability to mitigate the effects from events involving explosions or fires that can affect a large area of the plant, operating plant owners have implemented mitigating strategies that further reduce the probability that an aircraft impact could result in a release of radioactivity that would affect public health and safety. In addition, proposed amendments to NRC regulations would require new nuclear plant designers to perform a rigorous assessment of the design features to avoid or mitigate, to the extent practicable, the effects of aircraft impact.

The proposed rulemaking on aircraft impact assessments was published in the *Federal Register* in October 2007. The comment period closed on December 17, 2007. The staff is currently reviewing the comments and expects to provide the Commission with a draft final rule for its review in summer 2008.

The NRC regularly communicates with other Federal agencies, including the Department of Homeland Security, the Federal Aviation Administration, and the Department of Defense, which have acted on specific occasions to protect airspace above nuclear power plants. The Aviation and Transportation Security Act of 2001 also provides additional protection against air attacks on all industrial facilities, both nuclear and non-nuclear, by strengthening aviation security.

In addition to these measures, new reactor designs that have not yet been certified by the NRC will have improved engineering measures, such as spatially separated redundant safety systems, passive safety systems that do not require electrical power, and features to mitigate beyond design basis severe accidents. These design features enhance the ability of the plant operators to mitigate an aircraft impact or events involving explosions or fires that can affect a large area of the plant. It is the NRC's understanding that some of the reactor vendors with certified designs also are planning to modify their designs to address aircraft crashes better.

The NRC is also performing aircraft impact studies for new light-water reactor (LWR) designs, based on earlier assessment of operating plants, to provide a realistic assessment of what might happen in the unlikely event of an aircraft impacting a nuclear power plant. NRC staff has completed assessments of aircraft impacts on four of the five new LWR designs expected to be included among the combined license applications over the next few years. These four new LWR designs are the Advanced Passive Reactor, the Advanced Boiling-Water Reactor, the Economic Simplified Boiling-Water Reactor, and the U.S. Evolutionary Power Reactor. The staff is currently assessing the Advanced Pressurized Water Reactor.

Radioactive Source Control

Radiation sources are used in many medical, industrial, and research applications that are critical to the nation's health, safety, and economic strength. Some of these sources could be strong enough to be used by terrorists for malicious purposes and thus require increased regulatory controls.

After 9/11, the NRC worked with Federal, State, and international partners to reach consensus on the radioactive sources that should be the first to receive increased regulation. Orders were issued over several years on a risk-informed basis to ensure that sources with the most risk were addressed first. Specifically, the NRC issued orders in 2003, 2004, and 2005 requiring licensees who possess or have access to large quantities of radioactive sources falling within Categories 1 or 2 of the International Atomic Energy Agency (or IAEA) Code of Conduct on the Safety and Security of Radioactive Sources to implement additional security measures. Initially, these orders were based on our common defense and security authority, which rests solely with the NRC. The Commission used this authority to enable the expedited issuance of the orders to certain affected entities, which included both NRC and Agreement State licensees. The Commission decided to require increased controls on the remaining Category 1 and 2 sources under its public health and safety authority, which is the authority under which our Agreement States operate. The NRC and Agreement States worked cooperatively in establishing the requirements for the increased controls. Both the NRC and Agreement States have aggressively implemented and inspected these increased controls.

In addition, the Energy Policy Act of 2005 (EPACT 2005) provided NRC new authority to require fingerprinting and FBI identification and criminal history records checks of individuals allowed unescorted access to certain radioactive materials. The NRC is pursuing rulemaking to implement this provision of the Act. However, to ensure that the intent of the EPACT 2005 was implemented, the Commission determined that the previously identified affected materials licensees should be covered under this fingerprinting requirement by order while the rulemaking continues. In December 2007, the NRC issued additional orders requiring fingerprinting to its affected materials licensees. We are working closely with our Agreement State partners to get the Agreement States to issue similar requirements.

Furthermore, the NRC is implementing a comprehensive action plan to address the concerns identified by the U.S. Government Accountability Office (GAO), the U.S. Senate Permanent Subcommittee on Investigations, and NRC's Office of the Inspector General regarding the security of radioactive sources. In addition, the interagency task force formed as a result of the EPACT 2005, also identified some concerns that are being considered in this action plan. We are directly involving our Agreement State partners in this effort and have already made some changes to our licensing process. However, we expect that there will be additional security enhancements and changes in regulatory procedures as a direct result of this activity.

The NRC is also considering the recommendations of the National Academy of Sciences February 2008 report on alternative technologies to existing high risk sources and is evaluating what additional actions should be taken to refine and enhance requirements for safe

and secure use of radioactive sources. This report is one of three comprehensive studies that were initiated pursuant to the EPACT 2005 to assess the technological alternatives to radiation sources. The NRC and the Agreement States are working with the radioactive source vendors, the Department of Homeland Security, the Department of Energy, and the interagency Radiation Source Protection and Security Task Force to enhance the security of radioactive sources nationwide.

In parallel with the above efforts, the Commission has been developing a National Source Tracking System (NSTS) for high risk sources. The development of the NSTS has been difficult because of the need to ensure adequate cyber security to protect the resulting database from unauthorized access. Considerable progress has been made, and the NRC currently plans to have an operating NSTS implemented by December 2008. These plans depend on the system passing final systems checks mandated by various security requirements. Initially the system will be populated by licensees under NRC authority, and we will be including the Agreement State licensees over the next year. We have already identified enhancements we would like to make to the program, and they are being scheduled for a later date so that the system can be made operational without additional delay.

The NRC is strengthening its regulations in the area of transportation security. From 2003 through 2005, the NRC ordered licensees that ship risk significant quantities of radioactive materials to put in place additional security measures during transport. Currently, we are gathering public input on proposed security measures to be implemented through rulemaking for risk significant radioactive material shipments. This process may result in new and revised regulations for enhancing the security of risk significance materials during transport.

Although I have focused my testimony on domestic measures, we have also worked with our international counterparts on improvements in source security and have revised our regulations covering the import and export of Category 1 and 2 material.

Security Requirements for New Reactors

The Commission is currently experiencing increased licensing activity due to renewed interest in the fuel cycle and numerous COL applications for new nuclear power plants, which we continue to receive. While we remain firmly focused on the safety and security of currently operating plants, we are also attentive to the need to ensure a high level of safety and security for any new plants that may be built. NRC expects that new reactors will provide at least the same degree of protection to the public and the environment that is required for current generation light water reactors.

The NRC is conducting a series of rulemakings to establish a clear regulatory basis for the security of these new plants. The rulemakings most relevant are a significant revision to the Design Basis Threat requirements, which were published as a final rule on March 19, 2007. In addition, an ongoing rulemaking would revise a number of security requirements applicable to both current and future nuclear power plants, including requirements for physical security, access authorization, fitness for duty, and training and qualification of security officers.

Among other things, this rulemaking codifies requirements imposed by the Commission in various orders. The Commission published the proposed power reactor security rule for public comment, and stakeholder comments have been addressed and in many cases incorporated into the draft final rule language. In addition, numerous regulatory guidance documents that support the rulemaking have been published in draft. It is anticipated that the rule will be effective in the first quarter of calendar year 2009.

Allow me to add a word about the security of research and test reactors (RTRs), in light of the recent press coverage of a report prepared by the GAO that raised questions about the adequacy of the security at these facilities. As we communicated to GAO during the preparation of this report, we believe that the GAO report provides a misleading and incomplete picture of our actions to ensure the safe and secure operation of RTRs. Furthermore, the GAO report relied on inaccurate information and unsupported assumptions, which undermined the credibility of the evidence presented in the report, and thus did not provide a sound basis for the report's conclusions and recommendations. In fact, both Idaho National Laboratory and Sandia National Laboratory provided written comments to GAO refuting GAO's characterization of some of their work and key facts in the report. Beyond the precautions established soon after 9/11, additional security measures were implemented at RTRs from 2002 through 2004. Through on-site inspections, the NRC has verified that these facilities have measures in place to protect their nuclear material and to limit the radiological consequences following a potential act of sabotage. NRC's assessment of RTR security is based on well-founded technical and security processes, as well as expertise from outside sources, including the U.S. Department of Homeland Security, Sandia National Laboratories, Los Alamos National Laboratory, the Federal Bureau of Investigations, and the DOE Office of Nuclear Energy and National Nuclear Security Administration. Of course, the NRC will continue to evaluate the threat environment and the effectiveness of these security measures and will take additional steps if necessary.

Mr. Chairman, there are many more topics we could address today, and if we have neglected any topics of the Subcommittee's interest, we would be pleased to respond to any questions you may have. Let me just say in closing that the Commission remains dedicated to ensuring public health and safety, and that the conduct of all of our activities flows from that fundamental commitment. Our new Strategic Plan focuses on two goals – Safety and Security, the agency's core functions. My fellow Commissioners and I look forward to working with the Committee on these and other issues during this session and in the years to come.

RESPONSES BY DALE KLEIN TO ADDITIONAL QUESTIONS FROM SENTOR BOXER

Question 1. The NRC received word of security lapse at Peach Bottom in March 07, but did not respond adequately until September 2007 when you learned of the video tape obtained by the media. Why did the NRC's response change once the media got involved?

Response. In March 2007, the NRC received an allegation indicating that security officers at the Peach Bottom Station had been sleeping on duty while in bullet resistant enclosures (BREs), and in other (unspecified) areas, due to fatigue from working excessive overtime and from not being able to adjust to 12 hour shift schedules. There was no mention at that time of more than one security officer at anyone location being inattentive on duty or of any effort by other officers to conceal that inattentiveness. At that time, the alleger did not indicate that any video evidence of inattentiveness existed, nor was any corroborating information provided other than the statement made by the alleger. While the NRC Allegation Review Board (ARB) considered reaching out to the alleger for further information, the concerned individual explicitly stated in the allegation that he did not want to be contacted by the NRC.

In response to the allegation, NRC Region I conducted an ARB meeting on March 29, 2007, as well as an additional ARB meeting on April 11, 2007, to determine appropriate follow-up actions to address the allegation. Based on the ARB discussions, NRC Region I decided to request information from, and an evaluation by, the licensee of the concerns, then review the licensee's written response to determine if the licensee adequately evaluated the concerns. Before making that decision, Region I conducted a historical review of allegation records involving security related issues at the Peach Bottom Station.

NRC Region I determined that there was no immediate safety significance to the assertions in the March allegation based on the results of the staff's review of previously identified security related issues at the Peach Bottom Station. From a process standpoint, it is agency policy for an ARB to consider providing technical allegations to a licensee for evaluation since the licensee has responsibility for ensuring safe operation of its facility and, in most cases, can promptly address issues through ready access to site personnel and documentation related to the issues that are the subject of the allegation. The NRC always requires the licensee to respond with the results of its review, and the NRC then evaluates the adequacy of the licensee response.

When a subsequent allegation was received by the NRC in September 2007 from a WCBS-TV reporter indicating that he possessed video evidence of inattentive security officers at Peach Bottom, the NRC not only promptly informed Exelon senior management of the allegation so that they could initiate a prompt investigation of the matter and take appropriate compensatory actions, but also increased resident inspector monitoring of security officer activities and subsequently initiated an Augmented Inspection Team review of the matter. The potential safety significance of this allegation was considered to be greater than the original March allegation since multiple security officers may have collaborated to conceal their inattentiveness, and corroborating evidence in the form of a video made substantiation of the allegation more likely.

Question 2. You mention in your testimony that the NRC issued a Security Bulletin to gather information about licensees' programs to prevent and correct inattentiveness and ensure that employees report security concerns. What did you find from the information you gathered? Are there best practices that can be shared among plants?

Response. The NRC has received licensee responses to NRC Bulletin 2007–01: "Security Officer Attentiveness." The staff performed an initial review of the responses and has concluded that although all licensees provided answers as required by the Bulletin. the answers lacked sufficient detail for a qualitative analysis. Additional information will be requested from most licensees to better understand the results of their assessments. After obtaining and evaluating the additional information, the staff will recommend to the Commission whether further regUlatory action is warranted.

At this time, the staff is still reviewing licensee responses and therefore has not identified best practices that can be shared across the industry. However, prior to licensee submittal of responses to NRC Bulletin 2007–01, the industry developed draft guidance for licensee evaluations of security officer inattentiveness. The purpose of this guidance is to provide a standard methodology to licensees for evaluating conditions that may impact the ability of security personnel to perform their

assigned duties and responsibilities. The staff will issue final guidance after it completes its review of the adequacy of licensee submissions.

Question 3. In your testimony you mention that NRC receives 500–600 allegations a year, but only about 1 in 10 is substantiated and warrants enforcement action. How can you be sure you aren't missing real problems if you are only able to substantiate about 10 percent of all allegations? How do you know there aren't more Peach Bottoms where you didn't significantly follow up on an allegation?

Response. To clarify, about 30–40 percent of the allegations NRC receives each year involve a substantiated concern. This substantiation rate is similar for those allegations that involve a written request for response from the licensee and those that are independently evaluated by the NRC. About 10 percent involve a substantiated concern that warrants formal NRC enforcement action (e.g., notice of violation of a regulatory requirement).

Allegations are an important source of information to the NRC and programs and processes are in place to address every allegation the NRC receives. The implementation of the NRC allegation program at specified NRC offices is assessed biennially by the NRC Office of Enforcement, the program office with lead responsibility for allegations at the NRC. Self—assessments are conducted by offices in years when the office does not receive an independent assessment. Historically, the results of the program assessments and self-assessments have shown that NRC follow up is effective. It is also noted that every alleger whose identity is known, in receiving closure documentation related to his or her allegation, is offered an opportunity to re-contact the NRC if he or she feels that NRC's response was, in some way, insufficient, inaccurate, or otherwise unacceptable. In such instances, NRC reviews the alleger's feedback and responds appropriately. The percentage of allegations involving such feedback has been historically small (1–2 percent).

NRC is evaluating the circumstances of the Peach Bottom situation to identify opportunities that may have been missed and to consider appropriate changes to improve the effectiveness of the NRC allegation program.

Question 4. In your testimony you mention proposed NRC regulations that would require applicants for new standard design certificates to assess the effects of a large, commercial aircraft hitting their nuclear power plant. Why wouldn't this same requirement apply to existing facilities or facilities that have yet to be constructed but whose designs have already been certified? Do you believe existing plants should meet the same security standards as newly constructed plants?

Response. For the existing operating, commercial, nuclear power plants, the NRC staff and its contractors have conducted detailed, state-of-the-art analyses to evaluate the physical behavior of systems, structures, and components of the plants as a consequence of aircraft impact. These classified studies have confirmed that there is a low likelihood that an airplane attack on a nuclear power plant would affect public health and safety, thanks in part to the inherent robustness of the structure. A second study identified new methods that plants could use to minimize damage and risk to the public in the event of any kind of large fire or explosion. NRC staff, working with industry, has developed mitigation strategies for minimizing damage to the containment, spent fuel pool and reactor core. These mitigation strategies have been incorporated into the license of all operating nuclear power plants. The staff is in the process of codifying these strategies in a 10 CFR Part 50 rulemaking. Thus, all existing plants and all future plants will be required to meet these requirements.

Whether already certified or not, NRC staff has completed assessments of aircraft impacts on four of the five new light-water reactor (LWR) designs expected to be included among the combined license applications over the next few years. These four new LWR designs are the Advanced Passive Reactor (AP1 ODD), the Advanced Boiling-Water Reactor (ABWR), the Economic Simplified Boiling-Water Reactor (ESBWR), and the U.S. Evolutionary Power Reactor (EPR). The staff is currently conducting an assessment of the Advanced Pressurized Water Reactor (APWR).

Further, the Commission issued a proposed rule for public comment that will codify aircraft impact assessment requirements in 10 CFR Part 52. The objective of this rule is to require nuclear power plant designers to perform a rigorous assessment of design features that could provide additional inherent protection to avoid or mitigate, to the extent practicable. the effects of an aircraft impact. with reduced reliance on operator actions. The public comment period has closed and the NRC is evaluating the comments. The NRC staff is scheduled to provide a draft final rule to the Commission in summer 2008.

RESPONSES BY DALE KLEIN TO ADDITIONAL QUESTIONS FROM SENATOR CASEY

Question 1. On March 27, 2007, the NRC received the whistleblower's allegation. Rather than directly investigating, the Commission's Review Board forwarded the concerns on to Exelon. It was not until June 2007 that Exelon reported back with its finding that it had not found any instance of inattentive security personnel. But footage surfaced in September showing the contrary was true. How would you strengthen coordination between NRC, the plant owners, and the security contractors to ensure that important information like this is uncovered sooner?

Response. The March 2007 allegation only provided a general concern about security officer inattentiveness without providing details or direct evidence. Current NRC policy calls for the Allegation Review Board (ARB) whenever possible and appropriate, to refer the allegation on to the licensee and require a response. Therefore, NRC requested Exelon to evaluate the allegation and provide a response, believing that Exelon would be better able to inconspicuously observe such conditions. Exelon's evaluation did not identify any instances of inattentive security personnel. The video footage provided in September 2007 provided direct evidence of security officer inattentiveness in an area not mentioned in the March 2007 allegation. This prompted immediate notification of Exelon and independent inspection by the NRC.

NRC is evaluating the circumstances of the Peach Bottom situation to identify opportunities that may have been missed and to consider appropriate changes to improve the effectiveness of the NRC allegation program. The evaluation includes an assessment of and recommended changes to, how NRC ensures licensee understanding of the allegation concerns, and how the NRC conveys its expectations with regard to the licensee's response quality and timeliness. The results of the evaluation will be used to determine whether coordination with the licensee in a different manner and/or at different times would contribute to more effective and timely review.

Question 2. According to information gathered by my staff, the letter sent to the NRC concerning the sleeping guards was written anonymously. But the letter was delivered via a person who provided the NRC with his name and contact information, including contact information for his lawyer. It is my understanding that the NRC never made contact with this person or his lawyer about the allegations. If this is true, how can the NRC say it didn't have enough information to pursue the allegations when attempts to get further information were not attempted?

Response. The allegation received by the NRC in March 2007 was in the form of a letter from a former security manager for Wackenhut (the company contracted by Exelon to provide security services at the Peach Bottom Atomic Power Station) who expressed concerns with aspects of the security program at the Peach Bottom Station. The former security manager did provide his name, but indicated that he was providing the information on behalf of other security officer(s) who wished to remain anonymous. The letter was mailed to the NRC resident inspector office at Peach Bottom and did not contain contact information for the alleger's lawyer. Although the NRC was aware that the alleger had been represented by an attorney in a prior issue raised to the NRC, the alleger did not indicate in his March correspondence that the attorney still represented him, nor did that letter indicate that the attorney could be contacted.

The alleger specifically requested in the letter that the NRC: (1) provide complete anonymity regarding the letter; (2) not inform the licensee or the security contractor of the letter's existence; (3) not tell the licensee or the security contractor that any security employee had voiced concerns captured in the letter; and (4) not contact him in any manner. Consistent with NRC practice to avoid alienating allegers, which could make them reluctant to bring forward other concerns to the NRC in the future, NRC honored the alleger's requests. Specifically, while the NRC paraphrased the alleger's concerns and provided them to Exelon, the NRC did not reveal the alleger's name, the licensee was not informed of the existence of the letter, the licensee was not informed of the source of the allegation, and the alleger was not contacted by the NRC.

NRC is evaluating the circumstances of the Peach Bottom situation to determine opportunities that may have been missed and to consider appropriate changes to improve the effectiveness of the NRC allegation program.

Question 3. The Peach Bottom incident highlights the important function of allegations. They serve as a check on dangerous practices that can-and too often do-go unnoticed. It is vitally important that we not only encourage the employees to continue to make these allegations, but to have in place the right system to effectively respond to them. What procedures would ensure that the NRC work with the

individual to understand the allegation and better tailor an investigation plan? Please provide a chart that shows the process for responding to allegations.

Response. The Office of Enforcement (OE), the NRC office with lead responsibility for allegations at the NRC, has been meeting on a frequent basis with the allegation staff throughout the agency to discuss and implement enhanced practices identified by various lessons learned initiatives. Formalized changes to the process guidance documents have been developed and will be issued after internal and external stakeholder review.

To date, OE has:

• Revised allegation process terminology and correspondence templates. The term allegation "referrals" was changed to "requests for information" (RFI) to more clearly reflect that, with respect to the process by which the NRC requests a licensee to develop information regarding an allegation at its facility, NRC maintains responsibility and authority to assess and respond to every allegation concern.

• Reemphasized the need for NRC staff to contact an alleger whose identity is known, even if initially s/he indicates that s/he does not want to be contacted by the staff. The alleger would be contacted to request additional information, if needed, to assist in the assessment of the allegation, and to stress that further NRC contact will help ensure:

• NRC's understanding of the alleger's concerns;

— the alleger's understanding of the NRC's plan for assessing the allegation, including the use of an RFI if the alleger has no objection; and,

— the adequacy of the NRC's conclusions with regard to the concerns.

• Emphasized to the staff the need to include direction in the RFI that the licensee specifically address how their evaluation was independent, of sufficient scope and depth, and, if samples were taken, that they were appropriate.

• Reemphasized the need for NRC staff to clearly document the agency's assessment of a licensee's response to an RFI and to specifically articulate the agency's conclusion regarding each allegation concern.

The staff continually looks for enhancements to the agency's Allegation Program, through annual assessments and incident analyses. A Senior Executive Review Panel recently evaluated the agency's handling of the Peach Bottom concerns and their report is being reviewed by the Commission and is expected to be issued shortly. Additionally, the NRC Office of Inspector General's investigation into the agency's handling of allegations is ongoing. The staff will assess any findings or observations resulting from these efforts and work to ensure changes are appropriate.

RESPONSES BY DALE KLEIN TO ADDITIONAL QUESTIONS FROM SENATOR INHOFE

Question 1. The U.S. military is responsible for many sensitive security operations, including protection of the airspace over the Capitol and protection of our nation's nuclear deterrent. Has the NRC consulted with any branches of the military regarding best practices for addressing inattentiveness in comparable security situations?

Response. Yes. As part of NRCs effort to update its fitness-for-duty requirements applicable to personnel at nuclear power plants, including security personnel, the NRC consulted with representatives of the Army, Air Force, and Coast Guard regarding their guidelines and research and development efforts to address personnel fatigue. The NRC also consulted with other Federal agencies including the Department of Transportation, the National Space and Aeronautics Administration and the Department of Justice.

Question 2. Mr. Lochbaum has expressed concern about "zero-tolerance" policies, that security officers would be fired the first time they are found to be inattentive, suggesting that such policies might have a chilling effect, discouraging employees from raising concerns if they feel they'd be responsible for getting a colleague fired. Is that concern valid? If so, what actions is the NRC taking to address the issue?

Response. The NRC has taken a number of actions to ensure that employees can report concerns without fear of retaliation. As early as May 1996, the NRC issued a Commission Policy Statement entitled, "Freedom of Employees in the Nuclear Industry to Raise Safety Concerns Without Fear of Retaliation," to emphasize that licensees and their contractors are responsible for achieving and maintaining a work environment which is conducive to the reporting of concerns without fear of retaliation. All NRC licensees and contractors are expected to establish and maintain such a work environment, called a safety conscious work environment (SCWE).

In August 2005, after continuing to note weaknesses in some SCWEs at both reactor and materials facilities subject to NRC regulation, the staff issued supplementary guidance on how licensees can fulfill this expectation. This guidance, found

in Regulatory Issue Summary (RIS) 2005–18, "Guidance for Establishing and Maintaining a Safety Conscious Work Environment," includes specific advice on effective ways for licensee management to prevent a chilling effect" on workers' willingness to raise safety concerns potentially resulting from disciplinary or other employment actions. The RIS includes guidance for conducting reviews of proposed employment actions to determine what, if any, effect the employment action may have on the SCWE, and to take mitigating actions to minimize potential chilling effects, if necessary. Ensuring that disciplinary policies, as well as specific disciplinary actions, do not have a significant effect on the SCWE is part of the licensees' responsibility, as outlined in the NRC's policy documents.

The NRC assesses licensees' SCWEs primarily through inspections, as well as allegation activities. About 6 percent of allegations received at the NRC in calendar year 2007 concerning reactor licensees involved unhealthy or "chilled" work environments. Assessments of a SCWE involve interviews with plant personnel in the impacted area; observations of management interactions with the work force during meetings that typically include discussion of safety concerns; and document reviews, including licensee policies, training modules, corrective action program/employee concerns program use records, etc. Allegation trends in general are also reviewed on a periodic basis to assess the licensee1s SCWE. If the allegation of a chilled work environment is substantiated, or the trend analysis indicates a concern in this area, the NRC considers issuing a "chilling effect letter" to the licensee or otherwise engaging the licensee in a public forum. The purpose of such engagement is to pUblicly notify the licensee of NRC's concern that their SCWE may not be effective and to request information on what corrective actions will be taken to address those concerns. Unlike issues handled within the Allegation Program, chilling effect letters are pUblic documents. This ensures public notification of an NRC concern and sends a message to the licensee's workforce that the NRC is requesting the licensee take action to establish a SCWE.

The NRC also conducts periodic baseline inspections that include a series of interview questions designed to address NRC expectations for establishing and maintaining a SCWE, as outlined in the 1996 Policy Statement. Questions address: Finally, pursuant to the requirements of "Fitness for Duty Programs" 10 CFR Part 26, licensees are required to take specific actions in response to confirmed misuse of alcohol, valid prescriptions, and over-the-counter drugs. Part 26 does not require, prohibit, or make specific reference to sanctions in situations involving worker fatigue. In a related manner, the agency also provided clarification to the industry in May 2002 (RIS 2002–07, "Clarification of NRC requirements of Applicable to Worker Fatigue and Self-declarations of Fitness-For-Duty") of the regulatory requirements associated with worker fatigue and self-declarations of fitness-for-duty concerns. The guidance specifically addressed the potential for licensee sanctions, policies, and practices related to worker fitness-for-duty issues to discourage declarations, in particular, self-declarations of fatigue, to highlight the NRC's concerns in this area.

(a) employee willingness to raise concerns;

(b) management behaviors to encourage raising concerns;

(c) the effectiveness of concern resolution processes, including the Corrective Action Program

and Employee Concerns Program; and

(d) the effectiveness of management in detecting and preventing retaliation and chilled SCWE.

Question 3. Regarding the proposed increase tor reactor oversight activities, was any effort made to find offsets among projects or programs that are ramping down or no longer necessary?

Response. Yes. As part of our budget development process, NRC looked for ways to achieve efficiencies in our programs and applied the resources saved to the program.

Question 4. The fiscal year 1909 budget requests 121 additional FTE's. Please indicate which activities the new employees will be assigned to and how many FTE's to each activity.

Response. (See table and additional information presented below.)

FY 2009 Green Book	FTE Growth*	
	FY 2009 FTE**	Delta FY 2009 - FY 2008
Sub-Program		
Nuclear Reactor Safety		
New Reactors	812	13
Reactor Licensing Tasks	793	1
Reactor License Renewal	130	22
International Activities	37	-1
Reactor Oversight	1,094	18
Incident Response	71	-1
Subtotal	2,937	**51**
Nuclear Materials and Waste Safety		
Fuel Facilities	198	39
Nuclear Materials Users	307	37
Decommissioning and LLW	139	12
Spent Fuel Storage and Transportation	104	-5
HLW Repository	98	-7
Subtotal	845	**75**
Total	3,833	**126**
Reimbursable FTE	15	**(5)**
Agency Total	3,848	**121**

*Numbers may not add due to rounding (source: FY 2009 Green Book pp. 20 & 52).
**Numbers include Management and Support FTE

THE ACTIVITIES TO BE CONDUCTED BY THE NEW EMPLOYEES ARE AS FOLLOWS:

Nuclear Reactor Safety

New Reactors

Continued development of the Construction and Vendor inspection program and reactivation of licensing and construction oversight for Watts Bar Unit 2;

Licensing Tasks

Conduct power uprate applications (increase from 4 in fiscal year to 11 in fiscal year 9), detailed fire protection reviews, and research on materials degradation issues;

License Renewal

Work on license renewal applications and guidance revisions (e.g. Generic Environmental Impact Statement);

Reactor Oversight

Improve Force-on-Force program and conduct security inspections, increasing license renewal inspections (6 to 8 license renewal inspections per year starting in fiscal year 9), generic issue inspections, and allegation/enforcement activities.

Nuclear Materials and Waste Safety

Fuel Facilities

Support the review of two new uranium enrichment facility applications and continuation of licensing and inspection activities for existing fuel facilities;

Nuclear Materials Users

Support increasing regulatory oversight activities in response to a GAO materials licensing investigation;

Decommissioning and Low-Level Waste

Support uranium recovery licensing activities and initiation of related environmental reviews.

Question 5. The NRC's enforcement policy was recently revised with regard to contractors of a licensee. What enforcement action can the NRC take against contractors and subcontractors?

Response. The NRC has regulatory authority to take enforcement action against contractors and subcontractors in three specific areas. Specifically, the NRC can take enforcement action against contractors and subcontractors who:

(1) engage in deliberate misconduct or knowingly submit incomplete or inaccurate information as provided in the rule on deliberate misconduct (e.g., 10 CFR 30.10 and 10 CFR 50.5);

(2) violate 10 CFR Part 21, Reporting of Defects and Noncompliance; and

(3) violate the Commission's employee protection regulations, (e.g., 10 CFR 50.7).

The enforcement actions available to the NRC for viorations of these regulations include Notices of Violations, Orders, and civil penalties. In addition, Notices of Nonconformance can be issued to contractors who fail to meet commitments related to NRC activities, but are not in violation of specific requirements. Specific guidance regarding enforcement actions against individuals and non-licensees, including contractors and subcontractors, is contained in NRC Enforcement Policy (Sections VIII and X).

Question 6. Please summarize the safety-significant findings in the Inspector General's audit report OIG–07-A–15 entitled "Audit of NRC's License Renewal Program," and describe any actions taken to address them.

Response. The NRC Office of the Inspector General's (OIG) report noted that overall the NRC has developed a comprehensive license renewal process to evaluate applications for extended periods of operation. The OIG report findings were specific to the documentation of the technical review, not the sufficiency of the technical review.

In response to the OIG's recommendations, the staff is enhancing its report-writing guidance. In addition, staff training was conducted to ensure the staff was aware of the OIG's recommendations and management's expectations. Until the staff confirms that corrective actions have been effective, it is using internal peer reviews to ensure the quality of the safety evaluation report documentation. The OIG has told the staff that the OIG regards the staff's response as having resolved the seven recommendations the OIG directed to the staff.

Question 7. Please describe the rulemakings or other actions that the NRC would need to undertake in preparation to consider a license application for a reprocessing plant. Please include the timeframe to complete those actions and the resources needed.

Response. The NRC currently has the authority to license a reprocessing plant under its regulations in 10 CFR Part 50. Use of the current Part 50, however, would require a lengthy two-step licensing process: issuance of a construction permit followed by issuance of an operating license. Moreover, the terminology and the logic of Part 50 are based upon the licensing of a light-water reactor, not a reprocessing facility. Due to these factors, the NRC does not consider Part 50 to be an ideal regulatory mechanism to license the construction and operation of a reprocessing facility.

The NRC is conducting a regUlatory "gap analysis" to determine which of its regulations would need to be revised to allow for a thorough, safe, and predictable licensing review of a spent nuclear fuel reprocessing and fuel fabrication facility. The purpose of this effort is to identify what NRC regulations clearly apply, what regUlations clearly do not apply and identify and characterize gaps in the regulations that would need to be addressed through rulemaking. Both 10 CFR Parts 50 and 70 are being reviewed, as well as other applicable regUlations. Preliminary results of the gap analysis indicate that significant changes would need to be made to NRC regulations and associated regulatory guidance before a license application for a reprocessing facility could effectively and efficiently be considered. Part 70, (Domestic Licensing of Special Nuclear Material) which is both risk-informed and performance-based, appears to be the NRC regulation best-suited, after rulemaking amendments, for the licensing and regulation of a reprocessing facility. The NRC has internally reprogrammed about two full-time equivalents (FTEs) to support this activity in fiscal year 2008.

After completing the gap analysis, the NRC plans to prepare a technical bases document to support rulemaking. The NRC staff anticipates completing the technical bases document approximately 1 year after completing the gap analysis. At that time, the NRC will make a decision on whether to move forward with rulemaking.

The necessary rulemaking effort would involve multiple, simultaneous rulemakings and parallel development of the associated regulatory gUidance documents. This process would take approximately 2 years to complete and expend a total of 10 to 14 FTE. It would take another one to 2 years to issue the final rule. The amount of effort for the final rule is estimated to be an additional four to six FTE.

Task	Effort (FTE)	Completion
Gap Analysis	2	March 2009
Technical Basis Document and Rulemaking Plan	4	March 2010
Proposed Rule and Guidance Development	6-8	June 2012
Final Rule	4-6	June 2014
Total Effort	16-20	June 2014

Question 8. Please summarize the actions being taken to address the "red oil" issue that has been raised in an August 9, 2007, memo to the Commission in connection with construction of the MO_x plant at Savannah River Site.

Response. A red oil explosion event is one of many safety issues currently being evaluated by the NRC in its review of Shaw Areva MO_x Services' (the applicant's) license application to possess and use radioactive material at the MOX Fuel Fabrication Facility (MFFF). The evaluation of red oil safety strategies, as described in the license application and supporting documentation, began in January 2008 as part of the NRC's normal safety review. A decision on this and other issues will be documented in a draft safety evaluation report, which is scheduled to be issued in December 2010.

The NRC is conducting its review of the MFFF in two stages. The first stage of the review pertained to DOE's construction authorization request. The NRC approved DOE's construction authorization request on March 30, 2005. A red oil explosion event is one of the chemical safety issues that the applicant addressed in its construction authorization request and that the NRC evaluated in its safety evaluation report prior to issuing a construction authorization. Based on the applicant's multi-tiered approach, the NRC determined that there was sufficient defense-in-depth to provide reasonable assurance that the applicant had an adequate strategy for preventing and mitigating red oil events. However, the NRC staff also understood that this approach would have to be further developed and evaluated during the review of the subsequent possession and use license application.

The applicant submitted a license application in November 2006 to support the second stage of the MFFF review. Since NRC's approval of the construction authorization, the applicant has revised its safety strategy with respect to red oil to focus more on prevention than mitigation. This new strategy is described in the license application and supporting documentation and is currently under review by the NRC. The NRC has also requested that Brookhaven National Laboratory update a previous study on the risks of a red oil explosion to reflect this new strategy in order to help inform NRC's decisionmaking process. The conclusions of the earlier study were consistent with the consensus staff view.

Question 9. Please describe the actions being taken to address the Inspector General's findings in Case No. 05–46 regarding potential problems with the use of Hemyc to protect electrical cables in the event of a fire.

Response. The following actions are being taken to address the OIG's findings:

OIG finding: The NRC did not communicate the results and perform further testing following 1993 NIST small-scale testing.

Staff response: The purpose of the small-scale tests was to determine if any of the non Thermo-Lag fire barrier materials exhibited the same failure mechanisms as Thermo-Lag (e.g., burnthrough). These tests were not designed to evaluate the performance of the barriers in large-scale tests. During this time period, the NRC was focused on resolving the more safety significant Thermo-Lag issue. These activities eventually led to improved testing and acceptance criteria for fire barriers, and an expanded and improved NRC inspection program to more effectively identify safety significant fire protection design concerns.

OIG finding: The NRC did not require licensees to take corrective actions in 2000 following inspection findings regarding Hemyc.

Staff response: When the NRC concluded that the Hemyc fire endurance results were inconclusive, the staff engaged the industry and the specific affected licensees to address the questions regarding Hemyc. During meetings with the industry and licensees, the industry declined to participate in addressing the questions regarding Hemyc. After concluding that further testing was necessary regarding Hemyc fire resistance, the NRC initiated a program to perform full-scale confirmatory fire endurance tests in 2001.

OIG finding: The NRC April 2005 Information Notice did not require licensees to take action or provide a written response.

Staff response: NRC Information Notices provide timely operating experience to licensees. While Information Notices do not require licensees to take action or provide a response, pursuant to the NRC approved fire protection program, each licensee is required to consider all operating experience to determine the need for compensatory measures and corrective actions. The NRC followed the issuance of the April 2005 Information Notice with a Generic Letter in April 2006. The generic letter required licensees to provide a written response, and to establish compensatory measures and initiate corrective actions, as appropriate.

OIG finding: The NRC has not scheduled or bUdgeted for inspections to review licensees' Hemyc resolution.

Staff response: The NRC is inspecting licensees' resolution of Hemyc fire barrier issues. The NRC annually budgets resources for fire protection inspections. The schedules for these inspections performed by the staff include quarterly fire protection field inspections and annual inspections of fire brigade training and capability. The NRC also performs triennial fire protection design and operational safety inspections.

OIG finding: In 1993, the NRC Chairman committed to conduct assessments of all fire barriers used to protect electrical cables.

Staff response: The NRC has completed the actions committed to by the Chairman in 1993 in assessing fire barrier capabilities. In 1993, the NRC obtained and reviewed design and test information from all fire barrier vendors, and observed installed fire barrier configurations at selected nuclear plants. The NRC also performed small-scale fire barrier tests of selected fire barriers. Finally, the NRC issued updated guidance on fire barrier testing and acceptance criteria in Generic Letter 1986–10, Supplement 1.

RESPONSES BY DALE KLEIN TO ADDITIONAL QUESTIONS FROM SENATOR VOINOVICH

Question 1. Chairman Klein, in your testimony, you mentioned that NRC has an ongoing. rulemaking that would revise a number of security requirements applicable to both current and future nuclear power plants. Could you please give us a sense of breakdown on how much of this rulemaking involves codifying requirements imposed in various post 9–11 orders versus new requirements not addressed in the orders?

Response. In developing the proposed rule the NRC considered experience and insights gained during the implementation of the Commission's Orders as well as the implementation of the current requirements over the past 30 years. A significant percentage (approximately 90 percent) of the rulemaking would codify the Commission Orders, fulfill certain provisions of the Energy Policy Act of 2005 (EPAct 2005), or update the regulatory framework in preparation for receiving new reactor license applications. This rulemaking would add new requirements to assess and manage the safety/security interface, and would add new requirements that resulted from the NRC's review of revised site security plans, lessons learned from the enhanced baseline inspection program, and lessons learned from force-on-force inspections.

Question 2. In one of our recent periodic meetings together with Senator Carper, you suggested that the industry might consider having security officers carry an electronic device which senses inactivity and alerts the security command center. I think something like that could be a very good, practical solution to security officers working the midnight shift. Have you pursued that idea with the industry?

Response. Based on licensee responses to the Security Bulletin, some have already implemented the use of these devices for their security force and others are considering their use and application for their security programs. Given that only a few licensees have recently started using these devices, the effectiveness has not been determined. Over time, as more experience is gained, we will have a better appreciation of their benefits to curb inattentiveness. After NRC staff completes their final reviews of licensee responses to the Security Bulletin, the staff will report their recommendations to the Commission which may include, among other recommendations, best practices that can be shared among licensees. The staff may also rec-

ommend the appropriate methods to communicate those best practices to the industry and whether further regulatory action is warranted.

Question 3. The new reactor program is just getting off the ground. I know you have hired staff and have received several applications. Do you have everything you need in terms of resources for accomplishing your mission?

Response. Resources in the fiscal year budget request will enable the agency to continue review of the 14 combined license (COL) applications that have been received or are anticipated to be received during fiscal year 8, and perform acceptance reviews of 6 additional COls expected in fiscal year 9.

However, resource constraints in fiscal year may necessitate a delay in initiating the review for these 6 applications.

Additional resources would enable the agency to initiate review of the 6 COls expected to be received in fiscal year without any delay and support industry plans and schedules for new electric power sources.

Two additional areas that would benefit from increased resources are the advanced reactor/next-generation nuclear plant (NGNP) program and the new reactor construction inspection program. Increased resources to conduct research necessary to support NRC's licensing responsibilities for the NGNP, and resources to develop adequate staff knowledge and expertise for the new technology, technical basis for requirements, guidance, and independent analytical capabilities to confirm safety analyses and results will allow NRC to meet its responsibilities under the Energy Policy Act of 2005. The new reactor construction and inspection program would benefit from additional resources to develop the program to train and qualify inspectors to meet the anticipated inspection requirements in 2011 and 2012. The lead time necessary to recruit, hire, train, qualify, and deploy a qualified inspector is 2 years.

RESPONSES BY DALE KLEIN TO ADDITIONAL QUESTIONS FROM SENATOR SPECTER

Question 1. One of the issues here is NRC's failure to respond to whistleblower allegations. In a statement NRC chairman stated that NRC receives "between 500 and 600 of these allegations per year and only about 1 in 10 is serious enough to warrant an enforcement action of some kind against a plant." What is happening with the majority of these allegations? Has the NRC changed the way it looks at these allegations in light of the incident at Peach Bottom? How do you determine if an incident warrants enforcement action?

Response. To clarify, about 30–40 percent of the allegations NRC receives each year involve a substantiated concern. This substantiation rate is similar for those allegations that involve a written request for response from the licensee and those that are independently evaluated by the NRC. About 10 percent involve a substantiated concern that warrants formal NRC enforcement action (e.g., notice of violation of a regulatory requirement).

Allegations are an important source of information to the NRC and programs and processes are in place to address every allegation the NRC receives. NRC is evaluating the circumstances of the Peach Bottom situation to identify opportunities that may have been missed and to consider appropriate changes to improve the effectiveness of the NRC allegation program. The implementation of the NRC allegation program at specified NRC offices is assessed biennially by the NRC Office of Enforcement (OE), the NRC office with lead responsibility for allegations, and self-assessments are conducted by those offices in years when the office does not receive an independent assessment. Historically, the results of the program assessments and self assessments have shown NRC follow up to be effective.

Since the incident at Peach Bottom, OE has been meeting on a frequent basis with the allegation staff throughout the agency to discuss and implement enhanced practices identified by various lessons learned initiatives. Formalized changes to the process guidance documents have been developed and will be issued after internal and external stakeholder review.

To date, OE has:

• Revised allegation process terminology and correspondence templates. The term allegation "referrals" was changed to "requests for information" (RFI) to more clearly reflect that, with respect to the process by which the NRC requests a licensee to develop information regarding an allegation at its facility, NRC maintains responsibility and authority to assess and respond to every allegation concern.

• Reemphasized the potential need for NRC staff to contact an alleger whose identity is known, even if initially s/he indicates that s/he does not want to be contacted by the staff. The alleger would be contacted to request additional information, if needed, to assist in the assessment of the allegation, and to stress that further NRC contact will help ensure:

• RC's understanding of the alleger's concerns;

— the alleger's understanding of the NRC's plan for assessing the allegation, including the use of an RFI if the alleger has no objection; and,

— the adequacy of the NRC's conclusions with regard to the concerns.

• Emphasized to the staff the need to include direction in the RFI that the licensee specifically address how their evaluation was independent, of sufficient scope and depth, and, if samples were taken, that they were appropriate.

• Reemphasized the need for NRC staff to clearly document the agency's assessment of a licensee's response to an RFI and to specifically articulate the agency's conclusion regarding each allegation.

The staff continually looks for enhancements to the agency's Allegation Program, through annual assessments and incident analyses. A Senior Executive Review Panel recently evaluated the agency's handling of the Peach Bottom concerns and their report is being reviewed by the Commission and is expected to be issued shortly. Additionally, the NRC Office of Inspector General's investigation into the agency's handling of allegations is ongoing. The staff will assess any findings or observations resulting from these efforts and work to ensure changes are appropriate.

The NRC considers both allegations that result in findings under the Reactor Oversight Program (ROP) and those that result in enforcement action issued under 10 CFR Part 2, Subpart B, to comprise those allegations "warranting enforcement action." The ROP, initiated in 2000, comprises the NRC oversight and assessment program at all nuclear plants, and uses objective, timely, and risk-informed criteria to assess plant performance. The NRC uses inspection findings together with objective performance indicators to assess plant performance. The NRC addresses any significant performance issues and follows up any other performance issues until they are corrected. When a safety problem or failure to comply with requirements is discovered, the NRC requires prompt corrective action by the licensee and takes appropriate enforcement action. The NRC's procedures exercising its enforcement authority (issuing notices of violation, issuing orders, and assessing civil penalties) are set forth in 10 CFR 2.201, 10 CFR 2.202 and 10 CFR 2.205, respectively, and implemented through its Enforcement Policy.

Question 2. Despite Exelon terminating its relationship with Wackenhut, it is my understanding that Wackenhut is still providing security at a number of nuclear facilities. At how many facilities is Wackenhut providing security, and is the NRC confident in Wackenhut's ability to carry out the task?

Response. At this time, 27 NRC-regulated nuclear facilities use Wackenhut for security services. However, all of Exelon's nuclear facilities are in transition from Wackenhut contractor forces to a proprietary security force. These transitions are scheduled to be completed by July 2008. After the Exelon transition, the number of NRC-regulated nuclear facilities using Wackenhut for their security services will be 18. The NRC is conducting inspections of these facilities to oversee transition activities.

Yes, based on continued NRC oversight of all licensee programs, and a focus on recent issues, the staff is confident in the current security forces' ability to protect licensed facilities. NRC licensed nuclear facilities continue to be among the best protected private sector facilities in the Nation, and through the inspection and oversight processes, the NRC is committed to ensuring strong security at these facilities, inclUding the role performed by security officers regardless of which company provides the security force.

Question 3. Both NRC and Wackenhut contend that plant security was not in jeopardy. It would seem on the face of it, that sleeping or inattentive guards would jeopardize security. Chairman Klein, you stated on February 8th that you were "confident-that the overall security of the plant was adequate" and that "Nuclear power plants have redundant and overlapping security measures". Could you Elaborate on that point, and touch on some of these overlapping measures?

Response. NRC regulated nuclear power plants have been implementing strong physical protection programs for several decades. The plants were already surrounded by fences with continuously monitored perimeter detection and surveillance systems, and they were guarded by well-trained and well-armed security forces. Following the attacks of September 11, 2001, the NRC issued a series of Orders from February 2002 through April 2003 to enhance security at all nuclear power plants. Some enhancements included, increased vehicle standoff distances, augmented security forces, enhanced security force training, additional security posts, increased security patrols and improved coordination with local law enforcement and intelligence communities.

The concept of overlapping security measures as I have discussed in my testimony refers to a licensee's protective strategy and a defense in depth methodology em-

ployed by our licensees. The concept of defense in depth is utilized so as to maximize security through a variety and combination of physical barriers, electromechanical sensors and devices and human interdiction. Defense in depth at NRC nuclear facilities consists of: 1) formidable physical and vehicular barriers extending the time needed by an adversary for a successful intrusion into the Protected and Vital areas, 2) redundancy of alarm and detection devices, 3) interdiction by the security force to neutralize an adversary threat by interposing themselves between vital components of the facility and the adversary, and 4) prompt support and response by local law enforcement agencies.

Based on the duties that were assigned to the inattentive security officers at Peach Bottom, our assessment has indicated that the site protective strategy would have still been able to defeat a Design Basis Threat attack. I want to assure you that the NRC takes the matter of inattentive security officers very seriously and the robust defense in depth methodology employed by each of our nuclear power plants provides me the confidence that while this situation was not acceptable, the potential degradation of one component of a facilities' defense in depth is not indicative of a total failure of the implementation of the security program. This potential degradation of one component is mitigated by the continued operation of other security program components to assure the adequate protection of the facility. A facility's protective strategy, from a perspective of armed response, consists of multiple layers of responding security officers that can arrive in time and are suitably armed to defend the facility from an adversary attack with prompt support and response by local law enforcement agencies.

Senator CARPER. Fair enough. Chairman Klein, thanks very much not just for joining us and for your testimony today. Thanks for your leadership. We look forward to asking you a series of questions.

Commissioner Jaczko, you are up next. Welcome.

STATEMENT OF GREGORY B. JACZKO, COMMISSIONER, NUCLEAR REGULATORY COMMISSION

Mr. JACZKO. I, too, want to thank you, Chairman Carper and the rest of the members of the Subcommittee, for having us here to testify on this very important issue of how the NRC oversees the security of the Nation's commercial nuclear reactors.

I, too, was very concerned to discover that security guards on duty at Peach Bottom conspired to sleep during their shift. My concern in many ways was more heightened by the fact that they had conspired to do this, rather than simply that it was a matter of fatigue. This is absolutely unacceptable. There were failures not only in the security officer's ability to perform their functions, but also in the program to identify behavior among security officers that would identify them as individuals who weren't willing to perform their jobs successfully, something we call a behavioral observation program.

As an agency, we are focused on two things: investigating those directly involved and taking a long, hard look at our own performance as an agency. We have made some positive initial changes in our security oversight program to look for these types of issues, but I do not believe that that is enough. We should make several straightforward improvements to another program that we have that deals with allegations specifically, and also conduct a more comprehensive review than we have done so far.

Any broader changes the Commission decides are necessary should be informed by this broader, more comprehensive review, along with the consideration of findings from our own Inspector General.

My colleagues and I have also directed the staff recently to develop a Commission policy statement on safety culture. This gets to a point that many people talked about about the importance of culture in this incident. This statement will for the first time make clear the Commission's safety culture expectations for its licensees, and most importantly for this hearing, it will expand consideration of safety culture to include the idea of security culture as well, to reinforce with licensees that security is just as much an important part of safety as operations, maintenance and engineering.

Another way that the agency will ensure security is better integrated in plant operations is through the implementation of fitness for duty requirements the Commission approved last year. Based on my discussions with staff and discussions I have had with security officers at several facilities, I think these new work hour limitations are a substantial improvement on what we did in orders following September 11th. I am very interested in looking at ways that we can accelerate some or all of the provisions of that rulemaking, in particular as they apply to security officers to ensure that we get the advantages of that rulemaking as early as possible.

Before concluding, I did want to briefly mention that I remain concerned that the agency has not yet completed a rulemaking to add new security requirements for nuclear power plants. In addition, the Commission is proceeding with a rulemaking I proposed a year ago to require new plants to be designed to withstand the impact of an aircraft crash.

Right now, we are in the process of reviewing comments that we have received from members of the public on that rule, and I am encouraged by many of the comments that we have received that I think we will be able to move forward with an effective rule. But I strongly believe that the key to the successful rulemaking will be ensuring two important points: one, that the rule applies to any new plant built in this Country; and two, that it has very clear criteria on how we determine that a plant will be designed to withstand the impact of an aircraft.

Again, I thank you for the opportunity to appear today and to provide this testimony. Thank you.

[The prepared statement of Mr. Jaczko follows:]

PREPARED STATEMENT OF
COMMISSIONER GREGORY B. JACZKO
UNITED STATES NUCLEAR REGULATORY COMMISSION
BEFORE THE
SENATE COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
SUBCOMMITTEE ON CLEAN AIR AND NUCLEAR SAFETY

February 28, 2008

Thank you for having us here today to discuss the vitally important issue of how the Nuclear Regulatory Commission oversees the security of this nation's commercial nuclear reactors. I was honored to appear before you five months ago to discuss the safety of the current fleet and believe this focus on their security is timely and appropriate.

I, too, was very concerned to discover that security guards on duty at Peach Bottom Nuclear Station conspired to sleep during their shift. That is absolutely unacceptable and you can rest assured that the NRC takes this situation very seriously and is vigorously pursuing it. We are focused on two things: investigating those directly involved - and holding the licensee and the contractor accountable - and taking a long hard look at our own performance as an agency.

We have made some positive initial changes in our security oversight program to look for these types of issues, but I do not believe that is enough. The NRC must better use its traditional tools including its regional and resident inspectors, but to ensure we can prevent a recurrence of this situation, we must also focus on improving the allegations program and setting clearer expectations in the area of safety culture.

As far as the allegations program is concerned, we need to make straightforward improvements such as changing the current default policy of requesting information about an allegation directly from the licensees. Instead, we should commit the additional resources necessary to enable us to first independently gather information, if possible. We should look for opportunities to harness our inspection resources to accomplish this effectively and I believe we owe it to the public to be more involved as an agency in the investigation of allegations.

A few weeks ago, the agency released a report about our regional office's review of its performance in handling the allegation at Peach Bottom. We have already begun making changes such as those I just mentioned, but I believe there is more agency-wide work that needs to be done to fully evaluate the agency's handling of this issue. The foundation of the Commission's additional allegation program improvements must be built on a more comprehensive review than we have allowed the staff to conduct so far, along with consideration of forthcoming findings by the Inspector General. The Commission should look for additional improvements the agency's allegation and investigation programs, but we should do so in a way that does not sacrifice quality for speed.

Discovering safety concerns and violations is the job of our safety inspectors, but it is also the job of the individual employees who work at nuclear power plants. Without the trust and dedication of the thousands of licensee employees who see every part of every plant, and bring concerns to our attention, the NRC's job would be much more difficult and require many more resources. That is why I believe the agency must be more involved and continue to improve the process by which we handle allegations – to preserve that trust. I look forward to the Commission being in a position to provide this Committee with the agency's full formal lessons

learned report, along with an explanation of all of the changes we are making, in the near future.

I discussed the idea of safety culture in my appearance before you last October, and the root of the problem with some security personnel on site at Peach Bottom appears to have been cultural. My colleagues and I have directed the staff to develop a Commission Policy Statement on Safety Culture. This policy statement will for the first time make clear the Commission's safety culture expectations for its licensees. It will expand consideration of safety culture to include not just nuclear power plants, but also fuel cycle facilities, and radioactive materials licensees, and also for the first time, it will incorporate the importance of a strong security culture.

Another way the agency will ensure security is better integrated into plant operations is through the implementation of the fitness for duty requirements the Commission approved last year. While we have no direct evidence to point to security guard fatigue as a factor at Peach Bottom, this rule definitely improves upon the work hour provisions included in orders the NRC issued after September 11, 2001. Based on my discussions with staff, and based on conversations I have had with security guards at plants around the country, these new work hour limitations are a substantial improvement and I remain interested in finding a way to accelerate the implementation of the provisions of that new rule which relate to security guard work hours.

Before concluding, I did want to briefly mention that I remain concerned the agency has not yet completed a rulemaking to add new security requirements for nuclear power plants. This rulemaking needs to be completed because it will strengthen security requirements for both the current fleet and for applications for new plants under consideration. In addition, the Commission is proceeding with a rulemaking I first proposed a year ago to require those new plants be designed to withstand the impact of an aircraft crash. I am encouraged by the public comments the agency received that encourage strengthening the proposed rule language. I strongly believe that the key to the successful completion of this aircraft impact rulemaking will be twofold – changing the text to ensure the rule applies to any new plant built in this country, and that it includes clear criteria for how the NRC will determine whether a plant design can withstand an aircraft impact. Both of these rulemakings must continue to get the Commission's full attention. The NRC has a responsibility to act decisively when establishing and maintaining security requirements for all of its licensees.

Finally, I believe that one of the most important ways to ensure the NRC can effectively oversee both the security and the safety of nuclear reactors is to have a strong enforcement program. While generating the regulations and policy I have discussed is important, what defines a regulator is its ability to ensure that such requirements are met and that corrective actions are swiftly taken if they are not. I believe that a willingness to exercise the enforcement powers Congress granted the agency should be clear to all licensees and the public. Indeed, the more evident that willingness is, the less likely the agency is to ever have to pursue enforcement actions because licensees will have a clear incentive to promptly comply with all safety and security requirements.

Thank you again for the opportunity to appear before the Committee today.

RESPONSES BY GREGORY JACZKO TO ADDITIONAL QUESTIONS FROM SENATOR BOXER

Question 1. In your testimony you stated that the NRC should take a more active role in investigating allegations rather than sending the allegation to the licensee for investigation. Does the NRC defer safety allegations to the licensee? Please explain how you think the NRC should respond to security allegations and whether this differs from how they respond to safety allegations.

Response. Current allegation policy calls for the agency to consider requesting information from the licensee in writing in support of allegation closure whenever possible and appropriate, because the licensee is responsible for safely operating the facility. I believe, however, that we should consider some fundamental changes to the current program. The agency should change the presumption that we request information about the allegation from licensees unless certain circumstances are present. Instead, the presumption should be that the agency will seek to obtain the information itself unless extraordinary circumstances are present that would dictate the need to request it from the licensee.

The policy as written sends the message that we generally send the allegations on to the licensee, when in fact in a majority of cases, the opposite is true. According to recent staff statistics, only 35 percent to 40 percent of allegations are currently forwarded to the licensee for information. Thus, it appears that changing the presumption would be a more accurate reflection of current practice. The agency has changed the allegation terminology from "referral" to "request for information." Using the correct language is important and this represents both a better focus and more transparently captures the agency's actual practice.

Additionally, the agency should stay more involved in those few cases where it is determined that the more appropriate path forward is to request information from the licensee. More active NRC oversight of a licensee as it develops its responses to the agency will both highlight the seriousness with which the agency reviews allegations and make for a more efficient process. It also makes clear that the NRC is ultimately responsible for the evaluation and closure of every allegation it receives.

Regarding the assessment of security and safety allegations, the Allegation Review Board (ARB) evaluates both in terms of their significance to plant security and plant safety to determine the appropriate course of action. NRC staff knowledgeable about the issues meet with the ARB and provide insights into the significance of the allegation so that an informed decision may be made. Because of the sensitivity of information associated with security related allegations and their disposition, the NRC policy for responding to individuals with such security concerns differs somewhat from the practice for responding to safety concerns. I believe the goal of the staff is to be as responsive to an alleger as is possible, while continuing to protect any information that could be used by an adversary to exploit potential security vulnerabilities.

Question 2. In your testimony you stated that the NRC needs to strengthen its proposed rule on aircraft impact. Do you believe existing plants should meet the same security standards as newly constructed plants? What do you think a final rule should encompass?

Response. The purpose of the aircraft impact rule should be to require that any new plant built in the U.S. is designed to withstand the impact of a large commercial aircraft. All current vendors have stated an intention to address this issue and public comments received during the rulemaking support meeting this standard.

There are, however, two major deficiencies in the current proposed rule. First, it only requires nuclear power plant designers to perform an assessment of design features that could provide additional inherent protection to avoid or mitigate the effects of an aircraft impact, while reducing or eliminating the need for operator actions, and to only do even that "where practicable." The proposed rule does not require vendors or licensees to include these design features and there are no clear criteria for making a determination about the benefit of the optional design features. Second, the proposed rule language does not apply to designs already certified by the time the rule is finalized.

The NRC received public comments suggesting the need to expand the scope of the rule to include existing design certifications and to include specific criteria that plants would be required to meet. They included industry comments which reinforced my conclusions that relying on a practicability standard is ambiguous and subjective. Such an approach fails to require and then convey the extent to which a design addresses aircraft impacts, is not good public policy, and will not engender public confidence in the safety of new reactor designs. The staff is currently evalu-

ating the public comments in preparation of the final rule, and I am hopeful it will be substantially improved based on the comments received from stakeholders.

It was not easy to address new security threats for the fleet of existing reactors, but the Commission thought it was vital to do so following September 11, 2001. The agency, therefore, issued orders requiring licensees to identify and implement strategies to maintain or restore cooling for the reactor core, containment building, and spent fuel pool. The NRC directed licensees to identify mitigative strategies—or measures they could take to reduce the potential consequences of a large fire or explosion—that could be implemented with resources already existing or readily available. I believe this was an acceptable approach for the existing fleet of reactors. Nuclear power plants are robust and it is difficult to alter their features. This is not, however, a sufficient reason to miss an opportunity to design away the need for these mitigating strategies in new plants.

RESPONSES BY GREGORY JACZKO TO ADDITIONAL QUESTIONS FROM SENATOR CASEY

Question 1. What protocols and procedures did the NRC have in place for dealing with security incidents? How have these protocols or procedures changed as a result of the Peach Bottom incident? Does NRC have plans to take further action through regulation or other internal measures?

Response. The agency uses a variety of programs to respond to security incidents. When incidents come to the agency's attention, as did the Peach Bottom incident. through an allegation, the concern is handled through the agency's allegation program. As a result of the allegation, or if the security incident is identified as part of the agency's inspection program, the agency may also determine that the use of our incident investigation program is warranted. This program allows for more in-depth inspection and investigation when a specific incident is brought to the agency's attention that warrants a review beyond that provided as part of the routine annual baseline inspection program.

In the case of Peach Bottom, in March 2007 the NRC received an allegation from a former security manager for Wackenhut (the company contracted by Exelon to provide security at Peach Bottom Atomic Power Station) expressing concerns with aspects of the security program at Peach Bottom Station. The concerns were that security officers had been sleeping on duty due to fatigue from working excessive overtime; security officers were fearful of retaliation if they raised concerns; and that Exelon managers were aware of inattentiveness but had not taken proper actions to address it. The NRC informed Exelon of these concerns in April and requested that the licensee investigate the allegations, take appropriate corrective actions, and provide the NRC with a written response. In that sUbsequent response in May, Exelon concluded it was not able to substantiate the concerns and in August the NRC made a determination that the licensee's response was adequate to resolve the allegation.

It was not until September 2007 when the NRC was presented with video-taped evidence of on duty security officers sleeping in a ready room (a tape made by a security officer employed by Wackenhut at the time) that the agency initiated its own investigation. At that time the agency performed an augmented inspection of this incident under our incident investigation program to ensure that Exelon and Wackenhut had taken appropriate corrective actions to address this unacceptable performance.

I believe that the agency acted appropriately in September, but we clearly missed an important opportunity to discover and correct this issue 6 months earlier—an opportunity that an earlier whistleblower had provided us. Rather, it took a second individual who felt he had to go to such lengths as obtaining actual video of officers conspiring to sleep before anyone took direct action.

In response to the events at Peach Bottom the agency has changed some aspects of the allegation and inspection program. In the allegation area, the agency has changed the allegation terminology from "referral" to "request for information." While this is may appear to be a minor change, using the correct language is important and more clearly reflects that NRC maintains responsibility and authority to assess and respond to every allegation concern. Additionally, in the inspection area, I support staff efforts currently underway to expand the scope of the NRC resident inspectors at each nuclear power plant to focus more on security issues such as that identified at Peach Bottom, and I believe we must focus on the requirements for behavioral observation programs that should be able to identify people prone to the type of collusion demonstrated by the security team in question.

I believe we must continue to make improvements. The agency is continuing to evaluate the Peach Bottom incident to determine what other changes to our allega-

tion, inspection and behavioral observation program may be necessary to improve the programs and ensure that our response to security incidents is as effective as possible.

Question 2. NRC's Review Board decided that NRC did not need to initiate its own investigation into the allegations at Peach Bottom. Instead, it referred the issue back to the licensee for investigation. How does the Review Board determine which allegations rise to the level of an NRC investigation versus a licensee investigation? What were the factors that led to the decision that an allegation concerning a team of sleeping guards was not an NRC-level investigation.

Response. In response to the three concerns provided in the March Peach Bottom allegation, NRC Region I conducted an Allegation Review Board (ARB) meeting on March 29,2007, as well as an additional ARB on April 11, 2007, to determine appropriate follow-up actions to address the subject allegation. Based on the ARB discussions, NRC Region I decided to request information from and an evaluation by the licensee of the allegation concerns and then review the licensee's written response to determine if the licensee adequately evaluated the concerns. Unfortunately, this decision clearly turned out to be wrong. The licensee did not substantiate any part of the allegation that security guards were sleeping on duty. If the agency had taken a larger role in this investigation, it may not have taken the revelation of videotaped evidence 6 months later to initiate corrective action.

Current allegation policy calls for the agency to consider requesting information from the licensee in writing in support of allegation closure whenever possible and appropriate, because the licensee is responsible for safely operating the facility. I believe, however, that we should consider some fundamental changes to the current program. The agency should change the presumption that we request information about the allegation from licensees unless certain circumstances are present. Instead, the presumption should be that the agency will seek to obtain the information itself unless extraordinary safety circumstances dictate the need to request it immediately from the licensee.

The policy as written sends the message that we generally send the allegations on to the licensee, when in fact in a majority of cases, the opposite is true. According to recent staff statistics, only 35 percent to 40 percent of allegations are currently forwarded to the licensee for information. Thus, it appears that changing the presumption would be a more accurate reflection of current practice. After I raised this as an issue last Fall, the agency has changed the allegation terminology from "referralll to IIrequest for information." Using the correct language is important and this represents both a better focus and more transparently captures the agency's actual practice.

Additionally, the agency should stay more involved in those few cases where it is determined that the more appropriate path forward is directly to request information from the licensee. More active NRC oversight of a licensee as it develops its responses to the agency will both highlight the seriousness with which the agency reviews allegations and make for a more efficient process. It also makes clear that the NRC is ultimately responsible for the evaluation and closure of every allegation it receives.

Senator CARPER. Mr. Jaczko, thank you so much. I look forward to asking some questions.

Mr. Lyons, welcome. Thank you.

STATEMENT OF PETER B. LYONS, COMMISSIONER, NUCLEAR REGULATORY COMMISSION

Mr. LYONS. Thank you.

Mr. Chairman and members of the Subcommittee, it is a pleasure to appear before you today with my fellow commissioners to discuss the Commission's oversight of the security of our Nation's nuclear power plants. I will just briefly summarize my written statement.

Our security activities encompass many areas, including our roles in intelligence gathering and assessment and in information sharing. These capabilities support the Commission's screening process whenever potential new threats are evaluated. In the last year, the Commission improved our screening process by involving other agencies, removing cost considerations, and ensuring consid-

eration of the integrated threat mitigation capabilities of Federal, State and local agencies.

We have also supported completion of the comprehensive reviews of security led by the Department of Homeland Security at each of the nuclear plants. I believe the security of the nuclear sector will excel when compared to other elements of our critical infrastructure in these reviews.

Last year, we completed the first cycle of realistic force on force tests for all of our plants. Security of these plants is stronger today because of those tests.

A number of events of concern involving nuclear plants occurred during the last year. The Chairman and Commissioner Jaczko addressed Peach Bottom. But as another example, let me mention the issue of safety culture at Palo Verde, where our inspectors identified weaknesses in 10 of our 13 safety culture components. In this area of safety culture, as Commissioner Jaczko just mentioned, the agency is currently assessing the possible expansion of our current policy in order to address security.

This Subcommittee's support for work force development has been essential and helped toward the appropriation of NRC resources to foster educational programs supporting the entire nuclear industry. The agency's 2009 budget shortfall is an issue for which we may need to seek your support.

Mr. Chairman and members of the Subcommittee, we remain committed to fulfilling our statutory role. We appreciate the support we have received from the Subcommittee and the full Committee, and we look forward to working with you in the future. I look forward to your questions.

[The prepared statement of Mr. Lyons follows:]

STATEMENT
COMMISSIONER PETER B. LYONS
U.S. NUCLEAR REGULATORY COMMISSION

Before the

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
SUBCOMMITTEE ON CLEAN AIR AND NUCLEAR SAFETY
UNITED STATES SENATE
February 28, 2008

Chairman Carper, Ranking Member Voinovich, and members of the Subcommittee, it is a pleasure to appear before you today with my fellow Commissioners to discuss the Commission's oversight of the security of our nation's nuclear power plants.

The priority of the NRC remains, as always, the adequate protection of public health and safety and the environment and promotion of common defense and security. To emphasize these vital areas, the NRC recently refined its Strategic Plan to focus on only two strategic goals – safety and security. In the security arena, I believe that the NRC is playing an appropriate role as a partner in intelligence gathering and information sharing, while maintaining an intelligence assessment capability that provides timely information on potential new threats to the Commission. These broad integrated activities support the Commission's screening process whenever new threats are evaluated. The screening process is disciplined and thorough, with steps that include input from the intelligence community and technical reviews by other security partners. In this past year, the Commission supported improvements to this process that included seeking earlier technical input from other agencies, removing cost considerations, and ensuring that the integrated threat mitigation capabilities of federal, state, and local agencies are considered.

The NRC has supported the Comprehensive Reviews, led by the Department of Homeland Security (DHS), of the security capabilities at each of the nuclear power plants. The DHS has begun similar reviews in other critical infrastructure areas and those results may be of value to both the nuclear industry and the NRC. I will be interested to see how civilian nuclear activities rank against these other elements of our critical infrastructure, and I will be surprised if the nuclear power sector does not excel.

Last year we completed the first cycle of realistic force-on-force tests for all of our nuclear plants and Category I fuel facilities. These tests made a significant positive difference. They probed for and occasionally found weaknesses, which were then corrected. Security of our nuclear plants is stronger today because of these tests.

This Subcommittee has provided invaluable guidance to the Agency in the area of safety culture. We are currently assessing the possible expansion of the Commission's policy on safety culture to address the unique aspects of security. At this time, it is not clear whether this would be best accomplished by developing either one safety and security culture statement or two separate statements, one each for safety and security, taking into account the necessary interfaces between safety and security. Further dialogue between staff and our stakeholders should guide us toward the best approach. In any case, every effort should be made to integrate security forces into the licensee's

organization as a true team player whether they are employees of the licensee or of a security contractor and to hold them to equivalently high standards of performance.

In the reactor oversight arena, the NRC is conducting its eighth annual self-assessment of the Reactor Oversight Program (ROP). The ROP, a flexible risk-informed process designed to focus on those plant activities most important to safety, assures that our nuclear power plants continue to operate in a safe and secure manner. The ROP increases the level of oversight to focus on elements of a licensee's performance that may be declining. This program will continue to be enhanced as a result of these annual self-assessments, as well by external reviews such as the recent Government Accountability Office audit.

Too many frustrating events involving operating nuclear power plants occurred during the last year. In each case, I believe the Agency is taking appropriate actions to address the issues, but there were too many of them. One example involves the inattentive security guards at the Peach Bottom facility that the Chairman discussed. It is apparent that the NRC's oversight and inspection processes did not function at the level we require. We are reviewing staff recommendations to evaluate how we deal with allegations that come to us, how we work with the individual who raises the issue, and how we work with a licensee to evaluate their response. The NRC is also considering how to improve our inspection regime to detect inattentiveness and make certain our resident inspectors are kept fully aware of allegations that may be under investigation by other NRC offices.

A second example involves degraded performance of the Palo Verde facility. The results of our recent inspection, while concluding that the facility is still being operated safely, identified additional examples of organizational and programmatic weaknesses associated with ten of our thirteen safety culture components. The results of this inspection illustrate the importance of our oversight process when declining performance is recognized. An important lesson is that a licensee's performance is a dynamic condition that constantly needs to be assessed.

In addition to the reactor arena, the Agency has focused on the safe and secure use of radioactive materials and sources. The wide diversity of medical, academic, and industrial licensees presents challenges in the areas of both safety and security. Although after 9/11 the NRC took actions to improve the licensing and security requirements for materials with high risk significance, the agency is now focusing attention on additional actions to ensure the adequate protection of the public health and safety. I support the continuing efforts of the NRC staff, in collaboration with our Agreement State colleagues, towards ongoing improvement of materials regulatory programs.

The NRC faces many challenges including, as Chairman Klein indicated, a surge of new plant applications. We have experienced significant growth over the last few years to meet our need for trained and knowledgeable staff. As a result, we are ready and able to meet these challenges. However, with the exodus of experienced staff and increased industry needs, there will be a continuing need to ensure that there is a sufficient pool of people for future government, industry, and academic needs.

This fiscal year, Congress appropriated $15 million to the NRC to foster educational programs that support the entire nuclear power industry. We are committed to

effectively utilizing these resources to grow the pool of needed talent. We issued a public announcement just last week on the availability of grants for support of education. We very much appreciate your interest in, and support for, workforce development.

With our expansion, the agency has inadequate physical space for the growing staff. The Subcommittee's support on this issue has been greatly appreciated. The agency's 2009 budget shortfall is another issue that may require your additional support. Notwithstanding the challenges ahead, I believe the Agency is well positioned for the future.

Mr. Chairman, we assure you that the NRC remains committed to fulfilling its statutory role. We appreciate the past support that we have received from the Subcommittee and the Committee as a whole, and we look forward to working with you in the future.

I would be pleased to respond to your questions.

RESPONSE BY PETER LYONS TO AN ADDITIONAL QUESTION FROM SENATOR CASEY

Question 1. Throughout these testimoneys, the NRC has repeatedly mentioned the need to improve communications between resident inspectors and regional inspectors. Opening these lines of communication, especially when allegations are received, seems like common sense. How is it that this issue has yet to be addressed?

Response. The lines of communication between each NRC Region and its inspectors are open and strong. Nevertheless, assessment of the Peach Bottom case showed that improved information-sharing with inspectors regarding allegations may have afforded additional opportunities to identify inattentiveness among security officers. The NRC is considering a number of ways to enhance the sharing of allegation-related information with resident and region-based inspectors while still maintaining appropriate protection of allegation-related information and allegers' identities.

Current Communications with Inspectors Regarding Allegations

Each NRC Region communicates daily with its resident inspectors regarding current plant conditions and promptly shares significant safety and security issues that reqUire immediate action or attention by the resident. When an immediate safety or security concern is raised through an allegation, the resident is informed of the concern and cautioned to act upon the concern in a manner that does not identify the alleger, if possible.

Typically, only those inspectors who are assigned to evaluate or inspect a particular allegation have access to information regarding the allegation. This policy, which limits allegation information to those who have a "need to know," limits the dissemination of information that could identify an alleger. That, in turn, reduces the risk that an alleger's identity might be compromised. Accordingly, the status of all open allegations may not be known by, or communicated to, all inspection staff. However, in the Peach Bottom case the initial allegation was received anonymously and the resident inspection staff clearly should.have been informed of the allegation. Even in cases where an alleger reveals their identity, the resident inspection staff should be kept informed of the nature of all safety and security allegations, so they can be alert for evidence useful to other inspector(s) who may be assigned to follow up.

A Region may also assign a resident inspector to evaluate an allegation even when it does not present a significant safety or security concern requiring immediate action. For example, if a resident has an ongoing or near-term inspection in a functional area related to the allegation, the Region may assign the resident to also evaluate the allegation. Similarly, a Region may choose to assign a "region-based" inspector rather than the resident inspector to evaluate an allegation that is related to one of his or her regularly scheduled inspections. A Region may also request the licensee to evaluate an allegation and then assign a resident or region-based inspector to review or inspect the licensee's evaluation.

In summary, each Region currently shares allegation information with resident and region-based inspectors who have a "need to know" in order to perform their inspection duties.

Changes to Current Practice Under Evaluation

As a result of the Peach Bottom case, the NRC is considering options for sharing allegation related information with resident and region-based inspectors based on the principle that resident or region-based inspectors automatically have a "need-to-know" status regarding open allegations at their facilities. This approach would ensure that such inspectors maintain an awareness of asserted concerns as they accomplish daily inspection activities.

The NRC is also considering how to clarify guidance used by the Regions to determine when region-based inspectors should be informed of open allegations at facilities other than those they may be assigned to inspect directly. For example, as in the Peach Bottom case, it may have been beneficial for the Region to direct all region-based inspectors visiting the facility for a specified period of time after receipt of the initial allegation, to be cognizant of asserted inattentiveness issues related to security officers. Finally, the NRC is considering whether changes to its current allegation-tracking data base are needed to simplify data extraction and information sharing with inspectors.

The Commission is currently considering the extent to which changes are needed, even as some of the above changes are already being implemented, and we will provide the final Commission decisions to the Committee.

Senator CARPER. Thank you so much for your testimony.

What I would like to suggest to my colleagues is that we use roughly 5 minutes for an opening round. There will be a second round. If we run a little long, that is quite all right, but let's try to stick fairly close to that.

Let me just start by saying, Senator Voinovich and Senator Casey both heard me refer in the past to the time I spent in the Navy. I was a naval flight officer with 5 years on active duty, and another 18 years at Willow Grove Air Station where I was a mission commander of a Navy P3 airplane.

Chairman Klein heard me say this to the folks up at Peach Bottom that the most important thing that we did every day in our job in the Vietnam War was to fly low-level missions off the coast of Vietnam and Cambodia and track Soviet and other surface targets. And when we weren't doing that, to track Soviet nuclear submarines in the oceans of the world. That is what I did for a living for a number of years.

The most important thing that we did every day in the service in my squadron wasn't the work that we did flying missions off of Vietnam and Cambodia. It wasn't being out there chasing Soviet nuclear submarines in all the oceans in the world. The most important thing that we did every day was to take off safely and come back and land safely so that at the end of the day everybody on my crew, all 13 men, and at the time we had no women on our crew, but all 13 men went home to their families and we made that our priority, and it permeated everything that we did.

That was a culture of safety, where the leadership set the tone. Not just the leadership of our squadron, but the Chief of Naval Operations, and it permeated down throughout the organization. One of the reasons why we focus so much on safety and a culture of safety is because we believe that the leadership starts with us. If we are not attentive to these details and set the right tone, why should we expect the NRC and its leadership to feel that way? Why should we expect the folks who own and run these nuclear power plants to feel that way?

So it really starts right here, and we are attempting to provide through our oversight and our attention to detail the kind of leadership that is needed. Going back to the time that Senator Inhofe provided the leadership for this Subcommittee, we have endeavored to play that role. It is important and I think it is actually helpful. I am quite sure it is helpful.

I am going to take us back to Peach Bottom with my first question or two. I am just going ask the commissioners, and we will start with you, Chairman Klein. Would you just give us a brief description of the investigation of the sleeping guards allegation at Peach Bottom, including why Exelon was unable to substantiate the report of inattentive guards and why wasn't some attempt made to followup with the whistleblower when there was no substantiating evidence uncovered?

Mr. KLEIN. Mr. Chairman, I think all of us have been very frustrated at the specific events at Peach Bottom. It clearly is unacceptable behavior. So we are learning a lot about how did it happen and what steps do we take so it doesn't happen again.

The original allegation was interesting, and I read through that at some length when it first came in. The initial allegation was by a former employee and was allegating on behalf of some of the other individuals there. As you probably know, that initial allegation focused a lot on what is called the BREs, the bullet-resistant enclosures and of inattentiveness in those.

Senator CARPER. You all have been excellent so far in not using acronyms and so I would urge you to continue that as much as possible. Stay away from those things.

Mr. KLEIN. That is why I wanted to explain that the BRE was the bullet-resistant enclosure.

So as you know, when we walked up to that, it is fairly hard to sneak up on an individual that is in there because it is up in a tower with metal stairs on the way up there. So it was very difficult to find those initial sleeping allegations, or the inattentiveness.

The other thing that made this one particularly disheartening, as Commissioner Jaczko had indicated, was there was collusion. That is something you very seldom find at the level that we found it in that area. So it was difficult.

I must say on our behalf on the NRC, we were not as rigorous as we should have been. We were not as rigorous in challenging the utility in their investigation, and we were not as rigorous as we should have been on followup. So we have lessons to learn from that and we will learn from that.

But the initial allegation, we made a mistake in the initial alleger that said specifically, do not contact me again. We should not have honored that. We should have followed up and contacted that individual. That is one of the mistakes that we made and we followup with that in the future.

Senator CARPER. Why was the request not to followup with this person? I am sure you have asked that question. What is the answer?

Mr. KLEIN. I am sure the next panel can talk a little bit more in detail, but the individual had been terminated for cause. I think there were some hostile feelings. In his initial allegation he said specifically, do not contact me at all. It was very clear. We honored that, but we should not have. We should have followed that up.

Senator CARPER. I agree.

I have a followup to that. Let me just ask my followup and then I will yield to Senator Voinovich.

At Peach Bottom, the NRC relied almost exclusively on Exelon to actually investigate the allegation. When evaluating your methods for investigating allegations, what did the NRC conclude in terms of its reliance on licensees to investigate allegations of wrongdoing? Any of you are welcome to respond to that.

Mr. KLEIN. Commissioner Jaczko.

Mr. JACZKO. At this point, we haven't finished answering that question. Right now, the NRC has a process that whenever we get an allegation, we will look at several factors to determine who does the primary investigation. Our general assumption going in is that, the standard response is to send a letter to the licensee asking them to provide information. We right now have a series of internal reports from a variety of different groups at the agency, the pri-

mary one being a self-assessment from Region I that has looked at that particular issue.

I think right now, we don't have any firm conclusions about what the right way is to address that. My personal view is that instead of having an assumption going in that we would refer the allegation, I think the assumption going in should be we should ask the question, can we get this information with our own inspection resources, with our own investigators first? If that is not possible, then we would consider going to the licensee for the information.

So it is certainly something that was brought to my attention in this incident as something we might need to change in our process as we review it. But those reviews are still ongoing and we are really waiting to collect information from a variety of sources before we complete the review.

Senator CARPER. Commissioner Lyons, Chairman Klein, do you want to add anything to that?

Mr. LYONS. I would concur with what Commissioner Jaczko has already said. I would note that in the past in about 60 percent of the allegations, we have investigated about 40 percent have been referred. But as Commissioner Jaczko indicated, as part of the ongoing exploration of how to improve, we may well seek to change that ratio and possibly change our criteria.

Senator CARPER. All right.

Mr. KLEIN. One point, our No. 1 concern when anyone raises allegations is that we protect the identity of the alleger.

Senator CARPER. OK. Thank you.

I have used 7 minutes. Co-Chairman Voinovich, you are recognized for 7 minutes, my friend.

Senator VOINOVICH. Thank you.

In my view, the silver lining in this incident of the sleeping guards is it provides the NRC and the industry with a very timely opportunity to do some serious self-assessments on how do you handle whistleblower cases. From a management perspective, handling these things are fraught with difficulties. You just mentioned that the person said, don't contact me. How do you decide whether you are going to contact him or not contact him? It gets into personalities, verification of what may appear to be questionable allegations and so forth.

Anyhow, in your testimony, you mentioned that NRC receives between 500 and 600 allegations per year. I would be interested to know, and maybe you can't give me the answer to that, about how does that fit in with some other regulatory agencies in the number of whistleblowers they might get, the Securities and Exchange Commission or whatever.

And can you give us a sense of the criteria your agency is using to determine which ones would be turned over to licensees and which ones would be handled by the agency employees and do you have any numbers on it. You know, turn this over to the licensee or, red light, we better get in there and do this ourselves. How do you handle that, and how is that going to change, if any, because of what happened?

Mr. KLEIN. Senator Voinovich, we take allegations very seriously. As you might expect, being a regulatory body, we have procedures

that we follow. I think in summary for this particular Peach Bottom event——

Senator VOINOVICH. By the way, how many people handle that? For 600 a year, is that a part-time job for somebody to handle these, or how does that work?

Mr. KLEIN. It depends on where they come in. For example, if they come in, the resident inspector is one that might see these first. We also have a review board that will at the region determine what level of involvement it should be, whether we do it; where it is handled. Again, we have the Office of Investigation that follows up on all of the allegations and whistleblower activities. So we have a complete structure and a complete office that handles these allegations. So we have an office that is called the Office of Investigation that focuses on those.

In addition, in a case like Peach Bottom, after this surfaced, I asked the Inspector General to look at our procedures to see how we can make those better. We haven't gotten that information back yet, but we have a variety of levels that we look at.

In terms of the criteria, as I indicated, the first one is we protect the identity of the alleger because we believe that we need open and honest communications in the business that we are in, more than other agencies. I don't know what the record of other agencies is on the number of whistleblower allegations that they might have, but we believe very strongly in open communication. The men and women that work at these power plants should feel free to raise questions anytime, anywhere and we take those very seriously.

One of my concerns on this particular allegation was did we get back to the individual. As I read the letter, and then I was rather surprised at how strong this individual said, don't contact me at all. But we have a criteria to determine whether we handle it or whether we ask the licensee to address it. As Commissioner Lyons indicated, on average 60 percent of the allegations are handled by the NRC and 40 percent are referred back to the licensee for initial information. We hold the licensee accountable, but we should also hold ourselves accountable.

Senator VOINOVICH. You had somebody in residence. How many in-residence did you have from NRC at Peach Bottom?

Mr. KLEIN. At Peach Bottom, we have two resident inspectors. At Palo Verde, for example, as Commissioner Lyons indicated, because of the concern of their performance, we have an additional resident inspector. So at that site, we have four, for three operating plants. So typically, we will have at least two resident inspectors at a two-unit site.

Senator VOINOVICH. Should the resident inspector, is that part of their responsibility to mosey around and look at things and see whether or not they are doing things like that or not?

Mr. KLEIN. Absolutely. We expect the resident inspectors to walk through the plants, to observe, to look at activities. So we expect them to find those. In fact, the resident inspector was aware of the allegation, and obviously had looked, had walked around during backshifts and at other times of operation to find if there was any inattentiveness, and was able to verify those allegations.

Senator VOINOVICH. Well, the question I have is, what kind of action has the Commission taken in regard to the inspectors that were there?

Mr. KLEIN. We are clearly not finished with all of the actions that we expect to result from this investigation.

Senator VOINOVICH. I am talking about the individuals that are on your payroll that at there, have the responsibility to get around, and in this particular case they didn't observe anything like this activity of somebody sleeping on the job. Correct?

Mr. KLEIN. That is correct.

Senator VOINOVICH. OK. The issue then is were they doing their job and what action has the Commission taken in regard to those specific individuals in terms of their behavior, et cetera?

Mr. KLEIN. For the guards that were inattentive, that is an issue that they have been addressed. For our resident inspectors, we don't believe that because of the collusion that they necessarily were derelict in their duties. In other words, the resident inspectors were thorough in the way that they conducted themselves. Knowing what we know now, we should have provided those resident inspectors with additional support.

So we don't believe that the resident inspectors particularly failed in their duties, because of the difficulty. For example, in the ready room that Senator Carper and I had observed, this was where they were inattentive, not on post. This was basically in an area that they should have been ready to respond.

What we have done since, there are now cameras in those ready rooms so they can be observed at the command post. So there have been a lot of actions. But for the resident inspectors, we believe that this was an event that for their training and for how this was conducted, it would have been very difficult for them to have observed.

Commissioner Lyons.

Mr. LYONS. If I could add to that. As you have already indicated, Senator Voinovich, as well as several of your colleagues, this needs to be a learning experience. I am sure it will also be a learning experience for the resident inspectors. But to followup slightly on what the Chairman said, the original letter that came in referred to bullet-resistant enclosures and other areas. It said nothing about the ready room. It is my understanding that our resident inspector did focus his attention on the bullet-resistant enclosures and did not detect inattentiveness in those areas.

Mr. JACZKO. Senator, if I could add. Before this incident, security inspections were generally handled by regional inspectors only. We did not have a lot of responsibilities that we had given to the resident inspectors to be looking for areas of security violations. There is always a balance and a tradeoff. If they are looking in one area, it means they certainly can't be looking at something else.

So one of the things we did immediately after this incident was to change that. We sent out notice to all our resident inspectors that this was something that they should particularly be looking out for as they do their activities. So as the Chairman indicated, we don't consider this to be something where the resident inspectors were at fault here in not identifying this.

Senator VOINOVICH. In other words, it wasn't part of their charge.

Mr. JACZKO. It was not part of their charge, no. And it is something that we are really looking at, is seeing how we balance that security responsibility between the regional inspectors and the residents. We are looking at providing more responsibility for the resident inspectors in this particular area.

Senator CARPER. Senator Casey, you are recognized. You have 7 minutes, if you would. Thanks.

Senator CASEY. Mr. Chairman, thank you very much.

As a guest of this Committee, we are honored to be a part of this discussion.

Chairman Klein and the commissioners, we want to thank you for your work and your testimony today.

I have a couple of questions about the process and procedure here, before and after this incident. One thing that I wanted to, Chairman Klein, direct your attention to is that one of your responses to Senator Carper's question about what happened with the initial allegation here. It is my understanding based upon work that our staff has done and people they have spoken to, that even though in this instance you had an anonymous letter, which triggered this ultimate inquiry, that letter was in fact delivered to the NRC by an individual who left their name, address and their lawyer's name. I think that alone should have triggered action by the NRC that a minimum contact would be made to the lawyer of this person, and certainly that there should have been followup done. Even though where this thing started it is anonymous, but that was in fact delivered.

What can you tell me about the details of how this information came to the attention of the NRC?

Mr. KLEIN. Senator Casey, the letter was not anonymous. The individual actually signed it, and he did not refer initially to a lawyer. So when the allegation came in, it came in to the resident inspector. The resident inspector, according to procedures because of the nature of this, sent the letter to the region. We have an Allegation Review Board that then determines how to handle that activity.

So it did not fall in a crack, in other words. This allegation was taken seriously. It was followed up, but because the individual that had signed the letter that said don't contact him, that again is a lessons we have learned. Fundamentally, we should have gone back and contacted the individual.

In the letter, as Commissioner Lyons and Commissioner Jaczko indicated, the primary complaint that the initial allegation letter had was alleging long work hours and inattentiveness in the bullet-resistant enclosures. Again, what the photographs that were taken later demonstrated, the inattentiveness was in the ready room, where people were supposed to be waiting in order to respond. In those ready rooms, I am sure you saw the same room that Senator Carper and I saw, the initial ready room was not very conducive to maintaining attentiveness. It was not well cooled. It was warm. There were not activities in which they could work on. So there are a whole variety of reasons why inattentiveness occurred in that room.

Senator CASEY. But I ask you, how do we get from March 27, 2007, when NRC received the whistleblower's allegation, and it wasn't until June 2007 that Exelon reported back with its finding that it had not found any instance of inattentive security personnel? How does that happen, to have that much time transpire? I don't care how incomplete the allegation is or how off target it may have been compared to what was happening in the ready room. How does that happen that that much time passes when you have an allegation which involves security?

Mr. KLEIN. Again, what we did is we followed our procedures. As I indicated earlier, our procedures were there, but the outcome was not what we expected. The resident inspector passed that allegation to the regional office. The regional office had an Allegation Review Board that determined, yes, this is serious.

Again, we get a lot of allegations. We treat all of them seriously, but some are handled differently than others. Because of this nature, it went to the Allegation Review Board in Region I. Region I then put it in their process to administer and followup. Part of that followup put the responsibility back on the licensee and said we have this allegation; tell us what you have done; how you can verify that this is not occurring.

In other words, we then put the burden on Exelon, the licensee, to tell us, convince us that this is not happening. Once they conducted their interview process. They talk to people, and then they write their response. We then review it.

So it was a process of allegation going to region; region coming back to the licensee; licensee conducting their assessment; and then getting back to us.

Senator CASEY. What is different now?

Mr. KLEIN. What is different now is that we will contact the alleger directly. We will followup.

Senator CASEY. Let me just interrupt for a second. You are saying that in this instance, the individual signed it, but my point on anonymity is they wanted to remain anonymous. Is that correct?

Mr. KLEIN. This individual was actually reflecting conditions on the plant. This individual had been terminated about 2 years earlier. So he indicated of his concerns, and was representing other guards. So the individual that signed the letter, the complaint, had been terminated 2 years earlier. So he was no longer an employee, but he was expressing these concerns on behalf of the other guards.

Senator CASEY. OK. I think we are talking about two different things here. We are talking about whistleblowers, in this instance Mr. Kerry Beal. And you are talking about a second person, are you not?

Mr. KLEIN. No. Kerry Beal was the second, the first alleger, the written response.

Senator CASEY. But we are talking about two people here?

Mr. KLEIN. Yes.

Senator CASEY. I think that has to be clear for the record.

Mr. KLEIN. The second person, unfortunately, never contacted the NRC. Again, that was disappointing for us, the fact that he did not come forward and express those concerns to us. But Mr. Beal was the one who had the evidence. In other words, the first alleger

was a written letter claiming facts. What Mr. Beal had was actual evidence. We didn't hear of that information until September.

Senator CASEY. Tell me what is different now. If something like this transpired now, what specifically have you changed in your process? I think in these instances, the procedure—I should use the word procedure, process is not the right word—the procedure is very important, and then how it is implemented and followed is obviously critical.

What has changed specifically with regard to procedure and also with regard to how that procedure is implemented or followed up on when you have an allegation?

Mr. KLEIN. I will talk initially, and then I will ask Commissioners Jaczko and Lyons to followup.

Senator CARPER. I am just going to ask you to go ahead and be fairly succinct in responding to this question so we can recognize Senator Craig. But go ahead and respond.

Mr. KLEIN. OK.

What we are doing is, we are not finished with all of our improvements because we still have to hear from our Office of Enforcement and the IG. What we have done now is that an allegation like this that will come in, we will be much more rigorous. We will followup immediately and we will be notified from the resident inspector all the way up through the region to the commissioners.

Senator CASEY. When you say followup, what does that mean? In other words, my understanding is prior to this, you had a review board. In this instance, that was referred back to the company. What is different about that initial activity that takes place? When the allegation come to NRC, what happens? What events are triggered in that initial time period?

Mr. KLEIN. Our allegations, if it comes into the resident inspector, will still go to the region to make sure that we handle it appropriately, but we will be much more thorough and much more timely.

Senator CASEY. When you say it will go to the region, do you mean——

Mr. KLEIN. In this case, it would be near Philadelphia for Region I. We have four regional offices in the United States.

Senator CASEY. You mean the regional inspector will be the first level of review, is that what you are saying?

Mr. KLEIN. The resident inspector will probably get the initial allegation, and we will make sure whether we handle it internally, how it is handled, or whether it goes back to the licensee. For a case like this, obviously everyone's expectations and antennas have been raised. We will handle it much more thoroughly and much quicker.

Senator CASEY. OK. I just want to take another couple of minutes.

The allegation comes to your attention. Who reviews it at that moment?

Mr. KLEIN. Initially, whoever receives it, probably the resident inspector.

Senator CASEY. The resident inspector. Then when does the regional part of this come in?

Mr. KLEIN. Probably about 30 minutes later.

Senator CASEY. OK. And then what happens after that?

Mr. KLEIN. The region will determine how to handle it, whether we handle it totally internally or whether we go back to the plant.

Senator CASEY. Do you have a timeframe for this within which, 30 days, 60 days?

Mr. KLEIN. I think in a case involving security, it will be very quick.

Senator CASEY. But you don't have any final procedure in place?

Mr. KLEIN. Our procedures now say within 30 days, but again we are modifying those procedures.

Senator CASEY. OK. I want to come back, because I know that Senator Craig has been waiting, but I will try to come back to this. Thank you.

Senator CARPER. And you will have a second round.

Senator Craig, thanks for your patience. You are recognized.

Senator CRAIG. Thank you very much.

I am going to take a slightly different track because I think these questions have been very thorough and are getting to the heart of it. I guess my only reaction, Commissioner Klein, is that don't make it too bureaucratic. Make is nimble and responsive in a very timely fashion when these kinds of things happen. I am always fearful, you know, clouds can have silver linings, and in this instance where clearly a whistleblower exposed, there was not a security breach, but from it we can learn a great deal. You are learning a great deal.

My only cautionary note would be won't make the process so bureaucratic that somewhere along the line, someone doesn't respond in a timely fashion.

My question is of you, Commissioner Lyons, in a slightly different tack, but something that does relate to security. You are familiar with the advanced test reactor at the Idaho National Laboratory. We have now designated it as a national user facility for research for all universities to use onsite and even remote for research projects.

Now, I move to two, could you please take a moment to reflect on your views of the importance of university reactors and user facilities such as ATR in teaching, and how important it is to maintain these reactors as we teach the next generation of nuclear professionals, and this third caveat, in the context of GAO's recently issued report on the security of university reactors and their questioning of the NRC's risk assumptions.

Now, that may be a little bit of a convoluted question, but I think when we are talking security, there are reactors that are intensely safe and secure, even though we have slips within them, and then there are a lot of other reactors out there that are secure, but possibly less secure in the sense of where they are and how they are handled and who deals with them, and the protocols. And now we have had a GAO audit in part that I question as to its assumptions.

Would you react in that context?

Mr. LYONS. Senator Craig, as you said, you had a number of different questions embedded with that. Let me try to briefly address several of them.

Senator CRAIG. All right. Thank you.

Mr. LYONS. You asked about the importance of support for university reactors and the importance of supporting the educational program in general. I think the whole Commission has been very outspoken in past visits with this Committee on our very strong support for a national educational program that supports the overall nuclear power industry. This Committee, and I believe other committees, have had some concern with the way the Department of Energy has chosen—I am not sure how to say it—with the DOE's program that has been authorized in this area, and that led to appropriations to the NRC in the current year for us to undertake an educational program in support of this national need.

We strongly support, the need for that education. We are moving as expeditiously as humanly possible to set up a strong national educational program in these areas. That educational program, of course, needs to be supported, and must be supported by university reactors, the research reactors that are around the Country. ATR, I believe, that you referenced, is strictly speaking a DOE reactor and not considered one of the RTRs. It is regulated by DOE. But there certainly are a number of research and test reactors around the Country which have absolutely critical missions.

There are many, many differences, as I think this Committee is well aware, between the research reactors and the power reactors, starting with a gigantic factor, multiple decades of difference in power levels and potential concerns from the amount of radioactive materials involved.

You asked for brief comments on the recent GAO report about which our Chairman spoke in his testimony. He indicated very strong concerns. I certainly share those very strong concerns. We believe, based on the evaluations that we have done, very extensive evaluations, that the research reactors at universities around this Country are safe and secure, based on the level of threat that they present. We can expand on that answer as you wish with details on the GAO report, but perhaps I should stop there on initial answer.

Senator CRAIG. And that satisfies me. Obviously, you are on point and that is what is critical here as we look at the GAO report and move from that, and your reaction to it.

Mr. Chairman, I have not seen your full testimony and I will look at it in response to that. That is important because there is a broader range of security here, but you have said it well, Commissioner Lyons, in relation to mission. I don't know that the average citizen in our Country can distinguish the difference, and I think it is important that we help shape the distinguishing of difference between a commercial production reactor and a test facility and what it does or doesn't mean to the average person as it relates to security, and therefore methods of operation.

Thank you.

Mr. JACZKO. Senator.

Senator CRAIG. Yes.

Mr. JACZKO. If I could offer one point on something that Commissioner Lyons mentioned where I think there is some disagreement among the commissioners, and it does have to do with the university programs that he referred to. While those programs are cer-

tainly valuable programs and I personally believe at $15 million, that program is probably significantly underfunded.

I don't believe that that program is appropriately placed at the Nuclear Regulatory Commission. As the regulatory body that often may interact with the university reactors and others in that community in a regulatory capacity, I think it calls into question and raises issues of public confidence and potentially conflicts of interest between the Commission and the regulated if we are the same entity that is giving out grants to those same entities that we regulate.

So I certainly understand the Congress's interest in this program, but I think fundamentally that is a program that belongs back at the Department of Energy or at some other agency that may have an interest in educational programs, but not fundamentally long term at the Nuclear Regulatory Commission.

Senator CRAIG. OK. Thank you.

Mr. KLEIN. As Commissioner Jaczko indicated, this is not one in which I agree, and Commissioner Lyons agrees. We believe education is very important for the work force that not only the Nuclear Regulatory Commission needs, but also other Federal agencies and also the industry. So the nuclear education program that is proposed and we are now operating at Congress' request is a work force initiative. It includes trade schools, new faculty, individuals, and also scholarships and fellowships. This has nothing to do with regulatory activities. This is a work force initiative education program and it is one which the Country needs.

Senator CRAIG. Yes. I thank you.

With 47 seconds left, Mr. Chairman, let me suggest that the work force issue and the training issue, the educational issue is a component that is critical out there at the moment as we grow ourselves back into a capability as a Country to respond to what appears to be the demand and the need to build these reactors. I had mentioned a major utility that chose to stand down.

They gave a lot of reasons for standing down. One of them just happened to be the licensing process and its timing. The other one was simply the ability to staff, the ability to find the right and properly trained people, and all of that as we now compete in a world market for these trained individuals. So those educational tools, wherever they are placed, we ought to focus on them, and they are critical in the overall growth of this industry for all the reasons that we are now and appropriately support it.

Thank you.

Thank you, gentlemen.

Senator CARPER. Thank you, Senator Craig.

Commissioner Jaczko, if I could, I think in your prepared statement you discussed the NRC's new rules, I think they are proposed rules, to restrict work hours for security guards. Let me just ask, is security guard fatigue a serious issue across the fleet of 104 nuclear power plants? And what is the timeline for implementing these new fitness for duty requirements?

Mr. JACZKO. To clarify, it is a final rule for the Commission at this point, but it is still undergoing the subsequent bureaucratic process for OMB review and other processes that happen before it

actually becomes a final regulation. So that is working its way through.

The question about whether fatigue is an issue is something that we have recently asked our licensees. Following the Peach Bottom incident, we sent out a request for information from licensees to tell us what their work hours are and what are the kinds of hours that we are seeing.

But there have been, since 2004 over 20 incidents of inattentive security officers, some of which have been identified by NRC inspectors, some of which have been self-reported. So there is clearly evidence that these kinds of incidents are occurring.

We will have better information when we complete our review of the responses to this request for information that the licensees provided.

Senator CARPER. One of the things I want to better understand is the timeline for completely implementing the new requirements.

Mr. JACZKO. The new requirements won't go into effect probably for about another 22 months. We are hoping to get the rule finalized in March, and then it has an 18 month implementation timeframe. So what I have certainly asked the staff to look at is are there ways we can accelerate some of those components, particularly on the security side, for the fatigue requirements. I think there are some areas, particularly in the programmatic elements of the new rule, things like having a better process in place for individuals who are fatigued to be able to report that to their supervisors and not have an adverse employment decision because of that. Getting that kind of program in place earlier I think would be a real enhancement.

Senator CARPER. I am not interested in trying to micromanage that process, but one of the questions I will ask for the record, and I will just telegraph it now, is whether or not it might make sense for Senator Voinovich and I, and maybe others on this Subcommittee, to consider legislation that would somehow reduce that 18 months. It seems like a long time. So I just wanted you to know we are thinking about that, and we would ask you to think about it as well. We will reach out to you in writing for your thoughts.

The last question I wanted to explore deals with the composite adversary force. As I understand it, the NRC tests every facility security force using what they call force on force exercises. The composite adversary force that is used to challenge each plant's security is contracted by the Nuclear Energy Institute.

Let me ask, why doesn't the NRC have its own security force to test each plant's security?

Mr. KLEIN. Senator Carper, I will start and then I will delegate to our resident expert on force on force, Commissioner Lyons.

We have looked at a variety of ways on how we can better challenge and verify the force on force activities. Having spent 5 years at DOD watching a lot of force on force activities and then coming to the NRC and observing those, we do it well. So the system is working.

I will let Commissioner Lyons give additional guidance on that.

Senator CARPER. Yes, as I understand it, the folks who do that, who actually come in as the adversary force, are people who are drawn from the industry itself, who come in and maybe cycle

through an 18 month to 36 month commitment, and then go back to work within their own plant. Is that the way it works?

Mr. LYONS. That is correct, Senator Carper. Those individuals are not drawn only from Wackenhut facilities. They are drawn from all facilities.

I have to admit that when I was on Senate staff and when I first joined the NRC, I was quite skeptical about the current situation which has continued in which the NEI contracts for the composite adversary force. However, despite my skepticism, I have been very pleasantly impressed to learn how the NRC has maintained oversight of the activities of the composite adversary force. Frankly, it is a very, very impressive record.

One of the concerns that I have heard expressed is whether that composite adversary force, since it is contracted by NEI to Wackenhut, would find issues at a Wackenhut site. And they most certainly have found issues at Wackenhut sites. Furthermore, with the change in Exelon's practices, the number of sites with Wackenhut will be substantially reduced.

I have continued, therefore, to support the current situation, even though I came in very skeptical of it. I believe that the composite force is doing an outstanding job under the oversight of the NRC.

Senator CARPER. All right. Well, thanks for that observation.

Commissioner Jaczko, and then I am going to ask Senator Voinovich if he has any closing questions for this panel.

Mr. JACZKO. If I could just briefly say, I think the issue that we are dealing here is an appearance of a conflict of interest. As I am sure you are aware, in those kind of situations an appearance can be as significant sometimes as an actual conflict of interest. So I think it is an important issue that we need to address and explore other possibilities about how we could conduct this.

The Commission does have in front of us right now a voting paper to decide this issue and look at alternative approaches. One of the biggest drawbacks right now to an alternative approach of having the NRC itself contract and manage that adversary force is fundamentally cost. We would be talking about a program that would be in the range of several million dollars to do that. So in many ways, I think that is the real impediment in my mind to moving forward in a different direction.

As others have said, the issue here, from what we have seen, is really more of an appearance of a conflict than an actual conflict at this point, but sometimes those can be as significant as an actual conflict.

Senator CARPER. Good. OK, well, thank you for adding that.

Senator Voinovich, anything else for this panel?

Senator VOINOVICH. No, thank you.

Senator CARPER. OK. Senator Casey, you are recognized for 5 minutes.

Senator CASEY. Very briefly. Thank you very much.

I think in the interest of time, in order to supplement the record to followup on some of the questions that I was posing to Chairman Klein, I would ask that the NRC provide to the Committee for the record a fairly detailed summary or flow chart of how allegations are handled. Because of the time period within which the change

in regulations may not be able to be expedited, it sounds that way that it won't be, you won't be able to accelerate that, that you annotate or add to that flow chart anything that is new in terms of—in other words, procedures you can follow without having to go through the regulatory process. I think it would be important to know that.

Commissioner Jaczko, I wanted to highlight something that you had in your written testimony, which struck me. You talked about the report done by the regional office regarding the allegation at Peach Bottom, and then you say, and I am looking at the fifth paragraph of your testimony, you say, "We have already begun making changes such as those I just mentioned, but I believe there is more agency-wide work that needs to be done to fully evaluate the agency's handling of this issue." I am happy to read that. But then you go on to say, "The foundation of the Commission's additional allegation program improvements must be built on a more comprehensive review than we have allowed the staff to conduct so far, along with consideration of forthcoming findings by the Inspector General."

In the context of that statement and the context of some of the questions that I posed to Chairman Klein, where do you think the NRC is with regard to having learned from this incident? And where do you think it needs to go? Because I have no doubt that Chairman Klein and the Commission have and will learn from this, but the Congress and I think the American people need to see evidence that you have learned. I just want to get your perspective on this, as well as Commissioner Lyons, in the time that I have.

Mr. JACZKO. In my view, we are still early in the process of learning. For me, the most important thing is that we learn the right lessons, not that we learn something quickly. I think the focus of our effort so far has been on self-assessment from the region in which this incident occurred. We haven't yet fully integrated all the allegation individuals and other experts in other regions, for instance, into the process to really independently evaluate what happened in Region I.

So far what I think the indications I have are is that it was not strictly a procedural problem, that there may have also just been issues with implementing the procedures that we have. So we want to take a look in other regions about how they may implement the procedures, to make sure that we are learning all the right lessons.

So I think there is still a lot that we have to learn, but I think it is worth taking the time to get it right and make sure we talk to all the experts. The Chairman mentioned we have an Office of Enforcement that actually has the responsibility for this allegation program. We want to make sure that they are fully involved and that their experts are able to provide information on this process as well. Really, the most important piece that I think is missing is really bringing in the other regions as well, and getting their insights and their input into the process.

And then, of course, the one that I did specifically mention, which is the Inspector General, because that really provides the independent look at this. And they are looking at it in really much the same way. They are looking specifically at Region I to see what they did, and then they are looking to see how other regions handle

these allegations as well. So they will get both sides, in a way, of that picture.

But the most important focus for me, really, is just to make sure that we do this right, and not that we be too concerned with how quickly we move. We want to do it quickly, obviously, but we want to make sure we get good information.

If I could just add one other brief point, and it is something that hasn't been highlighted as much here. We have talked a lot about the allegations, but one of the areas that we actually identified as a weakness at Peach Bottom was in their behavioral observation program. This is a very important program in the security arena that we use to identify people who could exhibit characteristics that would indicate that they are an individual who is not necessarily there for the benefit of the facility, that they may have ulterior motives. That is a very important program and it is a very crucial part of our force on force exercises.

The way that we do security is to be able to identify individuals who, as I said, are doing things that are intentionally or could intentionally damage the facility. That program failed in this instance, obviously, when you have an entire security shift that is not focusing on security, but rather is colluding to be inattentive. And we have seen other facilities, Turkey Point for instance, where there have been similar instances of a failure in this behavioral observation program among the security officers.

So that is an area that I think we also need to make sure that we fully explore and evaluate as we go forward.

Senator CASEY. Thank you.

Commissioner Lyons.

Mr. LYONS. Just to add very briefly. Mr. Jaczko already summarized that we currently have the report of the region. There is a senior staff group that is now assessing that report, pulling in more information from the other regions, and of course the Inspector General. All of those will contribute to a package coming to the Commission for our review, and certainly to look toward improvements.

One comment I wanted to make, though, as Commissioner Jaczko mentioned involves, the behavior observation. The behavior observation program is certainly very important and ties in with the comment that several of the members of the Subcommittee have already made with regard to zero tolerance.

The fact that there has been in the past (and this is not dictated by the NRC, but by the licensee and the contractor) a zero tolerance policy to some extent undermines the behavioral observation program. To me, part of the answer to the issues that we are facing at Peach Bottom is to recognize that there needs to be flexibility in that zero tolerance. We need to encourage individuals who are fatigued to self-report or perhaps be reported by others into the behavioral observation program.

There has been some discussion of the so-called fireman's assistants, the small devices that people might wear. To me, if an indication on one of those devices can be entered into a corrective action program, which we would be doing for all other safety aspects of the site, instead of leading to immediate termination of the individual, we would have a far different response from the security of-

ficers. I am looking forward to the opportunity to blend all of these different points of view into the final set of responses.

Senator CASEY. Thank you very much.

Senator CARPER. Before our commissioners leave, on behalf of all of us, thank you for coming today. Thank you for your preparation and your responses to our questions. We will be following up with some questions in writing, as you know. We would ask that you continue to provide thorough and prompt responses there.

I hoped we would have an opportunity to get more specifically into the issue of a culture of safety today. We have not, though several of you have spoken to it directly in your testimoneys and some of your responses. What I think we have in mind, and our goal should be for everyone of the 104 nuclear power plants that operate in this Country, and those that may be built in the future, that there is an environment or culture that exists so that when any employee or supervisor or an inspector from the NRC sees what he or she believes to be a problem that could undermine the safe and sound operation of a facility, that they would feel compelled to report it promptly and fully to the appropriate authority.

The next step would be for the appropriate authority to take that report, to take it seriously, to fully investigate what has come to them, and as appropriate, to send up the chain of command to others, whether it is the regional offices that you have spoken to here today, so that others know that something has been raised and it is being investigated.

Subsequently, after a full vetting, and the concern is deemed to be unfounded or not one that we really need to be concerned about, that whoever has brought the concern be debriefed or briefed as to the outcome, and we explain to him or her that we appreciate what they have brought forward, but here is why we have not deemed it appropriate to act on.

On the other hand, when we have a situation like we have at Peach Bottom, where there was a problem, and it is a problem that could affect all 103 other nuclear power plants, that we take that lesson that we have learned at Peach Bottom and we fully spread that lesson across the Country so that other plant operators, others that are providing security and your inspectors are fully aware of this, and that we can learn from the mistakes, in this case at Peach Bottom.

I think that is our goal. My hope in conducting a hearing of this nature is that we will help further that goal in the creation of that kind of culture of safety at every plant because we need it.

With that having been said, again we thank you for being with us today.

Again, Mrs. Klein, thank you for joining us, too. Thank you so much.

The third and last panel is welcome to come forward and to join us.

To the members of our third panel, thanks for waiting, and thank you for your presence here today and your testimony. We look forward to asking you some questions.

Let me just introduce the panel from our left to our right, and Mr. Crane, we will give you the privilege of being our lead-off hitter.

Mr. Fertel, nice to see you. You can bat cleanup, if you would.

David Lochbaum is Director, Nuclear Safety Project, Union of Concerned Scientists. Thanks for coming. Welcome.

Second is Eric Wilson. Mr. Wilson is the Chief Executive Officer of G4S Regulated Security Solutions, which I believe was formerly Wackenhut Nuclear Services. Thank you for coming today.

Mr. Crane, Christopher Crane, is the Chief Operating Officer of Exelon Generation. Thank you. Nice to see you.

And then we will skip over Mr. Wilson and go right to the real David Lochbaum, who is Director of Nuclear Safety Project, Union of Concerned Scientists.

And finally to Marvin Fertel over here. He is the Senior Vice President and Chief Nuclear Officer of the Nuclear Energy Institute.

I think I got it right that time.

All right. Mr. Crane, in any event, you are No. 1, and we look forward to your testimony. Take it away. I am going to ask you to limit your testimony to about 5 minutes. If you run a little bit long, that is OK, but not much longer, and we will ask our questions. Thanks.

STATEMENT OF CHRISTOPHER M. CRANE, CHIEF OPERATING OFFICER, EXELON GENERATION

Mr. CRANE. Mr. Chairman, Senator Voinovich, thank you very much for the opportunity to be here today to discuss the security at our nuclear plants. I want to review what we are doing to ensure that all Exelon nuclear plants are safe and why the public can have complete confidence in the continued safety and reliability at our plants.

Exelon is the largest owner and operator of nuclear power plants in the United States. We have 17 reactors that we operate at 10 locations in Pennsylvania, New Jersey and Illinois, with over 8,000 employees, one eighth of those being security personnel providing protection on 24/7 at our facilities.

Although the security-related issues that were uncovered last year at Peach Bottom are completely unacceptable, it should not disparage the excellent work of the other thousands of employees at our facilities. Nuclear plants being part of the critical infrastructure, continue to be some of the best-protected facilities in the United States. Since 9/11, Exelon has spent $160 million enhancing the architecture and the security forces at our facilities. We are proud at Exelon of our continued sustained performance in safety and reliability at our facilities, and safety is priority one.

Because of our strong commitment to safety, our reaction was outrage when we saw the video of the clear images of sleeping guards at our Peach Bottom facility. I will explain our investigation, what it revealed, and the actions we have taken, but a little bit on the ready room. Senator Carper, you have been to the ready room so you understand. The ready room is not a guard post. It is a staging area for personnel to be ready and able to respond to other security officers and posts as needed, based off an adversarial attack.

Although the security at the plant and the health and safety of the public were never at risk due to our extensive defense in depth,

as the Chairman of the NRC previously stated, the behaviors were definitely contrary to Exelon standards and were completely unacceptable.

Equally disturbing, as Commissioner Jaczko stated in his testimony, was the realization of a subculture that existed where the poor behavior was tolerated by other security guards. Upon becoming aware of the details, we launched a comprehensive investigation and immediately made changes in the security procedures to ensure we had the enhancements as required.

At the beginning of it was our decision to terminate our contract with Wackenhut. I want to make a clear point here. This was not to make Wackenhut the scapegoat. The responsibility for having attentive security guards, as with all attentive employees at our facilities, is born by the licensee and that is Exelon. Our decision to terminate our agreement with Wackenhut was to greater enhance our flexibility for programs like behavior observation, training, selection, and better align the security organization into the site family and feel part of that organization.

We have increased our oversight by performance of senior management doing direct observations, face to face communications with the guards, and believe have put effective measures in place to continue to grow the trust of the organization between the work force and management. The security transition at Peach Bottom has gone well and we believe the security force feels that they are part of the team, but it is a beginning of that part and we still have actions to go to continue to build their trust and integrate them.

We also have conducted evaluations at the remaining facilities and found no evidence of inattentiveness, but have decided that it is the best organization structure to have the security forces at those locations brought in-house also.

Prior to implementing the full transition, we have made some changes, modified procedures, and conducted training emphasizing compliance, looking at shortened security rotations and random post checks. We have a highly trained paramilitary security force that is coupled with extensive physical barriers and architectural mechanisms to provide additional containment to any potential releases or accidents within our facilities.

Before I conclude, I do want to comment on our allegation review process. As a result of this issue, we have made improvements to our process. However, even prior to this issue, our review process was robust. It is regrettable that we received the initial comments from the NRC in April 2007 and our investigation did not uncover the sleeping guards. We have talked about the terminology, the wording in the investigation, but we still believe the onus was on our process to uncover and to fully evaluate.

We receive on average about 28 referred allegations from the NRC on an annual basis, and 6 of those we substantiate. We receive from internal employee concerns on average a few hundred a year and 25 percent of those are substantiated. We have employees reporting on issues within the plants, all of our plants, around 10,000 individual reports on an annual basis. So there is a culture for reporting issues. There is a process in place for taking referred allegations and employee concerns and diving into those. We have and will continue to make enhancements on the process.

Exelon is committed to safe operations of our plants, and we provide a strong security program at each site. We continue to make significant financial and personnel resources to comply with the NRC regulations, but that is not as a minimum. That is just as a base, and we continue to drive from the corporation to enhance above that. We will continue to work closely with the NRC and all appropriate Federal and State agencies to drive this compliance.

I will end it there, and look forward to your questions. Thank you for the opportunity.

[The prepared statement of Mr. Crane follows:]

Statement of

Christopher Crane
Executive Vice President, Exelon Corporation
Chief Operating Officer, Exelon Generation

Before the

United States Senate
Committee on Environment and Public Works
Subcommittee on Clean Air and Nuclear Safety

Security of Our Nation's Nuclear Plants

February 28, 2008

Mr. Chairman and Members of the Committee, I am Chris Crane, Executive Vice President of Exelon Corporation and Chief Operating Officer of Exelon Generation. Thank you for the opportunity to appear before you today to discuss the security of the nation's commercial nuclear power plants. While others will provide the Committee with a broad industry perspective, I want to discuss what we are doing to ensure that Exelon's nuclear plants are safe, and why the public can have complete confidence in our continued ability to protect our plants.

BACKGROUND

Exelon Generation is the largest owner and operator of commercial nuclear power plants in the United States. We have 17 reactors at 10 sites in Illinois, Pennsylvania and New Jersey. Exelon Nuclear employs over 7,000 highly skilled and dedicated people, including many who live within the 10-mile emergency planning zone around our plants. In addition, over a thousand security personnel are employed to protect these plants 24 hours a day. I would like to stress that although we had a security related issue at Peach Bottom that was completely unacceptable, that event should not disparage the excellent work that is being performed by the thousands of dedicated employees at Exelon each and every day. I am extremely proud of the efforts of these individuals.

Exelon's nuclear plants – and the other U.S. commercial nuclear reactors – continue to be the best-protected industrial facilities in the United States. Since the events of 9/11, Exelon alone has spent in excess of $160 million in security enhancements, and we have added many additional security officers to each of our plants.

Exelon is also proud of our sustained performance and continued commitment to safety and operating excellence. Our plants are among the industry best in terms of capacity factor and safe operation. These high capacity factors ensure that we can provide economic and reliable electricity to millions of consumers. But more than production, safety is "priority one" for all of us.

SECURITY AT PEACH BOTTOM

It is because of our strong commitment to safety that I was outraged and extremely disappointed when I saw a video that showed clear images of sleeping security guards in a ready room at our Peach Bottom Atomic Power Station in Pennsylvania. I will explain what our investigation revealed and the actions that we have taken, but first I would like to spend a moment describing the ready room and the duties of the security personnel who work in that room.

Contrary to some of the published reports, the ready room is not a guard post. Instead, the ready room can best be described as a staging area for security personnel that would respond to assist the team that is actually at physical posts in the event of an incident. Some compare it to individuals on duty at a firehouse. And although the overall security of the plant and the health and safety of the public were never at risk due to the extensive "defense in depth" security structure at the plant, such behavior on the part of our security officers is contrary to Exelon standards and expectations and is completely unacceptable. Equally disturbing was the realization that a "subculture" existed where this behavior was tolerated and accepted among certain members of the security guard force. We have since taken specific and aggressive steps to address these issues.

Upon becoming aware of this issue, we launched a comprehensive investigation at Peach Bottom and immediately made changes in site security procedures to ensure that our security officers are attentive and focused on their duties at all times. Those changes included increasing the number of management and supervisory oversight checks at various locations (e.g., ready rooms and bullet resistant enclosures), increasing the randomness of communication radio checks at guard posts, and installing video cameras in the ready rooms that provide continuous live feeds to security shift supervision.

To begin to address the cultural issue, on September 21, Exelon terminated its contract with Wackenhut to provide and manage security services at Peach Bottom, and we began a careful screening process to determine which Peach Bottom officers met our standards and should be hired as part of the new Exelon Nuclear Security organization. On November 1, after completing this screening process, we welcomed the new security officers into Exelon Nuclear, emphasizing to each and every officer our specific expectations for them to embrace Exelon's values and performance standards. These standards include

safety, integrity and accountability and, as with all Exelon Nuclear employees, the requirement that they embrace the imperative to continually challenge others and question what does not seem right to ensure that our organization continues to improve.

To ensure the continued commitment to these values and that our expectations are met, we have applied our proven Exelon Nuclear Management Model to the new security organization and have established our own standards of operation. We now manage our own security force at Peach Bottom and are in the process of transitioning to a similar structure at the rest of our nuclear facilities. The hallmark of our management model is a high level of accountability both for managers and employees. It is the framework that is the cornerstone of our entire business.

Our actions at Peach Bottom are working to ensure that a culture exists within our security organization where individuals feel free to raise issues of importance to our company. We recently asked an independent third party to conduct an assessment of the safety conscious work environment within our security organization. This assessment identified that the safety conscious work environment within Peach Bottom Security ranked in the top industry quartile. Importantly, every one of the safety conscious work environment survey respondents indicated they would inform management or would document a potential nuclear safety issue or concern. We performed an extensive and detailed review of that independent assessment and are taking several additional actions to further enhance the Peach Bottom Security safety conscious work environment. These actions include continuous communications on the importance of identifying and then fixing the problems.

Management engagement with security officers at Peach Bottom has significantly improved to ensure our expected standards, behaviors and attentiveness is being met. We have increased the oversight performed by our senior plant personnel at key security locations. In addition, key security personnel will provide oversight and interact directly with the guard force both day and night. This will ensure (1) direct observation of the work, (2) face-to-face communication with the security officers to ensure that concerns are addressed on a timely basis, (3) effective use of the corrective action program, and (4) increased trust between management and the workforce.

The security transition at Peach Bottom has gone well. The security officers feel that they are a part of the Exelon and Peach Bottom team. We have high expectations for these individuals, and they are meeting those expectations. We will not tolerate less than top performance.

EXELON SECURITY FLEET WIDE

Following the Peach Bottom event, we determined that we could manage security and ensure accountability in a more effective way across our entire fleet by providing more direct oversight. As we have already done at Peach Bottom, we are in the process of bringing "in-house" the security operations at all of our nuclear plants. This security transition at our other nine nuclear plants is being phased in and is scheduled for completion in July of this year.

Even prior to implementing the transition, we have made changes to modify our fleet-wide procedures and conduct training to emphasize compliance, expectations and awareness. We have also shortened security post rotations, conducted an assessment of each security post and facility to determine if conditions could negatively impact attentiveness or vigilance, and implemented appropriate mitigation measures where necessary. In addition, to verify the effectiveness of these changes, security shift management conduct random security post checks twice per shift.

As has always been the case, the design and operation of each of our plants include a "defense in depth" approach. The security officers are highly trained paramilitary personnel who are qualified in force protection and anti-terrorism techniques. Extensive physical barriers and fencing limit access to the plant and the reactor. In addition, the containment building, the reactor vessel and the nuclear fuel itself serve as additional layers of protection against any release of radiation to the public. These multiple layers of defense, along with the guard force, protect the public from any potential exposure to radiation.

ALLEGATION REVIEW PROCESS

Before concluding, I would like to comment on the review process for all allegations that are referred to us from the NRC. On average, we receive 28 referred allegations per year at our 10 sites. We substantiate or partially substantiate, on average, six allegations per year, suggesting that we do not shy away from substantiating referred allegations.

As you have heard, we had an opportunity to address the inattentiveness issue at Peach Bottom in late April, when the NRC referred to us an allegation stating that "Peach Bottom security officers were sleeping while on duty in the bullet resistant enclosures (BREs), and in other areas, due to fatigue from working excessive overtime and from not being able to adjust to 12 hour shift schedules." We investigated that allegation and were not able to substantiate the concern. That is regrettable. However, had we had the videotape at that time, I assure you that we would have acted on that information with as much rigor as we did when we ultimately were told that there were guards sleeping in the "ready room" and subsequently obtained the video.

We have always used a robust, proceduralized allegation review and response process containing many checks and balances to ensure that all referred allegations are thoroughly evaluated. For example, all NRC-referred allegations are reviewed with corporate senior management. This team includes senior management in Licensing and Regulatory Affairs, Human Resources, Nuclear Oversight and the Legal department. This group ensures independence and helps establish scope and depth.

Qualified investigators are then appointed that are both independent from the organization where the issue is alleged and are technical experts in the area of concern. Our procedure contains guidance for the investigators in preparing for and conducting their investigations. This guidance requires that investigations must be of sufficient depth to establish the scope of the problem and to identify potential generic implications. The scope must be sufficient to ascertain if the problem is systemic in nature. Once the investigation is concluded, Licensing performs an independent challenge of the facts presented by the investigators. Senior management then reviews the report. If the allegation is validated, appropriate corrective actions are identified and tracked in our corrective action system.

As a result of the issue at Peach Bottom, we have taken steps to revise our procedure, including a revision to ensure that the population of individuals interviewed (e.g., shifts, teams, crews, departments) is adequate to determine if the problem is isolated to a specific shift/team/crew or if it is present at the department or site level.

CONCLUSION

Exelon is committed to the safe operation of our plants and to providing strong security programs at each site. We have devoted, and will continue to devote, significant financial and personnel resources to assuring that our sites comply fully with all NRC requirements. In addition, we have established high performance expectations for our security forces. Those performance expectations include notifying management immediately of any concerns regarding the performance of their colleagues. We continue to work closely with the NRC and with federal, state and local law enforcement agencies to ensure that we have a fully integrated plan to respond to events and guarantee effective security at our sites.

Mr. Chairman and Members of the Committee, thank you again for the opportunity to appear before you today. I look forward to answering any questions that you may have.

RESPONSE BY CHRISTOPHER M. CRANE TO AN ADDITIONAL QUESTION FROM SENATOR INHOFE

Question. Mr. Wilson commented in his testimony that there was "too much separation" between security and other plant operations. Do you agree, and, if so, how do you think it should be addressed?

Response. The creation of Exelon Nuclear Security provides Exelon management the opportunity to directly engage the security workforce as Exelon employees. Feedback from security officers indicates an overwhelming appreciation for the opportunity to be a part of Exelon. The new security organization now has a complete Exelon Nuclear Security site management team versus our previous method of functioning in a contract administrative role. This team, similar to other Exelonsite organizations, is completely integrated within the station and works under the direct management of the site leadership team.

RESPONSE BY CHRISTOPHER M. CRANE TO AN ADDITIONAL QUESTION FROM SENATOR SPECTER

Question. Exelon terminated its relationship with Wackenhut in the wake of this incident last fall, and decided to make security an in house operation. Regarding this, in a December 18 letter to senator Casey, former Wackenhut CEO David Sanders states that "security is not a core competency of the energy manufacturer . . . it will be a challenge for them to conduct security operations better than Wackenhut". What steps are being taken to ensure that a similar situation doesn't reoccur?

Response. One of the major causes of the problems at Peach Bottom was inadequate leadership, management, and supervisory oversight of security by the Wackenhut leadership team to ensure that Exelon's expectations were being met. By creating the Exelon Nuclear Security Company, Exelon has developed the site security management organization in accordance with the proven Exelon management model. The Exelon management model includes focus on excellence in management and supervisory skill sets. Additionally, Exelon has taken a number of steps to ensure that we possess and maintain the core competencies necessary to meet the challenges of security in today's world. We have developed a corporate staff of security management and specialists that have years of experience in commercial nuclear security, military special operations, project management, and labor relations. As part of transitioning our security operations in house, we have added 11 individuals to the corporate security staff. Our site management teams are made up of not only experienced security management personnel but in many cases, managers with significant plant operations experience as well. This blend of talent and experience along with the fact that Exelon continues to be very active in industry working groups and task forces ensures that we maintain the required core competencies for functioning in commercial nuclear security.

RESPONSES BY CHRISTOPHER M. CRANE TO ADDITIONAL QUESTIONS FROM SENATOR BOXER

Question 1. In your testimony you stated that the NRC should take a more active role in investing allegations rather than sending the allegation to the licensee for investigation. Does the NRC defer safety allegations to the licensee? Please explain how you think the NRC should respond to security allegations and whether this differs from how they respond to safety allegations.

Response. My testimony did not State that the NRC should take a more active role in investigating allegations rather than sending the allegations to the licensee. The NRC does refer both safety and security allegations to Exelon for us to investigate. We recognize that protection of the alleger's identity is important, but on occasion, valuable details of the concern are removed to assure anonymity is maintained. In these cases, NRC has full benefit of the details and should consider providing that information to ensure that the investigation is complete.

Security plays an important role in plant safety and I believe that the response to security allegations should be handled in the same rigorous manner as safety concerns. This is how we do business today.

Question 2. In your testimony you stated that the NRC needs to strengthen its proposed rule on aircraft impact. Do you believe existing plants should meet the same security standards as newly constructed plants? What do you think a final rule should encompass?

Response. While my testimony does not State that the NRC needs to strengthen its proposed rule on aircraft impact, Exelon endorses the industry position, as presented in the Nuclear Energy Institute (NEI) letter to Ms. Annette L. Vietti-Cook

(NRC), "NEI Comments on NRC Proposed Rulemaking on the Consideration of Aircraft Impacts for New Nuclear Power Reactor Designs (72 Fed. Reg. 56287) (Oct. 3, 2007)," dated December 17, 2007. Exelon supports the intent of the proposed rule (for 10 CFR Part 52) and believes all new plants being licensed should address aircraft impacts. This would be accomplished by requiring the aircraft impact assessment as part of the design certification; by voluntarily amending existing design certifications; or by requiring the assessment at the time of the combined license (COL) application.

Exelon agrees that new plants should be required to meet the proposed rule. The proposed rule should not apply to holders of construction permits and plants where construction is substantially complete because it would be impractical.

Exelon believes that the aircraft impact rule should not be applied to existing operating plants. The security programs mandated by the NRC orders, the Design Basis Threat rule, and the protection provided by other Federal, state, and local entities, provide an adequate level of protection against the effects of aircraft impacts.

In regard to final rulemaking, the design features and mitigative activities resulting from aircraft impact assessment are part of the design and are not part of the physical security requirements of the plant. As such, it is appropriate for the rule to be in 10 CFR Part 52, as opposed to 10 CFR Part 73. The NRC, in conjunction with the Department of Homeland Security, sets the standards and provides the basis for security regulations at commercial nuclear facilities. The standard for commercial security forces at nuclear power plants is a reasonable expectation standard. It recognizes that that there are terrorist scenarios that are beyond the capability of a commercial company to provide protection. The protection against such events is the responsibility of the Federal Government.

RESPONSES BY CHRISTOPHER M. CRANE TO ADDITIONAL QUESTIONS FROM SENATOR CASEY

Question 1. Your testimony lays out Exelon's basic 4-step procedure for responding to whistleblower allegations (first, senior corporate management reviews the NRC-referred allocations; second, management appoints internal and external investigators and provides them with guidelines for conducting an in-depth review; third the licensing re-looks at the facts; and finally management reviews the report and, if the claim is substantiated, creates a plan of action). Can you provide me with the detailed protocol Exelon implements when responding to these complaints? And what new protocols have been instituted as a result of the incident with the sleeping guards?

Response. Exelon's detailed protocol for responding to NRC-referred allegations is contained in a procedure titled, "Responding to Allegations Referred by NRC and to NRC Investigations."

This procedure establishes roles and responsibilities for conducting the internal evaluation. An individual in our corporate Licensing and Regulatory Affairs department is assigned to act as the project manager for the allegation response. Investigators, who are independent of the asserted activities and possess the required knowledge and skill appropriate for the allegation, are assigned to conduct the investigations.

These assignments are determined by a senior management committee that includes Licensing and Regulatory Affairs, Human Resources, Nuclear Oversight, Legal personnel and a representative from the affected functional area, such as Operations, Maintenance or Engineering. This senior management committee also discusses scope of the allegation. The investigators conduct an evaluation that is sufficient in depth to establish the scope of the problem and to identify potential generic implications.

The results of the investigation are reviewed by selected members of the senior management committee prior to being approved and issued to the NRC. This process is typically performed within 30 days of the referral per NRC request. For assertions that have been substantiated, corrective actions are established and entered into the appropriate program (e.g., Corrective Action Program).

New protocols in the allegation procedure have been established since the Peach Bottom security personnel inattentiveness event. These changes were identified as part of the root cause evaluation conducted for the event. The allegation response procedure was revised to include consideration of external legal counsel to assist the investigators when an allegation has potential safety conscious work environment implications. Explicit direction was added to consider other types of investigative techniques when direct interviews are deemed inappropriate or ineffective. For investigations requiring a sampling of the affected population, a comprehensive sampling plan must be established such that the population of individuals interviewed

is adequate to determine if the problem is isolated to a specific shift/team/crew or if it is present at the department or site level. A procedural requirement was added to obtain clarification or additional information if needed. Additionally, enhanced requirements for documentation retention have been established; the allegation file will contain the investigation plan, the list of documents reviewed and personnel interviewed, interview notes, corrective action program search criteria and results, disposition of recommended actions, and confidential reports related to the investigation.

Question 2. How do you think your internal allegation-response protocol could be improved to maintain safety and help foster a culture in which employees feel free and comfortable with coming forward with such valuable information?

Response. Safety is our overriding priority. Exelon strongly believes in, and actively promotes, a safety conscious work environment (SCWE). The current policy on safety conscious work environment (SCWE) has been revised to strengthen applicability to supplemental personnel (i.e., contractors). The Chief Nuclear Officer (CNO) has reissued a letter reinforcing safety culture and SCWE policy. A SCWE video, featuring an introductory message from the CNO, and safety culture training have been cascaded throughout the entire nuclear organization. Plant Managers discuss our expectations regarding safety culture and SCWE during face-to-face meetings with contractors prior to outages. Contractors and contractor management are required to read and sign the SCWE policy. For the SCWE in the security functional area, the previous Wackenhut policy of zero tolerance for security infractions is being reevaluated in regards to Exelon policies to strengthen and improve the Security Behavior Observation Program as the contractor security forces are being transferred in-house as Exelon employees.

Additionally, allegation investigators and licensing personnel are more sensitized to SCWE when an allegation is referred to us for investigation. We now consider other investigative techniques if direct interviews may not ascertain the validity of the concern. These changes ensure we identify and correct any impedance to the free flow of information so that each of our employees feels free to raise issues and assist with their resolution.

Question 3. How do you expect bringing management and security within Exelon will help prevent future incidents? Since a significant portion of your new in-house security personnel were retained from Wackenhut, how do you plan to change the culture that made it for important information to surface?

Response. Exelon made the decision to bring the security force in-house to both prevent recurrence of the problems at Peach Bottom and to change the culture within the organization to ensure that issues are promptly reported to leadership and corrected using our Corrective Action Program. Expectations for oversight and leadership are outlined in the Exelon Nuclear Management Model and the new Exelon Nuclear Security organization was designed with the same model. This Management Model has been used successfully to create the strong performance that Exelon has shown in our nuclear plant operations. Specifically, security leadership teams are structured such that security management is directly engaged with the performance of the security forces and not merely oversight of a security contract. The Exelon Model includes improvements in security work force oversight such as on the job inspections to validate individual and organizational performance, improvements in the quality and effectiveness of training, and implementation of the corrective action program. Because the security force is now part of the Exelonsite operating team, they also receive additional oversight and support from the onsite senior leadership team. The implementation of the proven Exelon Nuclear Management Model provides Exelon senior leadership adequate opportunity to ensure the desired cultural change is occurring and that site and corporate security management is monitoring and reinforcing these behaviors.

RESPONSES BY CHRISTOPHER M. CRANE TO ADDITIONAL QUESTIONS FROM SENATOR VOINOVICH

Question 1. Mr. Crane, I'm encouraged by your testimony in which you acknowledge the realization of a "subculture" within the Peach Bottom security force which tolerated such unacceptable behavior. And it appears that Exelon has taken aggressive steps to address these issues.

One of the complaints I have heard anecdotally is that nuclear plant security guards in general do not feel that they are fully accepted as part of the site organization. And somehow they feel that they are less than equal partners compared to other plant workers, such as operators and maintenance workers. I would like to get your perspective on this.

Response. Your comment on security officers not feeling accepted as part of the site organization is one of the reasons that Exelon made the decision to bring the organization in-house. Security personnel are now part of the Exelon team and employees of the site organization with comparative standing as other station employees. Exelon Nuclear Security officers receive comparative compensation and benefits and feedback indicates they appreciate being part of the Exelon team. There is no longer the "less than equal" partner connotation, real or perceived, associated with being a contract employee assigned to the site.

Question 2. There is a suggestion that the industry might consider having security officers carry an electronic device which senses inactivity and alerts the security command center. I think something like that could be a very good, practical solution to security officers working the midnight shift. Has Exelon given any thoughts to this suggestion?

Response. We are aware of electronic devices that are being developed that would sense inactivity and alert the security control center. Exelon plans to evaluate the use of these electronic devices to enhance our ability to oversee security officers once they become available. A new device under development could be used to assist security officers in maintaining alertness as well as provide supervisors with assistance in monitoring the officers. Exelon has volunteered two sites to pilot these devices if and when they become available for testing from the vendor.

Senator CARPER. You bet. Thank you, Mr. Crane.

Welcome, Mr. Wilson, you are recognized for 5 minutes, please.

STATEMENT OF ERIC WILSON, CHIEF EXECUTIVE OFFICER, G4S REGULATED SECURITY SOLUTIONS, FORMERLY WACKENHUT NUCLEAR SERVICES

Mr. WILSON. Thank you very much, Mr. Chairman.

Mr. Chairman and distinguished members of the Subcommittee, thank you for your invitation to be here today. My name is Eric Wilson and I am the CEO of Regulated Security Solutions, or RSS, a newly formed company owned by G4S.

I am pleased today to represent the 4,000 professional employees of RSS, most of whom like myself have a military background, and frequently a law enforcement background. This is a group of people whose experience and personal beliefs give them a deep commitment to protecting our Country. I proudly served as an Army Ranger with the 75th Ranger Regiment and was a member of the U.S. Army Special Forces before starting my own security consulting company within this industry.

I have held various positions at Wackenhut, including head of the Nuclear Services Division. Much of my life has been devoted to securing nuclear facilities. I have visited nearly all of the commercial nuclear facilities in this Nation.

Because of my background, I was hired a little more than a year ago by Wackenhut to discuss a thorough assessment of the quality of security at all the nuclear facilities that we provided services for. Before I get to that assessment, I want to address the incident at Peach Bottom. Let me be very clear: the conduct of the Wackenhut security officers and supervisors at Peach Bottom was completely unacceptable and inexcusable. The inattentiveness of the company's officers was troubling for me, but even more troubling was the inaction of their leadership.

In my written testimony, I provide greater detail on the immediate and long-term corrective actions we took not just at Peach Bottom, but at all the facilities we safeguard. I believe strongly that this incident is not reflective of the approximately 4,000 dedicated security officers in our company.

That said, I am not here today to make any excuses. I take full responsibility for the actions of my people at any level, from the frontline officer to the Vice President. In my mind, part of taking responsibility is to make absolutely sure incidents of this sort do not happen again, as well as ensure high quality performance is always sustainable.

This gets me back to the principal finding of my assessment that was conducted a little over a year ago when I assumed the position. That is that while security of nuclear facilities today is very good, we have an opportunity to make it even better from a human performance standpoint, by developing a new model that will more easily adapt to the ever-changing regulatory needs of this industry.

Through our assessment, we concluded that contract security providers have traditionally focused on price as a competitive advantage, and consistent with that, trained security officers to comply with a standard set of regulatory needs and requirements. Moreover, we saw too much separation between security and other station operations. With focus on price and a tendency to isolate security, we saw a model that performed well to regulatory standards, but needed to be updated in order to keep pace with rapid change in the regulatory environment and deliver the highest quality, sustainable level of service in relation to human performance.

To address this decisively, I believe that security functions must be more closely aligned with other station operations, and that we can achieve this through focusing on three areas in the contract security arena: developing leaders, forming strategic alliances, and greater use of technology.

First, contract security companies need to provide a significant level of ongoing leadership development in a continuous learning environment. At the end of the day, effective leadership is the answer to most organizational needs. In my mind, enhanced leadership development is indispensable and should not and will not be separated from the security we provide our clients.

Second, as I mentioned, security must be better aligned with a station's operations through strategic alliances. We must develop close partnership with operators based on a set of clear, measurable deliverables. Contract security providers should measure their performance on their ability to deliver on specific results and objectives.

Finally, greater use of technology can significantly help our security officers fulfill their responsibilities and optimize their performance. We have developed software products and handheld devices that facilitate better partnerships with our clients, measure performance across facilities, and identify best practices to increase quality.

For me, this is where the contract security industry needs to go. The most important element of this model is accountability. I believe strongly in this. Put simply, if we don't meet set key performance criteria that are predetermined in partnership with our clients, we shouldn't make any money.

Let me finish by emphasizing a very important point. America's nuclear power facilities today are among the safest and most secure facilities in this Nation. What I have addressed this morning is not only a preventive solution to inattentiveness, but a better

way to ensure the quality and sustainability of security services at nuclear and other regulated facilities in the U.S.

Again, I appreciate the opportunity to address this committee today and am prepared to answer any questions you may have.

[The prepared statement of Mr. Wilson follows:]

Written Testimony to the Senate Committee on Environment and Public Works Subcommittee on Clean Air and Nuclear Safety

Delivered by Eric F. Wilson, Chief Executive Officer, Regulated Security Solutions

February 28, 2008

Chairman Carper, Ranking Member Voinovich, Senator Specter, Senator Casey and Members of the Subcommittee, thank you for your invitation to be here today. My name is Eric Wilson and I am the CEO of Regulated Security Solutions, or RSS, a newly formed company owned by G4S. RSS was created with the express goal of raising the bar for security providers at our nation's nuclear facilities to a new level of quality and sustainability.

Security has been the focus of my professional life – first as a member of the military where I was an Army Ranger with the 75th Ranger Regiment and later a member of the U.S. Army Special Forces. I also owned a consulting company focused on providing advanced security services for critical infrastructure, both domestically and internationally. Throughout my career, I've visited nearly all of the commercial nuclear facilities in the nation.

I was hired a little more than one year ago by Wackenhut Nuclear Services to conduct a thorough assessment of the quality of security at all nuclear facilities it served.

As you may know, Wackenhut Nuclear Services (WNS) has provided contract security services for more than 20 years and currently does so at 28 commercial nuclear power facilities across the United States. The company employs approximately 4,000 highly trained and professional nuclear security officers, many of whom currently serve, or have served, in the military or have law enforcement backgrounds. In fact, Wackenhut Nuclear Services has been one of the largest employers of our troops transitioning from the military.

Our takeaway from the assessment I was brought in to conduct was that a dramatically different approach – a new model – is necessary for contract security providers to meet the changing security needs of our nation's nuclear and other regulated facilities. And that is what ultimately led to the formation of RSS and our new strategic direction – a model that effectively responds to an ever-evolving regulatory structure in the U.S. and delivers a level of security that is both high quality <u>and</u> sustainable.

Before I explain this new model and its promise for the future, I want to directly address the incident at Peach Bottom Atomic Power Station that led to today's hearing.

Let me be very clear - the conduct of the Wackenhut security officers and supervisors at the Peach Bottom facility was completely unacceptable and inexcusable. The inattentiveness of the company's officers was troubling for me, but even more troubling was the inaction of their supervisors. Worse still was that the incident opened the door to the impression that the Peach Bottom facility was less safe and secure than it actually was and is.

In fact, despite the incident, Peach Bottom was safe and secure then and is today. Not only did the NRC conclude this in its own investigation, but we at Wackenhut retained highly regarded third party experts, Conner & Winters LLP, to conduct an independent evaluation of the Peach Bottom incident. I want to note that we didn't ask them to just look at the issue of inattentiveness. We asked these independent experts to scrutinize the whole operation, to identify lessons learned that could help not only prevent future problems with inattentiveness but go well beyond that to step up the overall quality and effectiveness of the security we provide – at Peach Bottom and at all facilities we safeguard.

First, in its investigation, the Nuclear Regulatory Commission (NRC) made the following observations to assess the significance of security officer inattentiveness on station security:

1- The inattentiveness of the security officers in question was not a result of fatigue.

2- All inattentive officers were inside the plant's "ready room" and were on standby at the time they were inattentive – meaning that they were not assigned at that time to surveillance or detection duties but rather were on-site and available to respond should a need arise.

3- Each of the identified officers satisfactorily conducted patrols and rounds, as assigned, on the dates associated with the inattentive events.

4- All the officers in the "ready room" carried two communication devices at all times that could be used to alert the officers, if required to respond.

5- If a need had arisen, these officers were near enough to defensive posts that they could arrive there in a timely manner.

6- The officers involved were not part of the first-responder team in place when they were inattentive; they were adding extra layers to the security force on-site as part of a layered defense-in-depth strategy.

With the creation of the new company and model, all clients are being transitioned from Wackenhut Nuclear Services to G4S Regulated Security Solutions. In the interim however, we have implemented numerous corrective actions designed to reduce the likelihood of similar events in the future. Some of these actions include:

1- Mandatory testing of supervisors and managers on attentiveness and their understanding of – and enforcement of – the NRC's Safety Conscious Work Environment requirement. (The SCWE requires a working environment where employees are encouraged to raise concerns about safety.) If they do not score 80% or better by their second attempt, they are removed from supervisory functions.

2- Meetings with all security force personnel reinforcing the expectations regarding raising concerns and resolving issues, and making sure all of them are aware of the many avenues they have to communicate concerns and do so without fear of reprisal.

3- Mandatory reporting of information every time a new shift comes on duty relating to inattentiveness and the Continual Behavioral Observation Program (CBOP), which provides counseling for job-related issues and unusual behavior.

4- Increased oversight of security management by corporate personnel and personnel from other facilities, and increased random visits to security posts by shift supervisors.

5- Educational communication to all security personnel, leveraging the Peach Bottom incident as a "teaching moment" to reinforce appropriate behaviors including attentiveness and reporting of issues and concerns.

6- Issuance of an "Immediate Corrective Actions" directive to all security personnel to drive a variety of immediate actions, including expectations for ready rooms, more observations and monitoring, reviews of communication and post checks, and post rotations, among other actions.

7- Issuance of a supervisory brief to the site workforce to reinforce proper behaviors regarding attentiveness and use of the reporting processes, as well as extensive personnel interviews and questionnaires to gauge their readiness to report issues to management and receiving adequate follow-up.

8- Review of security group work hour limitations to ensure compliance with regulations.

9- Improved management oversight by enhancing access to the ready room and other staging areas in which the inattentive events occurred.

10- The creation of a training DVD to ensure a consistent message is delivered. Every employee will be required to view the DVD. This DVD discusses the importance of attentiveness and the need to report these issues when observed by any and all avenues provided within Wackenhut Nuclear Security, the client and the NRC.

11- Revised post assignments in order to reduce the opportunity of inattentive events occurring.

12- Increased manpower at the corporate level to help make sure these enhancements are fully and aggressively implemented.

But as I mentioned previously, we didn't want to stop there. We tasked our third-party expert, Conner & Winters LLP, with conducting an evaluation of the Peach Bottom Security Force regarding the effectiveness of our Safety Conscious Work Environment efforts. SCWE is the NRC requirement that calls for the establishment and maintenance

of an environment in which employees are encouraged to raise safety concerns both to their own management and to the NRC without fear of retaliation.

Our third party expert's analysis concluded that WNS effectively implemented policies and programs designed to encourage employees at Peach Bottom to raise concerns. Unfortunately, members of one team at Peach Bottom subverted the normal operation of the internal channels specifically set up to facilitate the raising of concerns and then resolving them.

While overall the report provides assurance that a SCWE existed and that the issues seemed to be isolated to one shift, the bottom line is that leadership failed to adequately address an employee's concerns. This I believe gets to the root of this issue in this case, which was ineffective leadership. I am not here today to make any excuses for the actions that took place at Peach Bottom. To the contrary, I am here to take responsibility and explain how we are not only addressing the issue of inattentiveness, but how we will deliver a caliber of supervisor and manager that leads by example and represents a high degree of integrity and professionalism as he/she supports their people.

In addition to the rules established by the NRC, Wackenhut has numerous avenues available to our employees to raise their concerns without fear of retaliation. These include the Open Door Policy, the Safe-2-Say Program, Direct Access to the President of the division, and the client's Employee Concerns Program. All of the programs provide for anonymous reporting. These programs have been evaluated by a third-party expert and confirmed to be effective in clearly imparting the company's expectations concerning reporting procedures without fear of retaliation.

While I believe strongly that this incident is <u>not</u> reflective of the approximately 4,000 security officers that exceed expectations on a daily basis, I take full responsibility for the actions of my people. And, in my mind, part of taking responsibility is to make absolutely sure incidents of this sort do not happen again.

This gets me back to the principal finding of our assessment – if security vendors wish to provide security in heavily regulated markets, a new paradigm must exist that consistently provides sustainable and high quality performance. I believe we do just that with RSS.

In our assessment of the previous security services model, it became clear that providers of security services focused on price as a competitive advantage and, with that, security officers were trained to comply with a standard set of regulatory needs.

As you well know, regulatory requirements continue to evolve in the nuclear sector and security staffing continues to increase as the potential for terrorism changes at home and abroad. But in many ways the contract security model did not keep pace with these changes. One example is that too much separation existed between security and other station operations.

As the CEO of RSS, I will no longer provide that model when doing business with nuclear and other regulated facilities. We are committed to evolving WNS clients into

RSS in accordance with our new model. This new model focuses on providing solutions and will require us to deliver specific results and objectives to our clients. It is based on three critical pillars: Leadership Development, Strategic Alliances and Technology.

First, we need to provide a significant level of ongoing **Leadership Development** and a continuous learning environment. At the end of the day, effective leadership is the answer to most organizational needs. Our new model provides for greater leadership development than is currently possible by increasing staff so that an effective, ongoing leadership program can proceed in parallel with the full staffing of the facility's security needs. In my mind, enhanced leadership development is indispensable and cannot and will not be separated from the security we provide our clients.

Second, we need to enter into **Strategic Alliances** with our clients. Under the former model, we provided qualified and trained personnel, but in many cases contract security services still stood outside the operations of the facility. Our new approach is built on providing a suite of services that are fully integrated with facility management. We will create mutually beneficial partnerships that will measure us against our ability to deliver specific results and objectives for our clients. Put simply, if we don't meet a set key performance criteria that is predetermined with the client, we don't get paid.

Finally, we will integrate **Technology** more effectively to ensure our personnel have the tools they need to fulfill their responsibilities and optimize their performance. We have already worked with high-tech designers to develop a prototype we call the ASA-100. Among its many capabilities, this device contains a motion detector that alerts management when a lack of motion is detected. Additionally, the use of Keystone, our automated total quality improvement system, will measure our performance across all facilities and identify best practices to ensure increased performance.

I believe there is general agreement in this room that we are all seeking the level of security that nuclear power facilities require and deserve. In short, I am confident in our model. We will not only be accountable for results, but see this as the very basis of our alliances with our clients.

Let me finish by emphasizing a very important point. ***America's nuclear power facilities today are among the safest and most secure facilities in the nation.*** What I have addressed this morning is not only a preventative solution to inattentiveness, but a better way to ensure the quality and sustainability of security at nuclear and other regulated facilities in the U.S.

Again, I appreciate the opportunity to address this committee today and am prepared to answer any questions you may have.

RESPONSES BY ERIC WILSON TO ADDITIONAL QUESTIONS FROM SENTOR BOXER

Question 1. Do you believe Exelon will provide better security than Wackenhut provided?

Response. It is important to stress that nuclear power plants are among the most secure facilities in the Nation, regardless of whether security is managed in-house or through a contract security provider. Wackenhut's record at Peach Bottom, excluding the inattentive event isolated to a specific work crew, at a minimum achieved and in some cases, exceeded NRC security compliance standards. The main purpose behind the creation of G4S Regulated Security Solutions is to make high quality security sustainable over the long-term with a specific focus on leveraging cost efficiencies.

I believe that the Strategic Alliance Model offered through G4S Regulated Security Solutions (formerly Wackenhut Nuclear Services) will provide the highest levels of performance and service reliability and is the model necessary in today's environment. Adopting the principles of the Strategic Alliance Model will allow Exelon or any other security service organization to perform at the necessary level however, I am confident that G4S RSS can provide those services much more cost effectively and efficiently.

Question 2. In your testimony, you mention that security service providers focused on price to gain a competitive advantage. How did this focus on price affect security, In what areas are there price differentials, and how can we make sure price isn't the focus in the future?

To be clear, the contract security industry's pricing structure never negatively affected the level of security at a nuclear power plant. However, the drive to continually reduce cost results meant that the security department was not fully integrated with other plant departments in the post-9/11 security arena. This in turn meant that security services were always delivered, but the impact of those services on nuclear power plant were never fully quantified, refined or fully optimized in a manner that has become imperative in the post-9111 world.

To address this, we have adopted a new strategic direction through the creation of G4S RSS, which essentially measures us against our ability to reduce performance shortfalls and deliver on predetermined outcomes.

Question 3. If the NRC is correct that fatigue was not the problem at Peach Bottom, what was the problem and how do you think we can prevent similar problems In the future?

Lack of leadership among the shift supervisors was the underlying issue in the events at Peach Bottom. Under G4S RSS, we have recognized the need for higher levels of training in the areas of leadership, integrity and professional development specifically for first and second line supervision. Starting from the Security Officer up through Project Manager level, we have initiated additional training requirements targeting the delivery and implementation of the necessary tools and skills to perform at the levels required in today's nuclear security environment.

RESPONSES BY ERIC WILSON TO ADDITIONAL QUESTIONS FROM SENTOR CASEY

Question 1. What procedures did Wackenhut have in place to deal with employee concerns and how were these advertised to employees? What changes have you made to these procedures since the incident at Peach Bottom?

There were several specific procedures and policies in effect allowing employees the opportunity to bring forth concerns:

1) G4S RegUlated Security Solutions Policy WPO–1314—Open Door Policy

Provides specific guidance to employees to bring forth any concern involving the degradation of security or any condition that could negatively affect the safety of the plant. Employees are encouraged to first use their "chain of command" and if they are provided a response not consistent with procedures and regulations or they are not comfortable discussing with their supervision, they have the right and obligation to contact facility and/or corporate management.

2) G4S RegUlated Security Solutions Policy WPO–1318—Safety Conscious Work Environment

Provides specific guidance to our employees of the importance of establishing a working environment in which employees have the right and are obligated to bring forth issues and concerns—without fear of retaliation. Specific expectations for supervision and management address their responsibility to respond to these concerns, elevate the concerns to proper supervisory or management level, when appropriate, and to ensure employees are treated with respect and confidentiality in the process.

Also, incorporated are requirements for monitoring employees' knowledge of their rights and obligations through employee survey assessments.

3) G4S Regulated Security Solutions Procedure WPR–1313—Safe–2-Say Program

For those employees that would prefer to submit concerns to a source independent to RSS, we have established a program allowing them to formally contact our Human Resource Department through a toll-free access line staffed 24/7.

This program was established to address issues related to harassment. discrimination and retaliation and other issues related to non-ethical treatment of employees. Additionally, employees are directed to use the utility-licensee Employee Concern Program for nuclear safety concerns if they do not feel comfortable submitting these to RSS supervision and management through other available RSS processes.

4) Employee Concerns Program (utility-licensee) Each utility-licensee is required to provide a means for all plant employees, whether utility or contracted, to submit concerns through an ombudsman" program. Utilities have submitted these programs for review to the NRC for approval. Specifics of these programs include: (a) the rights and obligations of employees to submit concerns of a nuclear safety issue (operations, maintenance, security); (b) employees will be capable of submitting concerns without fear of retaliation and (c) supervision and management have an obligation to address all concerns thoroughly and provide feedback to the employee(s).

5) NRC Form 3

All utilities are required to inform employees of their obligation and right to bring forth concerns to the NRC if employee concerns are not properly addressed by the utility-licensee or contractor. Furthermore, it informs employees that they have protection under the law from retaliation for submitting these concerns. Address and phone numbers of NRC offices and representative are provided on the form.

To ensure employees are informed and knowledgeable of these processes, both the utility-licensee and RSS conduct initial and annual re-qualification training on the regulations, policies, procedures and programs identified above. These measures are extensive as they allow employee multiple avenues to submit concerns.

RSS elected not to change our processes, as we consider them extensive and more than adequate if properly utilized. After the Peach Bottom occurrence, we did conduct employee refresher training of the processes at each RSS fleet location to re-emphasize the available avenues, RSS expectations, utility-licensee expectations, and NRC expectations. Additionally, we significantly increased our management on-shift presence at each fleet location to discuss the incident and again re-emphasize our expectations with regards to reporting nuclear safety concerns.

In a continuing effort to address the issue, RSS has recently prepared a video re-emphasizing our performance expectations with regard to inattentiveness and that employees are encouraged to use the processes available to them to bring nuclear safety issues to the attention of supervision and management. The videos have been distributed and are being viewed by our employees.

Question 2. In your opinion, would there be a benefit In requiring the NRC to deal with the licensee and security contracts directly and simultaneously? Would this have eliminated the information gap between your onsite management and your corporate managers?

Response. Yes, there would be significant benefit and RSS encourages a simultaneous communication process for allegations concerning our employee's performance. Recent regulation places more accountability on the contractor with fines being directly leveled against the contractor for non-compliance issues. yet current practices with regard to communicating allegations include the utility-licensee only.

Additionally, we support the position that a simultaneous communication of allegations would have eliminated the information gap between our onsite management and our corporate managers and provided RSS the opportunity to conduct a corporate directed investigation that potentially would have properly addressed Mr. Beal's concerns, identified the inattentiveness, and allowed the proper corrective action to be applied.

Question 3. Kerry Beal, your former employee at Peach Bottom, experienced retaliation at the plant after he went to Wackenhut supervisors with his concerns about sleeping guards. The retaliation seems to continue even though he's no longer employed by Wackenhut or within the nuclear industry. According to a recent newspaper story, Beal's partial employee records were released by one of his former Wackenhut managers (who is also no longer employed by Wackenhut) to the press. What actions are you taking regarding this matter? And, more broadly, what kind of actions are you taking within Wackenhut as new CEO In G4S to correct this kind of behavior at other Wackenhut protected nuclear sites?

Response. It is not true that Kerry Beal was subjected to retaliation by his Wackenhut supervisors after he raised concerns about sleeping officers. Any adverse

action taken by Wackenhut was based on legitimate reasons. While Mr. Beal was not retained as a security officer when Exelon assumed the security functions at Peach Bottom, Wackenhut was not involved in the selection and retention of security officers, which was conducted by Exelon. Moreover, no retaliation by Wackenhut or its employees occurred after his departure.

With regard to Mr. Beal's employee records, Wackenhut took prompt and assertive action in response to the disclosure of draft employee records for Mr. Beal. Wackenhut's understanding is that one of Mr. Beal's former supervisors had draft records because the supervisor worked on administrative tasks on his home computer. On February 1, 2008, the same day that Wackenhut became aware of the release of these draft records to a newspaper, and before the newspaper published the article, Wackenhut's outside counsel contacted the supervisor by letter, which was delivered by special courier to his home. Counsel's letter demanded that the former supervisor cease and desist from disclosure of the draft records and return them to Wackenhut's legal counsel. Also that day, Wackenhut's counsel wrote to the reporter for the York Daily Record, requesting in very strong language that the newspaper not print the information that had been disclosed without authorization.

Until February 1, 2008, by which time Mr. Beal's former supervisor was no longer a Wackenhut employee, Wackenhut had no knowledge that this former supervisor had any plan to speak to the press. At no time did Wackenhut in any way support or encourage the former supervisor's actions. By the same token, Wackenhut is mindful that it should not act to hamper anyone, including a current or former supervisor, from raising concerns about issues like inattentive security officers, nor from delivering to the NRC and the press accurate information on such issues, as such activity should be protected by "whistleblower" laws. Similarly, Mr. Beal was not adversely treated by Wackenhut or its employees for raising concerns about inattentive security officers.

The former supervisor agreed to return the computer disc with the draft employee records that very day, and he did so. The former supervisor also advised Wackenhut's counsel that he informed the newspaper reporter that the newspaper should not use or reference the draft documents in any story.

Exelon, Wackenhut and Mr. Beal settled and resolved all of their disputes in a settlement agreement, in which none of the Parties admitted any liability to any other Party. The terms of the settlement agreement are confidential. The NRC has reviewed the terms of the settlement agreement and accepted it.

Subsequent to this incident, Wackenhut has reviewed its policy manual and confirmed that prior to February 2008, it has had in place written provisions which articulate sufficiently the confidentiality of employee records. Wackenhut reviews and revises its policy manual on an on-going basis.

RESPONSES BY ERIC WILSON TO ADDITIONAL QUESTIONS FROM SENTOR INHOFE

Question 1. Exelon fired Wackenhut following the Peach Bottom problem. That has led some to question whether security can be effectively maintained by a contracted force. Mr. Lochbaum contends that the opposite question would be asked if the sleeping guards had been utility employees and not contractors. With nearly half of our nuclear plants guarded by a contracted security force, please describe why we can be confident that those plants are just as secure as an "in-house" force.

Response. According to most industry and regulatory authorities, including Nuclear Energy Institute and the Union of Concerned Scientists, security services provided by the contract security industry or nuclear power industry itself are very comparable (almost indistinguishable). The standards by which nuclear security organizations are held accountable and tested are the same whether the organization is "in house" or contracted. In fact, commercial nuclear power plants are the most highly secured commercial critical infrastructure in the Nation. Additionally, it's important to note that a contracted force affords greater flexibility in dealing with abnormal issues such as contingency force requirements, handling support requirements in response to natural disasters as well as leveraging capabilities and best practices across a broader range.

Question 2. The U.S. military Is responsible for many sensitive security operations, including protection of the airspace over the Capitol and protection of our nation's nuclear deterrent. Has your company consulted with any branches of the military regarding best practices for addressing inattentiveness in comparable security situations?

Response. Many of our employees actually come from various military backgrounds, including previous members of special operations units, and provide valuable input into our operations. The challenge we face is operating a highly special-

ized paramilitary organization within the constraints of commercial enterprise. There are fundamental differences in acceptable operational and accountability methodologies between military organizations and security organizations within the commercial arena. However, I believe that the commercial nuclear industry has made great progress in addressing today's threat, ensuring the security and safe operations of our nuclear reactors.

RESPONSES BY ERIC WILSON TO ADDITIONAL QUESTIONS FROM SENTOR VOINOVICH

Question 1. Mr. Wilson, one of the complaints I have heard anecdotally is that nuclear plant security guards in general do not feel that they are fully accepted as part of the site organization. And somehow they feel that they are less than equal partners compared to other plant workers, such as operators or maintenance workers. I would like to get your perspective on this.

Response. Traditionally, the security organization has not been viewed as a critical element for energy production, but more as only necessary for regulatory compliance. The events of 9/11 have highlighted the threat we face and the vital nature of security however instituting cultural change is a process, one that does not happen over night. As an industry, we feel change regarding the value of security has begun. Integrating the security function, but also moving toward measuring performance on outcomes instead of whether or not the service was delivered. is—I believe—the direction which the contract security industry must take.

Question 2. There is a suggestion that the Industry might consider having security officers carry an electronic device, which senses inactivity and alerts the security command center. I think something like that could be a very good, practical solution to security officers working the midnight shift. I would like to get your thoughts on this suggestion.

Response. We are currently in the final stages of production of such a device called the Advanced Security Assistant 100 (ASA–100). The device is equipped with motion sensing accelerometers designed to detect periods of inactivity, generating local and remote alarms once preset thresholds have been reached. The ASA–100 provides for not only inactivity monitoring but also other key tracking and monitoring functions to include equipment tracking and patrol logging. Additionally, this devise can assist in the deployment and implementation of the defensive strategy during drills or in an actual engagement. I believe that this device will provide an essential safeguard to ensure accountability and the sustained performance required today.

Senator CARPER. Good. Thank you, Mr. Wilson.

Mr. Lochbaum.

STATEMENT OF DAVID LOCHBAUM, DIRECTOR, NUCLEAR SAFETY PROJECT, UNION OF CONCERNED SCIENTISTS

Mr. LOCHBAUM. Mr. Chairman, I appreciate this opportunity to present our views on this important topic.

The NRC has taken many steps since 9/11 to improve nuclear power plant security. Last year's event at Peach Bottom indicate that three additional steps are required.

The first step corrects inadequate responses to security allegations. Last spring, NRC, Exelon and Wackenhut received allegations that security guards were sleeping at Peach Bottom. Their responses were untimely and inadequate until media reports surfaced last fall exposing the same problem. The NRC, Exelon and Wackenhut were then able to quickly substantiate facts that had been elusive before.

When workers raise concerns in good faith to Wackenhut, to Exelon and then to NRC, Newton's third law, for every action there is an equal and opposite reaction, should have triggered good faith responses. But instead, all three applied Newton's first law, an object at rest tends to stay at rest. Neither Wackenhut nor Exelon nor NRC reacted to correct the problems.

The NRC referred the allegations back to Exelon. Exelon investigated and informed the NRC that it did not substantiate the allegations. Yet last September, warned that a video of the sleeping existed, Exelon was able to quickly substantiate that it existed, that it showed security guards sleeping, as well as the identity of the videographer.

The allegations remained exactly the same between Exelon's initial denial and its subsequent mea culpa. This is not the National Football League's instant replay booth. It should not take and did not take indisputable visual evidence for Exelon to substantiate the allegations. Hence, when NRC entrusted Exelon to investigate the allegations, Exelon violated that trust with its shoddy response. The NRC must significantly sanction Exelon for that shortfall.

By the same token, the NRC should not have waited for the video either. After the NRC received the allegations last March, its inspectors took no steps to investigate them. After the NRC received Exelon's response last May, its resident inspectors took no steps to verify the response. But when the NRC received the same allegations from a reporter last September, backed by an alleged video, the agency responded vastly differently. Within hours, its resident inspectors at Peach Bottom were directed to investigate the charges. The NRC dispatched an inspection team to Peach Bottom about a week later. The different reaction suggests the NRC is more interested in protecting its reputation than the lives of American civilians. NRC must not stand for Nielsen Ratings Commission.

The second step restores public communication about security. Wackenhut, Exelon and NRC all applied Newton's first law in response to the security allegations. The full statement of Newton's first law explains why the reactions changed when the video surfaced: an object at rest tends to stay at rest, unless acted upon by an outside force.

In August, 2004, the NRC removed virtually all security information from its website. The removal created a vacuum that is now being filled by rumor, supposition, innuendo and occasional facts. For example, after the Peach Bottom story broke last fall, the lack of context allowed people to extrapolate from that single datapoint to whatever conclusion they wanted, from Peach Bottom being an isolated case to it being the tip of an iceberg of a total security sham.

Security information can be discussed without compromising national security. Earlier this month, the NRC announced the issuance of a "white" finding for the sleeping security guards at Peach Bottom. Last month, the NRC announced a $208,000 fine for security guards intentionally disabling their weapons at the Turkey Point nuclear plant. If the NRC can communicate about these serious problems, then the NRC can also communicate about less serious problems and the lack of problems at other nuclear plants.

Equally important, public communication of this security information serves as the outside force needed to put resting objects in motion. Plant owners falling short of NRC security requirements would be publicly identified, providing ample incentive to correct those shortfalls. Today, NRC's refusal to report security information enables underperformers to remain at rest.

The third step eliminates the zero tolerance policies. Many people have said already today at the hearing that zero tolerance policies can do more harm than good. We totally agree with that concept. It is clearly wrong for security officers to sleep on duty. Being asleep impairs a guard's ability to perform the job, but slipping on ice during an outside patrol and breaking an arm or coming down with a stomach virus also impairs that guard's ability, but those are not grounds for immediate termination.

It could be argued that the zero tolerance policy doesn't apply in those cases because those aren't deliberate acts. Yet zero tolerance policies applied to sleeping assumes that every act of sleeping is an intentional function. That is not true. Sometimes people simply fall asleep because they are bored or they are fatigued.

When a security guard falls asleep, the proper response is to enter that incident into the plant's corrective action program. The corrective action program is required by Federal regulation to identify causes of human and equipment performance problems and correct them. When the corrective action determines that an individual deliberately took steps to sleep, then termination is an appropriate reaction. But when the corrective action program identifies a number of security guards accidentally falling asleep, the appropriate reaction might be shorter working hours, more frequent shift rotation, and other things to offset the tedium. A zero tolerance policy is a one size fits all approach that often fails to correct the underlying causes.

In closing, as Senator Voinovich pointed out, the silver lining about these problems is the opportunity to be better prepared tomorrow. Adequate nuclear plant security is like adequate car insurance: protecting against an event one hopes never to encounter. Adequate nuclear power plant security requires plant owners and the NRC to provide timely and effective responses to security allegations. It did not happen last year at Peach Bottom. It must happen the next time.

The American public has a right to know that the nuclear power plants in their backyards have adequate security. The NRC needs to restore public communication about security to satisfy that right.

Security guards have a responsibility to perform their jobs properly. Security guards must not be held to a higher standard than other nuclear plant workers, especially with zero tolerance policies that cause more harm than good.

We thank this Subcommittee for holding this hearing and placing a spotlight on this important issue.

Thank you.

[The prepared statement of Mr. Lochbaum follows:]

Union of Concerned Scientists

Citizens and Scientists for Environmental Solutions

TESTIMONY SUBMITTED BY

DAVID A. LOCHBAUM

DIRECTOR, NUCLEAR SAFETY PROJECT

TO THE

SUBCOMMITTEE ON CLEAN AIR AND NUCLEAR SAFETY

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

UNITED STATES SENATE

FEBRUARY 28, 2008

Mr. Chairman and members of the Subcommittee, on behalf of the Union of Concerned Scientists (UCS), I appreciate this opportunity to present our views on nuclear plant security.

My name is David Lochbaum. After obtaining a degree in nuclear engineering from The University of Tennessee in 1979, I worked more than 17 years in the nuclear power industry, mostly at operating reactors in Georgia, Alabama, Mississippi, Kansas, New Jersey, Pennsylvania, New York, Ohio and Connecticut. I joined UCS in October 1996 and am the Director of the Nuclear Safety Project. Since nearly its inception in May 1969, UCS has maintained an interest in nuclear power plant safety and security. UCS is neither an opponent nor a supporter of nuclear power – our perspective is that of a nuclear safety and security advocate.

The nuclear power industry and the Nuclear Regulatory Commission (NRC) have taken many steps since 9/11 to better protect nuclear power plants from internal and external sabotage threats. Last year's revelation that security guards were sleeping while on duty at the Peach Bottom nuclear plant indicate that additional steps are required:

1. The root causes for inadequate responses by the company and the NRC to allegations of security guards sleeping on duty must be identified and corrected.

2. NRC must restore responsible public communication about nuclear plant security

3. The over-reaction to security guards sleeping on duty by adopting zero tolerance policies must be stopped.

We are confident that this Subcommittee can make sure the NRC takes these steps.

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1. Root Causes for Inadequate Responses to Security Allegations Must be Corrected

At least as early as March 27, 2007, (NRC), and April 2007 (Exelon and Wackenhut),* had received allegations that security guards were sleeping while on duty at Peach Bottom. The responses to those allegations were inadequate until media reports in September 2007 publicly exposed the problem. The NRC, Exelon, and Wackenhut were then able to substantiate facts that had been "elusive" before. It is impossible to determine which is more unacceptable and intolerable – sleeping on duty or ignoring security warnings from conscientious workers. Both behaviors allowed sleeping to continue until outside force was brought to bear on the matter.

The video of security guards sleeping on duty rendered the *status quo* untenable. Exelon fired Wackenhut; first at Peach Bottom and then from providing security at any Exelon's nuclear power plant. This response misses the mark. Had Exelon employed in-house security guards, the video would likely have forced them to bring in security professionals, like Wackenhut, providing the pretense of a "clean slate" while the real problem remained unresolved.

The unalterable reality is that Exelon, Wackenhut, and NRC all knew about security problems at Peach Bottom, specifically including inattentiveness, and did next to nothing about them. For example, NRC's documents report:

- "Security supervisors [e.g., Wackenhut] failed to properly address concerns involving inttentive SOs [security officers] and were not receptive to these concerns being brought forward." Reference 1, page 4
- "The environmental conditions in the 'ready room' [where the security officers slept] were not conducive to attentiveness and station management [e.g., Exelon] failed to address these known adverse conditions. The 'ready room' had high background noise, was dimly lit, and was poorly ventilated." Reference 1, page 4
- "Management [e.g., Exelon] failed to identify human factor issues related to 12-hour shifts spent, in part, at the 'ready room' post with low physical activity. For some SOs, a significant portion of the shift could be spent sitting in the ready room when not on patrol or performing other duties." Reference 1, page 5
- "Management [e.g., Wackenhut] failed to provide adequate attentiveness stimuli to the SOs in the 'ready room'." Reference 1, page 5
- On March 27, 2007, "NRC receives concerns involving Peach Bottom SOs that are inattentive to duty at PBAPS." Reference 1, page C-1
- "On the same day [April 30, 2007] that the allegation was provided to the licensee for investigation/evaluation, the NRC Regon I Division of Reactor Safety (DRS) began a four-person, one week baseline security inspection at the Peach Bottom Station. ... In hindsight, in conjunction with forwarding the allegation concerns to the licensee for its investigation, the baseline inspection could have been used to follow-up on the allegation, providing additional independence and potentially more information to the agency's review." Reference 2, page 6
- On May 30, 2007, "NRC received Exelon's response stating that the three referred concerns associated with inattentive SO behavior were not substantiated." Reference 1, page C-1

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* Reference 1, page C-1.

When Kerry Beal and other security guards raised concerns to Wackenhut, to Exelon, and to NRC in good faith, Newton's Third Law of Motion – *for every action, there is an equal and opposite reaction* – should have triggered good faith responses. But instead all three applied Newton's First Law – *an object at rest tends to stay at rest*. Neither Wackenhut nor Exelon nor NRC acted upon the security allegations to correct the problems. Removing Wackenhut from the picture provided a convenient scapegoat for the problems, but it did nothing about the co-conspirators, Exelon and NRC.

In the Peach Bottom case, the NRC referred the allegations it received in March 2007 back to Exelon for evaluation. It is typical for the NRC to make such referrals. UCS heard that the NRC refers about 80 percent of allegations back to plant owners and investigates the remainder itself. UCS also heard that the NRC is considering adjusting its referral thresholds with the objective of investigating more allegations – perhaps as high as 60 percent – itself.[†] Unless the referral rate increases to 100 percent or drops to 0 percent, the NRC will investigate some of the allegations and the plant owners will investigate the rest. Regardless of who investigates, the processes must achieve reliable results.

In this case, the NRC referred the allegations back to Exelon on April 30, 2007. Exelon informed NRC, by letter dated May 30, 2007, that its investigation did not substantiate the allegations. Exelon's investigation was incomplete and inadequate. Per the NRC, "none of the members of that shift [shown sleeping in the videotapes] were interviewed by Exelon because that shift was off duty at the time the interviews were conducted."[‡] The incompleteness and inadequacy of Exelon's first evaluation is revealed by the following timeline:[§]

- September 10, 2007: NRC hears from a WCBS-TV reporter about a video showing security guards sleeping at Peach Bottom.
- September 10, 2007: NRC calls Exelon to inform them about the alleged video.
- September 10, 2007: NRC resident inspectors at Peach Bottom are directed to increase monitoring of security guards, including conducting checks of security guard attentiveness during evening and midnight shifts.
- September 12, 2007: NRC hears from the WCBS-TV reporter that the video is about 10 minutes and shows security guards sleeping in the ready room.
- September 12, 2007: NRC calls Exelon to update them about the alleged video.
- September 18, 2007: During a follow-up phone call, Exelon informs NRC that its interviews of security guards identified one security guard believed to have taken video clips of other security guards sleeping at Peach Bottom. When this individual was interviewed by Exelon and "confronted with this information, the security officer indicated he was terminating the interview and stated that he would not answer any questions without the NRC present."
- September 19, 2007: The WCBS-TV reporter allowed NRC to view the video.

[†] The NRC's hints about investigating more allegations itself are analogous to Exelon's termination of Wackenhut. Both seek to absolve themselves of blame by assigning that blame to others. Exelon blames Wackenut while NRC blames Exelon. The reality shows there is more than sufficient blame for all three to share equally.
[‡] Reference 2, page 7, footnote 9
[§] Reference 2, page 8

Without having seen the video but warned that one existed, Exelon's interviews quickly substantiated that it existed, that it showed security guards sleeping on duty, as well as the identity of the videographer. The underlying allegations – that security guards were sleeping at Peach Bottom – remained the same between Exelon's May 30th letter to NRC and Exelon's September 18th call to NRC. This is not the National Football League's (NFLs') instant replay booth. It should not take, and did not take, indisputable visual evidence for Exelon to substantiate allegations of multiple security guards sleeping on duty on multiple occasions. Hence, when NRC entrusted Exelon to conduct a complete and adequate investigation into the allegations referred on April 30, 2007, Exelon violated that trust with its improper response. The NRC must impose a significant civil penalty on Exelon for such shoddy work. The best protection against future cases like this one is for the NRC to remind this plant owner, and other plant owners, that they must investigate allegation referrals adequately or incur appropriate sanctions. People's lives are at stake. The stakes are too high to tolerate nonchalance, complacency, incompetence, or whatever explains Exelon's initial failure to get the job done properly.

By the same token, the NRC should not have waited for the video, either. The NRC received allegations about sleeping security guards in March 2007.** The NRC's resident inspectors and security inspectors (who visited Peach Bottom between April 30 and May 4, 2007) took no additional steps to address the allegations. The NRC received Exelon's "all-clear" response on May 30, 2007. The NRC's resident inspectors took no additional steps to verify the response.

The NRC received additional allegations about sleeping security guards at Peach Bottom in September, now backed by an alleged video. The mere rumor of a video spurred the NRC into a different response. Within hours, the NRC resident inspectors at Peach Bottom were directed to investigate security guard attentiveness. The NRC dispatched an augmented inspection team to Peach Bottom about a week later. It's the NRC not the NFL: it must not take indisputable visual evidence for the NRC to take security allegations seriously.

In March 2007, the NRC received allegations about security guards sleeping at Peach Bottom from the plant's former security manager. The NRC took no action other than ask Exelon if the allegations was valid. In September 2007, the NRC received allegations about security guards sleeping at Peach Bottom from a TV reporter about to broadcast a video. The NRC immediately had its resident inspectors at Peach Bottom begin investigating and followed up by dispatching an augmented inspection team to the site. One the media's involvement threatened to hurt the NRC's image, the response that should have been launched nearly six months earlier finally happened. These disparate NRC reactions strongly suggest that the NRC is more interested in protecting its reputation than in protecting the American public. Such dismal regulatory performance provides neither with adequate protection. NRC does not stand for "Neilsen Ratings Commission," at least not in the federal laws that created and sustained the agency.

** It should be noted that the allegations the NRC received came from the former security manager for Wackenhut whose responsibilities included Peach Bottom. When that individual previously told Exelon and NRC that security was sound, his statements were accepted unquestioned and unchallenged as fact. But when that same individual told NRC about security problems, his statements were deemed fiction until confirmed by Exelon. Reference 2, page 1

2. Responsible Public Communications about Nuclear Plant Security Must be Restored

Wackenhut, Exelon, and NRC applied Newton's First Law of Motion – *an object at rest tends to stay at rest* – in response to the security allegations raised by Kerry Beal and others. The full statement of Newton's First Law explains their different reaction once the news media broadcast videos of the sleeping security guards last September: *an object at rest tends to stay at rest unless acted upon by an outside force*. The media broadcasts and ensuing public outcry roused Wackenhut, Exelon, and NRC from rest and compelled them to really investigate the allegations and address the underlying problems.

The broader lesson is that the NRC must restore responsible public communications about nuclear plant security issues. Shortly after 9/11, the NRC pulled the plug on its website. All documents and information were removed. As documents were reviewed for content that might aid our enemies attack nuclear facilities, the NRC added only cleared information back to its website. The information vetted and restored to the website included the safety and security components of the NRC's reactor oversight process (ROP). The security component information consisted of performance indicator data (e.g., availability of intrusion detection equipment and effectives of access authorization program) and findings from NRC's security-focused inspections. When the ROP was developed in 1999 and 2000, this information was determined to be appropriate for public consumption because it did not reveal anything about current uncompensated for vulnerabilities at nuclear reactors. When this information was re-evaluated after 9/11, it was confirmed that its public availability could not undermine national security.

But in August 2004, the NRC removed the security component information from its ROP website. The removal of this security information created a vacuum now being filled by rumor, supposition, innuendo, and occasional facts. For example, after the sleeping guards at Peach Bottom story broke last fall, the lack of context enabled people across the country to extrapolate from that single data point to whatever conclusion they wanted, from Peach Bottom being an isolated case to sleeping guards being merely the tip of the iceberg for a total nuclear plant security sham.

The NRC's public communications to response to two security problems illustrates that the agency could restore security component information to its website without compromising national security interests. On February 12, 2008, the NRC issued a press release[††] and associated report regarding the issuance of a "white" finding (the NRC has a four-tiered color system for safety and security problems; green, white, yellow and red with red being most serious) for the sleeping security guards at Peach Bottom. On January 22, 2008, the NRC issued a press release[‡‡] and associated report regarding a $208,000 fine for problems involving security guards at the Turkey Point nuclear plant in Florida intentionally disabling their weapons. If the NRC can inform the public about these serious security problems, then the NRC can also inform the public about less significant and lack of security problems at other nuclear plants.

The NRC must immediately restore the security component information to its website that passed the 9/11 muster and was publicly available until August 2004. The responsible public

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[††] Reference 3.
[‡‡] Reference 4.

communication of this security information will allow events like the sleeping guards to be viewed by the public in more accurate context.

Equally important, public communication of this security information serves as the *outside force* needed to avoid objects being at rest when they should be in motion. Plant owners falling short of NRC's security requirements should be publicly identified, providing ample incentive for them to correct the shortfalls expeditiously. Today, NRC's refusal to responsibly report security information enables poor performers to remain at rest.

3. Zero Tolerance Policies Must be Eliminated

UCS has heard that some plant owners responded to news about Peach Bottom by instituting zero tolerance policies with respect to security guards sleeping while on duty. Policies that unfairly target security guards do more harm than good and must be eliminated.

It is clearly wrong for security guards to sleep on duty. Being asleep impairs a guard's ability to perform the job. But slipping on ice during an outside patrol and breaking an arm or coming down with a stomach virus at work also impairs a guard's ability and these are not grounds for immediate termination.

It could be argued that zero tolerance polices are not applied to impairment resulting from slipping on ice or a stomach virus because these are not deliberate acts. Yet zero tolerance policies applied to sleeping on duty assumes that every incident is deliberate. That's simply wrong. Sometimes people unintentionally fall asleep due to boredom and/or fatigue.

It is unfair to hold security guards to a higher standard than other nuclear plant workers, especially when the pay scales for security officers relative to other plant workers do not correspond to this higher level of responsibility. Control room operators licensed by the NRC have been found to be under the influence of alcohol or unauthorized drugs while on duty without being terminated. For example, an NRC-licensed control room operator at the Fort Calhoun nuclear power reactor in Nebraska tested positive for alcohol in fitness-for-duty tests reported on August 25, 2005, and again on February 23, 2006.[§§] And an NRC-licensed control room operator at Exelon's Three Mile Island nuclear plant in Pennsylvania tested positive for alcohol or drugs in March 2006.[***] These individuals were given second, and third, chances for intentional actions that impaired their abilities to perform important jobs.

Mistakes by other nuclear plant workers are also tolerated. It is standard practice in the nuclear industry to, whenever possible, have a second operator verify equipment lineups conducted by an operator and to have a second engineer verify the calculations and assessments performed by an engineer. When a mispositioned valve or mathematical error is found, it is corrected without a zero tolerance policy that sends the offending operator or engineer out the door.

When a security guard is found asleep on duty or wakes up on a post and realizes having dozed off, the proper response is to enter that incident into the plant's corrective action program, the same program that handles reports of equipment problems, operator mispositioning events, and engineer ciphering mistakes. The corrective action program is designed to identify causes of

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[§§] Reference 5
[***] Reference 6

human and equipment performance problems and correct them. The corrective action program also identifies emerging adverse trends.

When the corrective action program determines that an individual – regardless of job function – deliberately took steps to sleep on duty (e.g., rigging up a hammock behind locked doors), the appropriate action is very likely termination. When the corrective action program identifies a number of security guards accidentally dozing off, the appropriate action might involve shorter working hours, more frequent post rotations, more frequent radio checks, and more challenging work to offset the tedium. A zero tolerance policy is a "one size fits all" solution that often fails to solve the true causes. An effective corrective action program, on the other hand, seeks to first identify the causes of problems and then apply appropriate solutions.

Had Wackenhut and Exelon responded properly last spring when Kerry Beal reported that security guards were sleeping on duty, those reports would have been entered into the corrective action program. The series of reports would have quickly established the location ('ready room') and identify (Security Team No. 1) of the problem, increasingly the likelihood that the problems would have been corrected absent intervention by the media.

If a zero tolerance policy is implemented, it should apply to circumventions of the corrective action program rather than to security guards sleeping on duty.

CONCLUSION

The silver lining about the security problems that surfaced at Peach Bottom last year is the opportunity to learn from them so as to be better prepared tomorrow. It is shame on all of us if we fail to take advantage of this opportunity by acting upon the lessons. Adequate nuclear plant security is like adequate car insurance, protecting against an event one hopes never occurs. Inadequate nuclear plant security is like inadequate car insurance; finding out that day in that way adds insult to injury.

Adequate nuclear plant security requires plant owners and NRC to provide timely and effective responses to security allegations.

The American public has a right to know that the nuclear plants in their communities have adequate security. The NRC needs to restore responsible public communications about security to satisfy that right.

Security guards, like other nuclear plant workers, have a solemn responsibility to perform their important jobs properly. Security guards must not be held to higher standards than other nuclear plant workers, especially with zero tolerance policies that cause more harm than good.

We thank the Subcommittee for holding this hearing and placing a spotlight on the issue.

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RESPONSES BY DAVID A. LOCHBAUM TO ADDITIONAL QUESTIONS FROM SENATOR BOXER

Question 1. The Peach Bottom incident was reported as an isolated problem. Are there other "isolated incidents" of which this Committee should be aware?

Response. The "isolated incident" at the Turkey Point nuclear plant in Florida was significantly more serious than the "isolated incident" at Peach Bottom. Both involved security guards conspiring to cover for each other as they slept on duty. But the security guards at Turkey Point also took steps to sabotage their equipment, such as removing the firing pins from weapons. But no video exists, to our knowledge, of the antics at Turkey Point so these incidents, while far more serious, got far less attention.

Question 2. Do you think Exelon will provide better security than Wackenhut provided?

Response. No, but I don't think Exelon will provide worse security either. Security will be the same regardless of what emblem appears on the guards' uniforms because the underlying factors remain unchanged. The NRC's Augmented Inspection Team report documents that mangers and supervisors for both Wackenhut and Exelon heard repeatedly about security guards sleeping on duty and did little about it. When the videotapes were broadcast, a scapegoat was needed. Wackenhut could not fire Exelon, but Exelon could and did fire Wackenhut. This measure provides the allusion of remedying the problem without addressing the root causes why did Exelon's managers ignore repeated warnings about sleeping security guards? Because that root cause remains uncorrected, security cannot get better.

Question 3. Do you agree with Commissioner Jaczko that the NRC should take a more active role in investigating allegations rather than sending the allegations to the licensee for investigation? In your opinion, will the NRC do a better job investigating allegations than the licensee?

Response. Yes, but not necessarily active in the same way that Commissioner Jackzo proposes. NRC lacks the resources to investigate 100 percent of the allegations it receives. Thus, while NRC may very well investigate a higher percentage of allegations, it will not investigate all of the allegations. When NRC refers allegations back to plant owners for investigation, the NRC must become more active in two ways: (1) NRC must do a better job monitoring the plant owners' investigations to verify that their efforts were thorough and their results reasonable, and (2) NRC must sanction plant owners who conduct incomplete or shoddy investigations.

RESPONSE BY DAVID A. LOCHBAUM TO AN ADDITIONAL QUESTION FROM SENATOR INHOFE

Question 1. In your testimony, you stated: "NRC's refusal to responsibly report security information enables poor performers to remain at rest," indicating you disagree with the NRC's restrictions on security information that is available to the public. Yet the purpose of the hearing was to publicly discuss security and guards' attentiveness in detail to ensure the proper steps are taken to prevent this situation in the future. Wouldn't you agree that any reporting of security successes or problems should be subject to requirements that protect security information?

Response. I absolutely agree and appreciate the opportunity to clarify our position on this important point. We wholeheartedly agree that information about current vulnerabilities at nuclear power plants should not be publicly available. But information about past problems, now resolved, can and should be made public. For example, the NRC's reactor oversight process (ROP) provides quarterly reports to the public on safety performance and used to provide quarterly reports on security performance. By restoring the quarterly reports on security performance to the ROP webpage, the many plant owners who are getting the job done and achieving solid security performance would have all "green" results reported. When media reports like the one last year on Peach Bottom surface, the people living around plants with "green" security performance results would have little to fear and the owners of those facilities would not be guilty by association. And plant owners who didn't get the job done in the past would have thus past failures publicized, giving them extra incentive to get the job done properly.

RESPONSES BY DAVID A. LOCHBAUM TO ADDITIONAL QUESTIONS FROM SENATOR VOINOVICH

Question 1. Mr. Lochbaum, one of the complaints I have heard anecdotally is that nuclear plant security guards in general do not feel that they are fully accepted as part of the site organization. And somehow they feel that they are less than equal

partners compared to other plant workers, such as operators or maintenance workers. I would like to get your perspective on this.

Response. My 17 years in the industry is consistent with these anecdotes. Although I worked at more than 20 of our reactors, I never worked at a site where security was integrated into the work force. Security personnel and other personnel were there to do their jobs at the same site, but not as part of the same overall team. Eric Wilson of Regulated Security Solutions and another witness during the hearing relayed a related conclusion he reached following his examination of how the nuclear industry responded to the Three Mile Island accident. That accident revealed weaknesses in training of operators and other key workers. In response, the nuclear industry significantly upgraded initial and ongoing training for these workers. As new issues emerged, like safety culture following the Davis-Besse incident, the lessons were incorporated into these training platforms. But security officers were excluded from this training and no separate training program was provided for them. This separation manifests itself in some of the safety culture surveys conducted at plant sites. For example, in recent years the security department scores on the safety culture surveys conducted at the South Texas Project (TX) and San Onofre (CA) nuclear plants were among the lowest of any group onsite. As a minimum, the ongoing training provided to operators and key plant workers must be extended to security officers.

Question 2. There is a suggestion that the industry might consider having security officers carry an electronic device which senses inactivity and alerts the security command center. I think something like that could be a very good, practical solution to security officers working the midnight shift. I would like to get your thoughts on this suggestion?

I agree that these electronic devices could be very beneficial depending on how they are deployed. If the devices are deployed with zero tolerance policies that mean one alert back to the security command center results in termination, the devices will alienate the security officers. For example, operators and other key workers covering shifts are also subject to fatigue and occasionally fall asleep at work. The security officers may view the devices as further evidence of their being held to a different standard when alarming devices end their careers while sleeping operators are treated differently. If, however, the devices are deployed in a constructive way to help security officers perform their vital roles more effectively, they can enhance security.

Senator CARPER. And we thank you for your testimony here today.

Mr. Fertel, welcome.

STATEMENT OF MARVIN FERTEL, SENIOR VICE PRESIDENT AND CHIEF NUCLEAR OFFICER, NUCLEAR ENERGY INSTITUTE

Mr. FERTEL. Thank you, Chairman Carper, Senator Voinovich. It is a pleasure to be here and have the opportunity to testify.

My testimony will address three subjects: first, the security at our Nation's 65 nuclear power plant sites; the actions that the industry has taken in response to the security officers inattentiveness incidents; and the use of Wackenhut Special Operations as the contractor to support the industry's composite adversary force.

As you know, prior to 9/11, nuclear power plants had to meet security requirements required by the NRC, and following the September 2001 attacks, NRC increased nuclear facility security requirements numerous times and is now in the process of codifying additional requirements in rulemakings.

Since 9/11, the industry has invested more than $2 billion in additional security at nuclear power plant sites, and has increased the number of security officers by more than 60 percent to about 8,000. Compared to other commercial facilities, nuclear plants start with a clear advantage in the area of security. The structures that house reactors and critical systems are built to withstand natural events such as earthquakes, hurricanes, tornadoes, fires and floods.

Furthermore, nuclear power plant security is designed with concentric perimeters, with increased security at each level. Both of you have visited plants and gone through this, and know you have physical barriers to protect against unauthorized personnel and vehicle intrusion, including truck bombs. These security zones are protected by trained and armed professionals who use hardened defensive fighting positions located throughout the plants, like the BREs that were discussed before.

In the innermost security zones, access to the vital areas of our plants is strictly controlled using biometrics and other technologies. Critical areas are constantly surveilled and monitored, and strict access control is also maintained, with industry employees with unescorted access subject to a systematic fitness for duty program, a continual behavioral observation program, and they must undergo comprehensive background checks.

Every plant also has extensive plans and arrangements with State and local law enforcement and emergency response entities. A significant security standard mandated by the NRC is the so-called design-basis threat. Every site tests its security forces against this standard, and the NRC inspects against it at mandated force on force exercises. Based upon tabletop exercises done at all of our sites, and additional simulations done at some sites, we would expect to be successful against most credible threats even at levels greater than the DBT.

But at some point, such threats require a more integrated response. So since September 11th, DHS, NRC and the industry have recognized the importance of coordinating Federal, State and local authorities with the industry to best defend against such an attack. As a result, a program was established by DHS to integrate the response planning around nuclear plant sites. This program is called comprehensive reviews and brought together the full potential of local, State and Federal capabilities. Last year, these comprehensive reviews were completed for every site.

As I just briefly described, the improvements to an already robust security program since 9/11 have been pretty broad-based and significant, and they continue today.

Let me turn now to the subject of this hearing, which is security officer attentiveness. In an environment of strong security and professionalism, we still have had isolated incidents of security officer inattentiveness. Every company expects the on duty security force to be fully attentive and able to respond when called upon. And certainly, that is the predominant situation when you look across our sites.

In 2007, we are aware of 17 incidents of inattentive officers at our sites reported to the NRC, and that is out of roughly about 16 million manhours of security officers on duty. Now, that doesn't make it OK. It shouldn't be happening at all. As the Chairman said, you are going for perfection. But we should keep in mind, we have 24/7 security offices on guard at every site and we have had 12 incidents—not acceptable, but not systemic.

Immediately following the Peach Bottom situation, NEI communicated with the industry's chief nuclear officers and recommended several immediate actions be taken by each site. Consistent with the Chairman's statement about his P3 experience, one of the

things we emphasized at that point was the need for leadership at the site and encouraged each chief nuclear office to meet with the security organization to discuss the importance of offices being attentive to their duties, and too, reinforce the organization's expectations and standards.

We also created a task force which is actively engaged examining security organization cultural issues, as well as additional measures that may be effective for ensuring security officer attentiveness. The task force is working to define the performance and professional standards needed to promote the security culture desired across all of our plants. It is also looking at the behavior observation program and how we can strengthen it.

This task force is also looking at the appropriate policy for addressing incidents where inattentiveness occurs. Fundamentally, I agree with what the Chairman said and what David said on zero tolerance. There are cases where zero tolerance is appropriate, but it is for egregious behavior, not behavior that you shouldn't have, but isn't egregious. We can talk about that more later.

Leadership at every company and every site expects and advocates a safety-conscious work environment program which is designed to ensure individuals feel free to raise concerns and are confident these concerns will be promptly reviewed and resolved with the priority appropriate to their significance. Security officers, just like other personnel on the site, are therefore encouraged and expected to promptly report concerns and issues to supervision for resolution. Our expectation is that those concerns are addressed effectively by management.

Let me turn now quickly to the force on force exercises and the industry composite adversary force. Prior to September 11, NRC evaluated force on force exercises roughly once every 8 years at each site and there were no NRC requirements for annual exercises to be conducted by the site. Also, the pre-9/11 program did not have specific performance requirements for the adversary force that participated in the evaluated exercises.

Since 2004, each plant has been required to conduct force on force exercises of security several times each year, with each security shift being tested every year, as well as an annual exercise. As Commissioner Lyons mentioned, in 2007 we completed the first 3-year cycle with NRC-evaluated force on force security exercises at every plant. We are now into the second cycle.

The NRC has also established standards for the qualification of the adversary force that participates in the drills. Given these defined requirements, the industry decided to establish a composite adversary force that is skilled in offensive tactics and has the training and qualifications to meet the NRC standards. The adversary force is used in the triennial NRC-evaluated exercises and thus presents a state-of-the-art challenge to the plants.

In addition to evaluating the defensive capabilities of the plant, the NRC also evaluates the adversary force to ensure a robust exercise.

Senator CARPER. Mr. Fertel, I am going to ask you to wrap up, if you would.

Mr. FERTEL. Yes, I am.

Senator CARPER. Thank you.

Mr. FERTEL. This is a subject you raised. Let me just touch on this.

The composite adversary force is managed under a contract with Wackenhut Special Operations Group. The management team is composed of five individuals, all of which have extensive special operations experience. The rest of the adversary team consists of individuals from power plant sites that are trained to meet the NRC standards and perform as a team. While some of the team members do come from Wackenhut sites, less than 50 percent do. We don't believe it matters where they come from because they are held to a standard by both the NRC and us that it doesn't matter whether they are Wackenhut people or not. They have to meet the standard.

With that, I would be prepared to answer any questions.

[The prepared statement of Mr. Fertel follows:]

Marvin Fertel
Senior Vice President and Chief Nuclear Officer
Nuclear Energy Institute

Written Testimony
U.S. Senate
Committee on Environment and Public Works
Subcommittee on Clear Air and Nuclear Safety

Washington, D.C.
February 28, 2008

Chairman Carper, ranking member George Voinovich, and distinguished members of the subcommittee, I am Marvin Fertel, Executive Vice President and Chief Nuclear Officer at the Nuclear Energy Institute (NEI). I am honored to address the subcommittee on the subject of "Security of Our Nation's Nuclear Plants."

NEI brings together and is responsible for developing policy for the U.S. nuclear industry. NEI's 270 corporate and other members represent a broad spectrum of interests, including every U.S. electric company that operates a nuclear power plant. NEI's membership also includes nuclear fuel cycle companies, suppliers, engineering and consulting firms, national research laboratories, manufacturers of radiopharmaceuticals, universities, labor unions, and law firms.

I am here to discuss nuclear security at the nation's 104 commercial nuclear power plants at 65 separate sites in 31 states. These plants are responsible for producing 20 percent of the electricity in the United States. In particular, I will also discuss the industry response to an issue we take very seriously – security officer inattentiveness. This is an issue that has gotten attention recently because of an incident at the Peach Bottom nuclear power station. The nuclear industry as a whole is proud of its safety and security programs and their records. We put great stock in and value each of the security professionals that work day in and day out to protect our employees that work at the plant, and the public that lives around the plants and the power plant itself. Yet, inattentiveness by even one individual does not meet our expectations and the situation that creates the inattentiveness needs to be corrected. We need to understand and deal with the individual and the specific situation appropriately. But, more importantly, we must better understand any conditions that might contribute to inattentiveness and mitigate them across the industry

My testimony will address the following issues:

- Security at the nation's 65 commercial nuclear power plants. America's commercial nuclear power plants have long been the most secure facilities in our nation's critical infrastructure. Even so, we have made huge changes since the September 11 terrorist attacks and they are considerably more secure today.

- The aggressive actions the nuclear industry has taken in response to security officer inattentiveness incidents particularly following the situation at Peach Bottom.
- The use of Wackenhut Special Operations as the contractor to support the industry composite adversary force. Because the officers involved in the recent inattentiveness event were provided by Wackenhut, some have again raised concerns about the use of Wackenhut to manage the industry composite adversary force – the teams we use to test our security in exercises we call "Force-On-Force" (FOF).

Security At Our Facilities

Unique among the nations critical infrastructure, nuclear plants have, even prior to 9/11 had to meet security requirements required by the U.S. Nuclear Regulatory Commission (NRC). Following the September 2001 attacks, the NRC has increased nuclear facility security requirements numerous times by issuing orders and other formal requirements, and is now in the process of codifying additional requirements in rulemakings.

Since 9/11 the industry has invested more than $2 billion in additional security at nuclear plant sites and has increased the number of specially trained, well-armed security forces by more than 60 percent. These officers are better trained, better equipped and armed, better led and better supported with stronger protective systems and barriers, and better tested and evaluated by the industry and independently by the NRC.

The industry is proud of its security programs and the example they provide for other sectors of America's critical industrial infrastructure. I urge members of this subcommittee and any member of Congress visit a nuclear plant to see these security programs firsthand and meet the professionals that manage and implement our security programs. All U.S. nuclear plants must meet the same high standards established and inspected by the NRC.

Compared to other commercial facilities, nuclear power plants start with a clear advantage in the area of security. The structures that house reactors and critical systems are built to withstand natural events such as earthquakes, hurricanes, tornadoes, fires and floods. They are massive structures with thick, steel-reinforced exterior walls and internal barriers of reinforced concrete. As such, the structures provide a large measure of protection against potential attacks. In addition, the "defense-in-depth" philosophy used in nuclear facility design means that plants have redundant systems to ensure safety. Many of these redundant safety systems are separated physically so that if one area of the plant is compromised, backup systems in another part of the plant can maintain safety. This redundancy provides a capability to withstand securely and safely a variety of events, natural or man-made.

The difficult-to-penetrate structures are just the first level of a multistage, integrated security strategy. Nuclear power plant security is designed with concentric perimeters with increased security at each level. Physical barriers protect against unauthorized personnel and vehicle intrusion, including truck bombs. These security zones are protected by trained and armed professionals, who use hardened defensive fighting positions located throughout the plant, if needed. In the innermost security zone, access to the vital areas of our plants is strictly controlled using biometrics and other technologies. Critical areas are constantly surveilled and monitored using state-of-the-art detection equipment. Strict access control is maintained using biometrics and other technologies. Industry employees with unescorted access are subject to a systematic fitness-for-duty program and a continual behavioral observation program and must undergo comprehensive background checks.

Every plant has extensive plans and arrangements with state and local law enforcement and emergency response entities. In addition, every plant must conduct drills and exercises to ensure a well-prepared, comprehensive emergency response plan.

This combination of strong structures, perimeter protection, access controls and other security measures greatly exceeds the security provided for other elements of the America's critical infrastructure.

One of the security standards mandated by the NRC is the "design basis threat" (DBT). The DBT provides the characteristics and capabilities of a potential attacking force – in effect, the threat each site must be able to defend against under any conditions. Every site tests its security forces against this standard and the NRC inspects against it at mandated FOF exercises. No other sector of the civilian operated critical infrastructure has a defined DBT.

Certainly the industry recognizes – as does the NRC and U.S. Department of Homeland Security (DHS) – that it is possible that there could be threats to our plants greater than or less than what is defined by the DBT. Based upon tabletop exercises done at all sites and additional simulations done at some sites, we would expect to be successful against most credible threats even at higher levels. But with any fixed size protective force and the inherent limitations of a private sector entity, on intelligence gathering, deadly force capabilities and authorities, there is a limit to its capability by itself. Against a much larger force, plant paramilitary security forces would certainly offer a significant degree of deterrence and a strong initial defense. But at some point such threats are the responsibility of the federal government, which has full intelligence, interdiction and military response capabilities. Since September 11, 2001, DHS, NRC, and the industry have recognized the importance of coordinating federal, state and local authorities with the industry to best defend against such an attack. The DHS, NRC and the industry established a program to integrate the response planning around nuclear plant sites. The mechanism for this planning was called "Comprehensive Review" and brought together the full potential of local, state and federal capability. Last year these

Comprehensive Reviews were completed for every site – well ahead of all other industrial sectors. The industry continues to work with DHS, FBI, NRC and other federal, state, and local law enforcement agencies to enhance the integrated response of all entities in the event of an attack at a nuclear power plant.

After 9/11, the NRC issued orders requiring sites to evaluate the impacts of losses of large areas of the plant due to fires and explosions. Each site conducted specific analyses to assess the implications of the requirements and identified "mitigation strategies" to address the results of the analyses. NRC independently reviewed the analyses and mitigating strategies. All sites have complied with the order and NRC is conducting inspections to ensure these strategies are now in place.

The improvements to an already robust security program since 9/11 have been broad-based and go far beyond the large increase of officers from 5,000 to 8,000. We now maintain a professional force of an average of 125 officers per site. We couple this professional force with better weapons, solid planning and tactics, effective training and exercises, strong barriers and the latest in defensive and surveillance technology all deployed with strong security designs in a naturally hard facility. Other changes include physical improvements to provide additional protection against vehicle bombs as well as additional protective measures against water- and land-based assaults. Every plant has increased security patrols, augmented security forces, added more security posts, increased vehicle standoff distances, tightened access controls, and enhanced coordination with state and local law enforcement. This then is all backed up and integrated with competent, trained local, state and federal capabilities.

Security Officer Attentiveness

In this environment of strong security and professionalism, there has arisen recently an issue of security officer attentiveness while on duty. This is not really an issue of training. Our officers typically receive 160 hours of initial training and 120 hours of recurring training each year. Nor is it necessarily an issue of fatigue given the current and new workhour limitations required by the NRC.

Our security officers face many challenges in discharging their responsibility of protecting the nation's 104 operating nuclear power plants 24 hours a day, seven days a week. Every company expects the on duty security force to be attentive and able to respond when called upon. However, it is important to recognize that while there were 12 incidents of inattentive officers during 2007, security officers spent approximately 16 million man-hours on duty. Most of the time, the work is tedious and boring. Nevertheless, inattentiveness is unacceptable behavior. We need to correct it at the individual level, at the plant level and remove or mitigate the root causes. The potential for inattentiveness is not uniquely a contract security officer matter, it is a human being matter that requires the articulation of appropriate expectations to the security officers, appropriate involvement by supervision and management and a

culture that fosters professionalism, openness, and appropriate reactions to conditions or situations that result in attentiveness.

Following the Peach Bottom situation, NEI communicated with the industry Chief Nuclear Officers (CNOs) and recommended several immediate actions be taken by each site. Specifically, we recommended more frequent checks of the security post positions by security supervisors, more frequent communication with those posts, rotating the officers in those posts more frequently, more observation of activities in the ready rooms and ensuring the environmental conditions in these areas are conducive to officer attentiveness. For example, if there is heating and cooling inside the room or bullet resistant enclosure, the site should make certain it is working properly to ensure officers remain alert.

We also emphasized the need for leadership at the site and encouraged each CNO to meet with the security organization to discuss the importance of officers being attentive to their duties and reinforce the organizational expectations and standards

The industry also created a task force which is actively engaged examining security organization cultural issues as well as additional measures that may be effective for ensuring security officer attentiveness.

The task force immediately developed two documents focused on the attentiveness issue. One document is a shift briefing paper that reinforces the security officer's roles and responsibilities for identifying and reporting of inattentiveness and other inappropriate behavior.

The second document is a security post evaluation checklist that is a structured review of each security post on site. This process serves to identify if the environment promotes attentiveness and if not, provides attentiveness aides for consideration.

We recognize that these are in part procedural adjustments that may not get to the core of the matter. Over the next few months, the task force is working to define the performance and professional standards needed to promote the security culture desired across all of our plants. This will include consideration of appropriate policy for addressing incidents where inattentiveness occurs.

It is important to recognize that the leadership at nuclear power plants expects an extremely high standard of professionalism, accountability and performance from all personnel that work at the plant. In this regard, all of the sites have processes in place to foster and support the desired culture.

Leadership at every company and every site expects and advocates a Safety Conscious Work Environment (SCWE) program which is designed to ensure individuals feel free to raise concerns and are confident those concerns will be promptly reviewed and resolved

with a priority appropriate to their significance. Security officers, just like all other personnel on the site, are therefore encouraged and expected to promptly report concerns and issues to supervision for resolution under one or more existing plant programs. These programs include the Corrective Action Program, Employee Concerns Program, Access Authorization, Fitness-for-Duty, and Human Resources. Alternatively, the individual may report directly to any of these programs or to the NRC.

All nuclear power plant sites have Behavioral Observation Programs (BOP) designed to make all employees with unescorted access aware of their responsibilities to recognize individual behavior which, if left unattended, could lead to acts detrimental to public or site personnel health and safety. A key objective of the program is the recognition of behavior that is adverse to safety and security of the facility, including an unusual interest in or predisposition towards security and/or involvement in operations activities outside the normal work activities scope.

On a monthly basis, supervision/management formally documents that BOP monitoring has occurred. An annual review is performed and documented by supervision which typically includes behavior deviations reported to or observed by the supervisor. The supervisory review is evaluated by an Access Authorization program reviewing official to determine if additional action is required concerning the individual's trustworthiness, reliability and Fitness-for-Duty.

Force-on-Force Exercises And The Industry Composite Adversary Force

The industry has not only greatly improved its physical and operational security, but has also significantly improved the testing of that security.

Prior to the tragic events of September 11, 2001, NRC evaluated FOF exercises occurred roughly once every eight years at each site and there were no NRC requirements for annual exercises to be conducted at every site. Also, the pre-9/11 program did not have specific performance requirements for the adversary force that participated in the evaluated exercises.

Since 2004, each plant is required to conduct FOF testing of its security several times each year, with each security shift being tested every year as well as each site conducting an annual FOF exercise.

NRC conducts annual baseline inspections to validate the effectiveness of the overall site security training program, physical security efficiency and FOF exercises.

The Energy Policy Act of 2005 also mandates that one of these large-scale FOF exercises be formally evaluated by the NRC every three years. In 2007 we completed the first three-year cycle of NRC evaluated FOF security exercises – at every plant.

The NRC has also established standards for the qualifications of the adversary forces that participate in the FOF drills. While, the primary purpose of the FOF exercise is to test the defensive capabilities of the plant, an effective exercise obviously requires high performance by the adversary. Recognizing that the sites would be conducting as many as 15 drills and exercises in a three year period, the industry decided that there was value in establishing a process by which site personnel could gain expertise in performing as adversaries. To this end, the industry has established a Composite Adversary Force that is skilled in offensive tactics and has the training and qualifications to meet the NRC standard. This force consists of full-time, highly trained, security experts. The adversary team members are thoroughly trained, meet physical fitness requirements and demonstrate weapons proficiency to standards, including expertise in the use of state-of-the-art MILES laser based weaponry. The adversary force is used in the triennial NRC-evaluated exercises and thus presents a state-of-the-art challenge to the plants. In addition to evaluating the defensive capabilities of the plant, the NRC also evaluates the adversary force to ensure a robust exercise. Through this program, assurance is further provided that our security forces can successfully respond to a dedicated adversary team.

We are unaware of any security forces for any private industry that are subjected to such rigorous testing that includes FOF drills using a full-time dedicated team.

The Composite Adversary Force is managed under a contract with Wackenhut Special Operations Group. The management team is comprised of five individuals all of which have extensive special operations experience. The rest of the adversary team consists of individuals from power plant sites that are trained to meet the NRC standards and perform as part of the team for a period of between 12 and 18 months after which they return to their site to train and participate in FOF exercises. While some of the team members come from sites supported by Wackenhut, more than 50 percent do not come from Wackenhut sites. Regardless of whether the adversary forces themselves consist of personnel from Wackenhut or any other entity, they must perform to the standard that the NRC has established.

To further ensure the integrity of the exercises, employees recruited from plant sites are not permitted to participate in FOF exercises at their own plant. Also, team leaders who may have assessed security at plants in previous positions will not be team leaders for the FOF drills at those plants.

In any case, it is important to recognize that only the NRC evaluates the exercise including assessing the performance of the adversary force as well as the plant's defensive response.

By all accounts, the Composite Adversary Force's performance in the first three-year cycle has been exemplary and they are meeting or exceeding both NRC and industry expectations.

In summary, our defenses were robust prior to September 11, 2001 and they are significantly better today. It is highly unlikely that attackers could successfully breach security at a nuclear power plant and even more unlikely they could produce a release of radiation that would endanger the residents near the plant. We take security officer inattentiveness seriously. We have taken and are continuing to take aggressive action to ensure appropriate measures are in place. In addition, security at our nuclear power plants is not static. We are constantly reviewing and reevaluating our security programs. Consequently, America's nuclear energy industry will continue to play its role as a leader and model for protecting our country's critical infrastructure.

Senator CARPER. Thank you very much.

Senator Voinovich is going to ask the first round of questions, and then I will wrap it up. Thank you.

Senator VOINOVICH. I would like to put this into perspective, and maybe you could shed some light on it.

First of all, we had a serious matter where somebody slept on the job and ultimately somebody took a picture and so on. In terms of the overall public, has anybody evaluated on a scale of one to ten why terrorists would want to go after a nuclear power plant? We have nuclear power plants. We have chemical plants. We have all kinds of facilities all over the Country.

From a threat assessment, and maybe we need to do this in a closed session, but if you had a guard sleeping and then something did happen, was there enough other stuff in place that it could have taken care of it, i.e. the guy wasn't there, he was sleeping on the job, the whistle blows, you have to do this, and he's not there. Could they have handled it if the guy remained sleeping? I am just talking practical things. So that is one thing.

I have been out to see two of our plants, Perry Nuclear and Davis-Besse, particularly at Perry Nuclear on the security side of this thing. So you have the internal problem of making sure that the plant works and things like Davis-Besse don't occur about the head of the gizmo that is there and so forth.

And then it is the security threat. I recall being at a Federal facility where they were bragging about how they had security in place. I said, get in a car and go up to Perry and find out how you really secure a place.

So I think the public ought to know that in terms of security, probably these facilities are more protected than anyplace anywhere in the Country, just to put things in perspective. I think so often they get the publicity, and I have to believe there may be some other things out there that are a lot more dangerous in communities that need to be secured than what we are talking about in terms of our nuclear facilities. So that is to put things in perspective.

And then you have the outside contractor and the internal people. And half of the operations have private people coming in and half do it internally. I don't know, Mr. Fertel, whether or not you guys have looked at this and said, when they do it in-house it is a little better done than if they hire somebody from outside to come into the operation. I think, Mr. Crane, in your testimony you talked about some kind of cultural difference there, people feeling they weren't part of the team. I would be interested in your comments on that.

And last but not least, Mr. Crane, when this thing went awry, I would be really interested in how did you go about dealing with the situation in terms of the people that were in security? I think you have now moved to your own people. OK? I would be interested in knowing how do you determine what really works in terms of security? What methodology? I am talking about a management issue here. For example, I would like to ask, do you have quality management in your company? Do you know what quality management is?

Mr. CRANE. We have a program similar to that, yes.

Senator VOINOVICH. OK. What did you do? What have you done?

Mr. CRANE. Yes, I can start first and go backward on the questions and then turn it over.

Our decision to bring the program in-house and no longer have it as an out-sourced service is wrapped around a few things. One is being able to have access to select, train and continue to develop the managers. We have a very detailed management training program where we start off and we do behavioral assessments. We look at gaps to standards that we want.

Senator VOINOVICH. You want to take over the H.R. part of this thing?

Mr. CRANE. Not only the HR. That is the first part. Being able to select the people. I think the basis of the program is the quality of the people and the development of the people, then the oversight of the people. The actual mechanism that we secure the plant by is set by regulatory standards, design standards. We are very well aware of how to operate a security force. What we did not have was the security force within our programs as far as assessment, development and continued nurturing, or deciding if the individuals should be part of the team or not. So that is one of our primary goals, and that is the focus that brought us to bring the program in-house.

Senator VOINOVICH. Are you doing this in all of your plants?

Mr. CRANE. We are. We are in the process. Peach Bottom is completed and we are in the process by the end of June of this year, we will have all the facilities with the guards being Exelon employees, the security personnel being Exelon employees.

Senator VOINOVICH. Now, when you finish with the job, is the NRC going to come in and evaluate what you have done?

Mr. CRANE. Yes. They have been evaluating Peach Bottom as an ongoing inspection, and we anticipate as they have told us that we will continue to get these inspections at our other facilities on a regular basis.

Senator VOINOVICH. How about you? Are you going to have a team in place to go out there and oversee this thing to make sure that it is at the standard where you want it to be?

Mr. CRANE. We do. We have a special team, an issues response team, that was set up at the beginning of this and they will continue on as the change management and oversight organization to provide the management support as required.

Senator VOINOVICH. Mr. Fertel, is it INPO? I can never remember the name of it.

Mr. FERTEL. INPO.

Senator VOINOVICH. INPO, yes. Because this happened at this place, is INPO going to do anything about it? This shed a bad light on the industry. What are you going to do about it? Or is that something that you don't touch?

Mr. FERTEL. Actually, NEI is doing stuff. INPO would stay on the safety side of the issue, not the security side. They will keep looking at safety-security interface.

Senator VOINOVICH. So INPO doesn't do security. They do the internal operation of the plant to make sure the maintenance is there, if things are replaced and so forth.

Mr. FERTEL. Right.

Senator VOINOVICH. OK.

Mr. FERTEL. But maybe starting at the top of your questions, Senator Voinovich, does the public understand this threat, the significance of the threat at Peach? The NRC did do a pretty in-depth review of it, and their conclusion was that there was no diminishment of their ability to defend the site, and they have made that public. Whether the public has read it is a whole other story.

The other thing that the NRC did determine, and this goes to a question asked earlier by Senator Carper, was that fatigue was not an issue. To be honest, we don't think fatigue is a big issue for security officers as much as boredom. We like them to be bored, just like we like the operators to be bored, because that means there is nothing happening. But we need to do something so that when they are bored, they don't get inattentive.

That is another thing. Inattentiveness across our industry, and this task force we put together is looking at trying to come up with the right standards, is defined pretty broadly. Inattentiveness in some companies could be sleeping. In other companies, it could be anything from sleeping to actually doing something that is not part of the job assignment. Say, I am reading a book and I am not supposed to be doing that. So it depends upon where you are on that.

I would say that the public is not fully aware at all, Senator Voinovich, of the relative threat. We are told, and this is not a safeguards issue, but we are told when we deal with law enforcement and the FBI and everybody else is that nuclear plants are always on the list, just like the White House is probably always on the list. But that from the robustness of the security, we are a very hardened target and not one that most people and most groups want to take on. But we are always on the list and we take the responsibility very seriously.

You asked a question about contractor versus proprietary, versus taking it in-house. I think what you heard both Chris Crane say what he is trying to do by integrating it into the family, and actually what you heard Eric Wilson say about his new approach, you want security to be integral to everything at the site. It is easier if it is in-house because it is in-house, but it doesn't have to in-house to be integral. It is just a little harder. They should use the same systems. They should have the same culture. They should know that they are part of the same shift as the operations people. And they should feel that they are treated with the same respect as operators, maintenance people and anybody else on that site.

So I have a bias where I think in-house might be better, but I don't think it is the only way you can do it.

Mr. WILSON. Senator Voinovich, if I could speak to your questions.

Again, I agree with Mr. Fertel and Mr. Crane on the management piece and the integration and why Exelon looked to go in-house. Because as I talked about in my written testimony, as well as my oral testimony, you will see that a little over a year ago, from a contract security perspective, we found that to be one of the three main areas that needed to be addressed was that closer relationship operationally with the site. So we are in agreement.

Obviously, Exelon will make the right business decisions for them, but we would disagree obviously that in-house is better than

contract or vice versa. We think that we all need to do the right thing at the end of the day.

One thing I did want to mention to you that you brought up at first, and I think is very important from a public perception standpoint, is I happen to have had the opportunity of doing target analysis on targets in critical infrastructure in this Country and others in my military career. I can tell you very comfortably that while we see nuclear being targets, it is not because they are vulnerable, OK? The only reason why they would be a target, in my mind, is the fact that because they are a nuclear facility, because I don't see success as it relates to it, nor do I see them as targets of opportunity, not in this Country. I just got back from the Middle East. This country itself and its nuclear facilities are very secure. I don't think there is any question of that.

Senator VOINOVICH. Thank you.

Senator CARPER. Senator Voinovich and I are supposed to be in another place right now. If you feel like you want to slip out, I will join you just as soon as we wrap up here. Thanks so much for being my partner in all this, and letting me be yours.

I want to go back to the issue of zero tolerance just for a moment, because I think that really is critical as to why there was this collusion and, if you will, a coverup and reluctance of people to stand up and say this is wrong and be public about it.

I understand, Mr. Wilson, that Wackenhut had a zero tolerance policy. I agree with Mr. Lochbaum, there are some things you want to have a zero tolerance policy about. There are others that maybe it is not appropriate.

Let me just ask you, do you all still have a zero tolerance policy? Did you ever have a zero tolerance policy? And how do you think it is appropriate or inappropriate in this instance?

Mr. WILSON. Well, I think again the intent of today is to learn from the experiences that we had.

Senator CARPER. That is what we are trying to do here.

Mr. WILSON. Yes, and I agree with that. And I agree with Mr. Lochbaum. We have talked on prior occasions. I have also talked to the NRC. We do have a zero tolerance policy, and I think that is a mistake because it is not conducive to wanting to bring forth concerns as far as inattentiveness goes. I think that is something we need to look at. I think it is something we need to change.

I have been in discussion with the NRC on that. I will continue those discussions at least as it concerns regulated security solutions and Wackenhut and the sites that we provide security for. We will continue those discussions with our clients at those sites, too. But I am in agreement that we have to change it or you will never see people wanting to bring forth an issue. It can't be black and white. I think in this regulatory space, this is an area where we can't be. We need to create a different culture.

Senator CARPER. All right. Thank you.

Mr. Lochbaum, in your testimony you stated that Exelon's firing, well, firing may be the wrong word, but discontinued relationship with Wackenhut in response to the video of sleeping guards, I think you said misses the mark. What do you believe would have been a more appropriate response? Do you believe that the safety

culture at Peach Bottom may be the root of the problem with some of the security personnel there?

Mr. LOCHBAUM. Well, the video rendered the status quo untenable. If Exelon had been using in-house guard, they would have had to bring in security professional like Wackenhut because they couldn't continue the status quo once the video aired. So there had to be a change, whatever it was, flipped.

And that really wasn't the underlying problem. It didn't matter what hats or shoulder emblems were on the jackets. That had little to do with it. At Peach Bottom, conditions existed there where security guards felt that their conditions weren't cared for. They were put in the ready room. The problem had been raised. They had been promised fixes for many years. So they got to the point where they reacted out of frustration. That was the equal force. They were treated badly, so they responded in kind, badly. That was the underlying cause. Changing the uniform doesn't fix that frustration.

Exelon since then has fixed some of those underlying causes that forced the guards into that improper response. But the right thing to do was figure out what the causes were that led the guards to feel that way and address those, not giving them new uniforms.

Senator CARPER. I would just say, Mr. Crane, when we visited your facility at Peach Bottom, and I might say Exelon has a great reputation throughout the industry. You guys aren't the black hats, you are the white hats, or one of the white hats. We appreciate very much the work your company did at Salem and Hope Creek, taking a couple of facilities that frankly were nothing to be proud of in terms of their safety record, and bringing them a long, long way. So I just feel compelled to acknowledge that.

Maybe one more, if I could, for Mr. Fertel. Let me ask you the same question I posed to the commissioners a little bit earlier, one of the questions. The NRC has discussed efforts needed to integrate security forces into the licensee's organization. I understand that the institute that you are representing houses and hires the composite adversary force used in force on force exercises.

If it is appropriate to integrate security forces in the plant's operation, similarly shouldn't it be appropriate to integrate the composite adversary force into the Commission's operation?

Mr. FERTEL. Let me explain why we think——

Senator CARPER. I know you spoke on this earlier, but I want you to come back to again.

Mr. FERTEL. Yes, fine, Senator. I think it is an important subject.

There were a couple of motivations when we first decided to go forth with the composite adversary force. One was lessons learned from the experience on force on force in the past. When the sites would exercise force on force training and drills for themselves, which before 9/11 wasn't that often, you got smart and you learned that the people who were now attacking were officers that most of the time defended. So there is a real difference if I spent most of my life defending, and then once or twice a year I am asked to become an attacker.

What we found was, we needed to figure out how to get better adversaries for ourselves. Put aside the NRC for a second.

Senator CARPER. In my business, I would like to have better adversaries, too.

[Laughter.]

Senator CARPER. Not more successful, but I have had good ones.

Mr. FERTEL. We should take some lessons.

Senator CARPER. I have had good ones.

Mr. FERTEL. But what we decided was that if we put together the composite adversary force that met the NRC standards, and we did it by having, as you pointed out, individuals from our sites running through there on an 18 to 36 month period. When we bring them back to the sites, they become trainers and leaders for the adversary forces at the site. So we saw a benefit to us by going that way.

To be honest, we understood the perception issue. We didn't have our heads in the sand. But we were saying, look, if you are meeting the standards that NRC has, and they have set them. If you didn't have them, it would be hard, but you have them. Two, they are evaluating the performance of that particular group. So if they actually took it in-house, it would be very hard for them to evaluate it.

I could say there is a perception of conflict if they took it in-house, potentially, but we were looking at an effective force that would give us value at the sites. Wackenhut manages it, but we have five individuals that manage it that hardly ever see Wackenhut. I think your staff may have met with a couple of them. These are individuals from Delta Force. They are all special ops. Actually, Eric was one of the first leaders of it.

The one thing all these people want to do is win. So when they go out and try and do this, their goal is to win.

The other thing in all honesty for the officers at the sites, the officers at the sites are very professional. There are people, and maybe they are mistreated as David said, and I am sure Exelon and other sites will fix that, but they are very professional. They want to do their job right. The last thing they want to do is game a force on force exercise and potentially not identify a vulnerability that could get them or their colleagues killed if somebody actually did show up with real guns and not lasers.

So we think it works real well. We understand the perception problem, but this is one of those where if we changed it, and I heard what Commissioner Jaczko said, if we changed this for perception, we would actually be diminishing, in my opinion, the strength of a very good program that not only helps in force on force, but helps the sites.

Senator CARPER. OK. Good.

A concluding word, Mr. Lochbaum?

Mr. LOCHBAUM. I just wanted to add to what Marv said. One of our concerns if the NRC took over that function, it would eliminate the conflict of interest perception, but if you look at how the NRC ensures the safety of the plant. The NRC doesn't run the test of the diesel generators. They don't run the test of the safety systems. They ensure that the plant workers do that right to the standards and regulations that the NRC has, but they don't run the safety tests. They make sure it is done right. Likewise, we think the NRC's role is to ensure that the security testing is done right.

To address the perception issue, Commissioner Lyons on the earlier panel said that Wackenhut's composite adversary force is identifying problems. That information is generally not publicly known. I didn't know that until I heard Commissioner Lyons say it. If they provided that information to the public, not necessarily that Plant X did bad, but just overall, that would help the public see that there is not a perception. And I think that is the way to address the problem, more so than putting NRC hats on the fellows.

Senator CARPER. Good. I think that is an important point and not a bad one to conclude on.

Before you all pack it up and head out, I will just mention a couple of things in closing.

One of those is going back to what we observed at Peach Bottom and the conversations we had with some of the security guards there, who I think used to be part of your force and now are part of the team at Exelon. They indicated the ready room where they went when they weren't up in the towers or on some other rotational duties. They indicated that the room was warm; that there weren't a lot of activities to keep them alert. I would suggest as we go forward that I think we need to consider the issues of fatigue. But just as important, we need to consider the kind of environment, temperature, other activities that are available for the guards when they are not on specific duty assignments to have to do to stay sharp.

When I was in my old job as a naval flight officer, in my squadron we would have FE and I might say, Mr. Wilson, thank you for your service to our Country in another capacity FE but we had ready alert crews. In our job, you had to be ready. When the balloon goes up, you have to go find Soviet nuclear subs and you have to be ready to go in 30 or 45 minutes. We would always have a ready alert crew ready to go.

Our ready alert crews would usually pre-flight around five or six in the morning and take over around eight. By noon, we all had our primary jobs on the ground, in addition to our jobs in the plane. Around noon, you had to knock off and go to the ready alert room and go to bed or sleep, crew rest. The idea there was quite the opposite of what we have in the ready room here in this instance.

But the reason why this is so important, sometimes the bad guys trying to come in and take over a facility may not be the composite adversary force. It will be the really bad guys. And we need to have whoever is in that ready room ready to head out the door and to grab their weapon and to be effective like right now. So it is a different kind of State of readiness.

I know read alert, because we stayed on duty for 24 hours. These guys don't. They stay on eight, nine, or 10 hours, and they are on their way home. So there is just a difference here.

Let me close, if I may say, I think this has been a most valuable hearing. Some of the hearings that I have been privileged to attend or preside over, they were of help, but maybe not as much as this one, not just in terms of what we have learned, but just in terms of the important lesson that we send out across the Country, the reminder that we send across the Country to folks that are running these important 104 facilities.

I liked one part of your testimony, Mr. Lochbaum, especially. It reminded me of my old physics lessons. I am talking about Newton's first law: an object at rest tends to remain at rest. And then you came back and added on the caveat: unless acted upon by an outside force.

This Subcommittee is one of those outside forces. The Congress is one of those outside forces. It is important that we keep that in mind and know that when we see an object that is at rest that ought not to be at rest, that we ought to be there to make sure that we get some action. My hope is by today's hearing, we will not only have put a spotlight on what happened, what went wrong at Exelon, both at Peach Bottom not only for Exelon and for Wackenhut, and Wackenhut's successor, but also for the NRC, especially for the NRC and a reminder for them to be vigilant.

I will close with one of the things I said to the employees that I spoke with and we met with when we were there. I said there is more for the employees at Peach Bottom at stake than just their own safety. There is more at stake than just the safety of the folks who live in the community around Peach Bottom. There is a whole lot at stake for our Country.

We have this huge and growing reliance on foreign oil. Over 60 percent of our oil now is imported and a lot of it comes from people who don't like us too much. I am convinced they take our money to hurt us. People sometimes say to me, well, why can a nuclear power plant and greater reliance on nuclear power, how can that help reduce our reliance on foreign oil?

I will just say two words: Chevrolet Volt. I went to the Detroit Auto Show, the North American Auto Show a year ago last January, one of the coolest cars, neatest cars I saw was the flex-fuel plug-in hybrid Chevrolet Volt, which hopefully will be on the roads of this Country in the year 2010. It is a vehicle you plug it in at your garage, you plug in where you work, go leave the next day and go 40 miles, if we can develop a battery to do that, on a charge. And use the auxiliary power to recharge the battery so you can go further than the 40 miles.

But we need clean energy that nuclear can provide to help provide the electricity for whether it is a Chevrolet Volt or other plug-in hybrids that will follow. So the potential to reduce our reliance on foreign oil through ample safe nuclear energy is very substantial.

The other thing is, in my State and States like Maryland and New Jersey and others in the mid-Atlantic States, we live at the end of the tailpipe for the rest of the Country in terms of air pollution, air emissions. We have in our region very high levels of child asthma and we have a lot of other problems with breathing disorders. That is unacceptable. One of the ways we can help reduce that problem, address that problem is by figuring out how to introduce a new generation of nuclear power plants into our Country, operate them safely, and make sure that ones that have been around for a while continue to operate safely, too.

So there is a lot riding on this, a lot for our Country.

You have been generous with your time. We appreciate the preparation that you made in coming here today and for the time you

spent with us today. We will be sending you some questions to followup and we ask that you respond promptly.

Again, we thank you, and with that, this hearing is adjourned. Thanks so much.

[Whereupon, at 12:40 p.m. the committee was adjourned.]

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