

NUCLEAR REGULATORY COMMISSION

+ + + + +

31st ANNUAL REGULATORY INFORMATION CONFERENCE

+ + + + +

COMMISSIONER BURNS PLENARY

+ + + + +

TUESDAY,

MARCH 12, 2019

+ + + + +

ROCKVILLE, MARYLAND

+ + + + +

The Regulatory Information Conference convened at the Bethesda North Marriott Hotel & Conference Center, 5701 Marinelli Road, at 10:00 a.m.

PRESENT:

STEPHEN G. BURNS, Commissioner, U.S. Nuclear Regulatory Commission

HO K. NIEH, Director, Office of Nuclear Reactor Regulation

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

P-R-O-C-E-E-D-I-N-G-S

(10:08 a.m.)

MR. NIEH: Okay, ladies and gentlemen, our next plenary is going to be from Commissioner Stephen Burns.

The Honorable Stephen Burns was sworn in as a Commissioner to U.S. NRC on November 2014 to a term ending June 2019. Commissioner Burns has had a distinguished career with the NRC and internationally as well. He was our 16th chairman from January of 2015 through January of 2017 and immediately prior to rejoining the NRC, Commissioner Burns was the head of Legal Affairs at the Nuclear Energy Agency that is part of the Organization for Economic Co-operation in Paris, France from 2012 to 2014.

Commissioner Burns was a career employee at the NRC from 1978 to 2012 and he served as the NRC's General Counsel from May 2009 to April 2012.

As I'm sure you have already heard, this will be Commissioner Burns' last regulatory information conference. He has stated that he will not be seeking an additional term after his current term expires.

So please join me in welcoming Commissioner Burns.

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

COMMISSIONER BURNS: Well good morning, everyone. It's a pleasure to be here. Are the slides going to go up? Yes, okay.

So I thought I would take you through, as Ho has already given you my career path, 1978, 40 years ago I joined the agency. Now there is something about that number 40, if we think about Moses and the Israelites they wandered through the wilderness for 40 years. Noah survived 40 days of rain. Jesus and Mohammed both went into seclusion and prayer for 40 days before they emerged and carried out their missions.

So 40 is something. It's all it is, it's a long time and maybe it's time for you to move on and that's what I plan to do.

But for these 40 years for me, there are two NRC Acts and one in the middle. So we're going to see here's Act 1. And Margie sort of set the stage here. She talks about Marie Kondo. And what I hope to do today is to share some pictures as I clear out my files that give me joy.

This is one. I guess I was a little darker of hair. But look at the modern computer that's sitting on the desk. This is about 30 years ago when I was in the chairman's office working for

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

a chairman. I didn't gray that much being the chairman for about two years or so. So that was my first act, my first time around at the NRC, which as Ho mentioned and then concluded when I retired as General Counsel in 2012.

And then I came back to town in November 2014. There's Allison and in the middle is my wife Joan, who is joining me today, just trying to figure out what I've been doing with myself for these 40 years I guess.

So over the course of this time and, of course, when I came back into town, I left this view from my office for this one. I guess Paris is a little more elegant than Rockville Pike. But in any event, with that in mind, I'm going to try to reflect on what I've learned and what the fun I've had, some highlights and lowlights perhaps of my career and the lessons that I can bequeath you, as wise as I am after these 40 years wandering in the wilderness.

When I joined the NRC in 1978 fresh out of law school, you know dark of hair, as you can see, I was eager to begin my career in public service. And I came to the NRC then a fledgling agency just spreading its wings, barely three years old. Joe Hendrie was the chairman. The NRC, as I say, was at

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

its beginning.

If the agency was human, we would say it was a toddler. And I think, frankly, that's a good description of it at the time. The NRC was trying hard to find its feet, if you will, while it was scattered around a dozen offices in the Washington area. The Commission downtown, about two blocks from the White House, in a building I'm also told was a bomb shelter.

For me, I was living in the District. I had recently been married. And I was commuting up to Bethesda, when the Metro stopped at Dupont Circle and I then had to get on the bus with the cleaning ladies going out to Bethesda at the time.

The Commission, again, was downtown, as I said. And so one of my -- I'm going to talk about my first Commission meeting, barely two minutes -- two minutes -- two months into my tenure at the NRC. Here is the Commission hearing room downtown at H Street. And at my first Commission meeting, I had an important job, as a young attorney with a rigorous education, a great background, I had the privilege of flipping the presentation slides for the overhead projector. Now some of you have no idea what I am talking about because you're used to PowerPoint. And

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

yes, you know, when we said cut and paste and you do that on your computer, we used to actually cut and paste. That was a way to make sure people didn't comment on your documents too much because they didn't want to go on.

So then the Commission met in those days in a long narrow room, kind of dark, instead of the amphitheater that you're all used to today with the Commission. However, there is one -- one of the things that is constant is actually the Commission table. So we still sit around the table that the Commission was using back 40 years ago. I remember Admiral Zech, when he was Chairman was -- there was some proposal to do -- can you imagine this, in 1988, digitized the Commission's hearing table or whatever. But the cost was some astronomical amount and he said heck no and the Admiral basically said we're taking the table up to Rockville and that's where it came in 1988.

So in any event, I hardly could believe that I would go from flipping transparency slides in 1978 to eventually becoming a Commissioner and sitting as chair at that table, and sitting as a Commissioner, as I do today. That's something I didn't expect in my career.

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

So what would I say is the lessons learned from all of that Commission meeting in my early days at the NRC? And it's probably not a surprising one. It's that I think we work better and we communicate better when we are in fact together. And the consolidation of the NRC's headquarters in 1988 was a significant accomplishment. It took a while to get there but we were no longer spread out, taking shuttle buses, trying to figure out how to get downtown. The Communication among us, both at the Commission level and at the staff level was greatly improved.

So as a young lawyer, it was not my job simply to sit in the office and expound on the great things I had learned in those three years of law school. I needed to do some other things. And I want to tell you about some of my journeys. And it wasn't sometimes the work that was so much interesting. It was those side things that just happened to occur.

One of them happened in 1980 and I got to go to the Iowa State Fair. Why? Because I was representing the agency in an Iowa State Commerce Commission proceeding that we got dragged into because I hate to say it, our management in Region

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

III didn't think, at that time, to call the lawyers and see whether we ought to be pulled into a Commerce Commission hearing. So I was out there to represent two of our inspectors who were called to testify.

Well, this is one of these contentious things where between basically the utility and the Public Service Commission is about who is going to pay for some repair work that had been done. And it seemed like actually they started coming close to a settlement. So the judge, or basically the Commission at the time, decided to suspend the hearing for a day. Well, we weren't going to fly back to Washington or Chicago. So what else could we do? We went to the Iowa State Fair. We had a great State. We saw the animals. We saw the fruits and vegetables. So anyway, you take your adventures as they can come.

Now another one. Here's me in Billings, Montana in 1985, a few years later. And one of these things -- the point on this one was we went out to Billings, Montana because we had a well logger who was storing its sources in a facility that it was not authorized to do. It wasn't reporting things under 10 CFR Part 150. For those of you who don't know, that is the reciprocity provisions with our Agreement

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701



States.

So the agency imposed an \$1,800 fine. Now the guy asked for a hearing. The well logger asked for a hearing and I figured, eventually, it took us \$6,000 to go prosecute the civil penalty case and to recover it but the fact of the matter is, I think it was worth. And it was most definitely worth it because what this agency has to do sometime is stand up for the requirements it imposes and to assure that the safety requirements and the obligations of licensee are met.

But in the meantime, when the hearing was over, I got to go up overlooking Billings up to Boot Hill Cemetery and have my picture taken by my co-counsel whose reflection you can see or shadow you can see there.

One other one I want to mention. Now, this is not the LaCrosse boiling water reactor I want you to remember but I did get to see the Heileman six pack in LaCrosse, the world's biggest six pack. And if you are interested, one person can get a six pack a day for 3,351 years. That's what it says on the back of the postcard.

Now why was I in LaCrosse? Well, I was in LaCrosse because, again, as part of our oversight

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

and enforcement activities, I was there because there are some questions about whether the seismic profile for the lack bar, as we used to call it, was sufficient at the time and it wound up being the licensee wound up eventually doing the test, the soil liquefaction test that we wanted them to do. But in the meantime, a hearing had been requested by local public interest groups. So we went out to LaCrosse to conduct that hearing. Eventually, we decided that what the licensee had done was fine.

But again, you've got to find adventures. And going to the LaCrosse six pack and actually seeing -- you could see the reactor from the top of the brewery and that was even -- that's before they served you at the very end.

So I want to take one maybe a little more serious. So one of the actually most interesting things I had done in my career as a lawyer on the staff was I wound up going to the Davis-Besse plant for eight days sort of at a drop of a hat.

Basically what happened is there was a loss of feedwater transient in June 1985, probably one of the most significant, if not the most significant transient that had happened since the Three Mile Island accident. And at that point, the

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

agency was standing up its fledgling Incident Investigation Program. This was something that actually came out of the recommendations from the Three Mile Island reviews. And the agency was really trying, as I say at that point, still getting its feet on the ground in terms of things like evaluating operating experience, understanding human behavior, human actions. And so this was an important investigation.

But what happened, the licensee started lawyering up and so if they're going to lawyer up, we're going to lawyer up. And my problem was I was in the office too late that day so I got a trip to Toledo starting the next morning.

But all kidding aside, I found this, again, one of the most interesting things I ever did because it really had me working very closely with our technical staff and really getting an idea of really seeing firsthand how they approach issues, the seriousness and respect that they had for licensee staff and operators but going through and methodically evaluating and considering what had happened during this transient, what were the things that the operator saw, what got in their way. And I have to say I also had a lot of respect for the

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

operators because although they had made some mistakes, the people in the control room and the aux operators recovered and stopped this transient from becoming a really worse event, in terms of figuring out what they had done wrong, taking the steps to correct it, and also owning up to it.

So I really look at this as one of the most significant events that I had had a role in during the early part of my career.

I want to also, as an early part of my career, I started to do a lot more international engagement and international travel. This is one I got to go. That is actually Ambassador Wolcott in the middle there, who is now our representative for the United States at the Mission in Vienna. And I got to accompany her into Southeast Asia, Vietnam, Indonesia, and Thailand in 2008 as part of a mission to talk about things like the 123 Agreements and the potential assistance the United States might be able to offer, should those countries have pursued a new build.

You're seeing a reactor built by General Atomics in the late 1950s, defueled in the 1960s because there were some other things going on in Vietnam, and eventually, refueled by the Russians

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

after the Vietnam Conflict came to an end.

I also got to do a lot -- a certain amount of travel as part of one of the things I really enjoy and that is education in nuclear regulation, in nuclear law. That got me to Amman, Jordan with a group of people from the North Africa and the Gulf States. Actually, one of them is actually Farouk Eltawila, right there in the middle, who used to work at the NRC. He was working with the UAE at the time.

But one of the great things, I got to do a side trip there. I got to go to Petra. And believe it or not, I had taken some marshmallow Peeps with me. Now, some of my international friends are going to say what is a Peep. It is a marshmallow -- those little things up there. Those are marshmallow candies and they've become very famous. So I took them along. I took this in front of the famous Treasury in Petra that was in the Raiders of the Lost Ark movie and I won a prize from National Geographic. So I got a free magazine subscription and they even -- Kathie Lee Gifford actually even mentioned it on the Today Show. So you know, why wouldn't I work here?

But I want to talk about some other travel, too, and more recently. I really enjoyed as

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

a commissioner and as chairman going around meeting with my colleagues around the world and it's taken me to some fantastic places -- the Rock Laboratory in Sweden and the Finnish Repository, going 450 meters or more under the earth is really quite an experience, kind of a weird feeling you get. And into India to see the power stations there and their laboratories.

This is me scrambling the reactor in Prague. Now, they told me to do it. So don't hold it against me.

One of the other things, too, I got to go to Korea last year and for me -- also to go to the Demilitarized Zone. Here is the general who is in charge of the three different forces in Korea. But one of the things that was very meaningful for me is because when I was born in New York City in 1953, my father was in the Korea during the Korean Conflict. That's him on the left there. And he was responsible for the engineering detail that built the hut in which the Armistice Agreement was signed in 1953 and, of course, of which there has been a lot more talk most recently with the President's visits to Korea, his visits to Korea and the question of further demilitarization or denuclearization in the Korean Peninsula.

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

One of the other things I did, too, this past year was go to Chernobyl. I visited the Fukushima site about four years ago and had been to Three Mile Island but I had wanted to go to Chernobyl really because this accident really is something not only a tragedy which we wish would have never occurred and we work to prevent for the future, but also because it really is the catalyst for the international framework for nuclear safety.

And it was important to see this and the cooperation that has gone on between the European Union, and the United States, Japan, other countries, to build the new safe confinement. Really an incredible achievement. And there you see in the background me on the right there and two of my staff members with me. You see the ruined Unit 4 where the accident occurred in 1986.

But it's not all about international travel. We do things here at home and obviously, the most important part of our work is our domestic responsibilities for oversight, and regulation, and licensing within the United States. So I've always thought it's also important to get out and see what we regulate.

I will give my colleague Chairman

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

Svinicki credit because she has hit every one of the plants. I haven't been able to do that but the ones I have, I've been able to see a lot. And it is important from my standpoint to do that because it gives us a better understanding of what we're regulating, what some of the issues are, and to try to understand.

So I've been out there, some power reactors obviously, the research facilities, the construction sites. This is me at Vogtle just a couple weeks ago. The control rooms -- I'm not scrambling that one. I think that's a simulator, as it is. I think that's up in Canada at Darlington.

And also hospitals and materials licensees. I think this is the one where I'm actually trying to do the mock implant of the seeds for prostate -- it says I'm not a doctor; I know why I became a lawyer. That's not for me.

And here we are looking at a pebble bed down at Texas A&M.

I want to talk about a couple other things. One thing, this is kind of ironic because we are very close on the reissuance of the Seabrook license but I will talk about one of the things I will take credit for and that is back in 1990 when

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701



the Seabrook license was coming up before the Commission. And there was a planned protest in front of the White Flint Building that we knew about. And the question was we didn't know how many people would show up for it.

Now back then, the bottom of the building at White Flint was actually pretty open. You could more or less walk in. There were pretensions that the operator of the cafeterias thought that people would just come in off the street and eat in one of our little cafeterias, or sandwich shops, or whatever.

So the staff decided we're not going to have the building open because you know bathroom access and things, because people might want to use the bathroom or something like that. So there was a conundrum. And at that time I was the Executive Assistant to Chairman Carr and the important decision I had to make was to give the staff go ahead to rent ten Porta Potties to be put on the White Flint campus. We did. We approved it and I think we wound up being so generous that everybody here in this picture, which was the full extent of the protest that day, everybody had a Porta Potty. So, those are great things.

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

But what I want to say with that is what's my takeaway here? Obviously, NRC operates in an arena that is inherently controversial. You know we have a right in this country to debate, to raise our voices, and to have a voice. Even a protest is not something that we should take lightly or dispel lightly. It doesn't mean you can throw compost at people, like we've had a problem in a couple circumstances. And we need to be respectful of each other. But we, as members of Commission are here to hear, listen to, and weigh external opinions, and then make safety and security decisions as we are called upon to do. And knowing that sometimes we're not going to keep everybody happy but that's the case. That's the democracy we live in.

I'll just share a few other things. In 2011 atomic cupcakes. This is at the National Press Club I think when then Chairman Jaczko was talking about the Fukushima. Talk about the tackiest thing you could do, given the subject matter, but the cupcakes were pretty good.

And then of course through my years, I've had impeccable fashion sense. You know this is what I wear in the office every day. Sometimes we have celebrations and I've been happy to wear my kurta

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

that I bought in India a few years ago at our annual Diwali celebration.

And this is just a great picture of my Ukrainian counterpart this past year in the Ukraine.

And of course for a long time, we had a lot of people in the General Counsel's Office, I was Santa. And this is perhaps my best sartorial composition.

But putting humor aside for a moment, one of the things I think there is a good record of is our appearances in front of the Congress. So there are a lot of pictures of us before the Congress. I think I had 12 congressional hearings as chairman and six more as a commissioner. And that of course, doesn't include basically the one-on-one meetings we may have, drop-in visits with Members. Preparing for these briefings is somewhat more difficult than hearings themselves. Sometimes you go through the murder boards. You're trying to figure out all the type of information you think you might be asked or the like.

And one gets intelligence. We thank our Congressional Affairs Office for that but you know obviously, it's sort of like you're going to get questions out of left field sometime.

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

But the fact of the matter is that we're there because we have a responsibility to be responsive to the legislative branch and to be able to answer their questions, to rationalize what it is we do as an agency and that we do it responsibly in both a manner that it tracks with our statutory goals, as well as within the budget that we are appropriated from the Congress.

So I think sometimes that is a difficult thing to do. It's not always the fun thing to do but it is part, again, what I view as our goals in this democracy and one of the things that we have to adhere to.

Of course over the years, I think there have been any number of crises that I have seen and been at the agency that we have worked through -- Three Miles Island; obviously, 9/11; Fukushima; other challenges in terms of how the agency has performed or how it works.

We have to, for better or worse, keep our eyes focused and reflect sometimes on mistakes that we may make. And over the decades, as we have already heard I think from the chairman and the EDO, and Commissioner Baran, we struggle sometimes with the question of how much regulation is enough to be within

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

what we consider to be that adequate protection of public health and safety and a common defense and security. And I spoke on the concept at the RIC of the regulatory craft and that is that our focus on how we best look at and how we best address those challenges that we face as a regulator about giving that balance, of finding that sweet spot, of really employing and practicing the regulatory craft.

And I spoke, as I say, at the RIC about this and we have, over time, we have to use our broad discretion to impose requirements we believe that meet the mandate of adequate protection. We can't be too lax or too strict, whether that's in the security or the safety arena. We have to consider real life and actual operating experience, weigh public and stakeholder input to guard against making decisions in isolation. And I believe we've worked hard and we've done our best at that over the years. I think I try to do that, as chairman, as commissioner, to give, to practice that regulatory craft.

And when I look across the time I've been at the agency, I'm proud of some of my contributions primarily as a lawyer but also a chairman or commissioner to things like those post-TMI

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

implementation of safety improvements; the Maintenance Rule that Chairman Carr was so passionate about; license renewal; Part 52; security after 9/11; and now our efforts to transform, as you've heard them in today's earlier presentations.

We're here, as I called it last year, reformed and reforming. And now we are transforming. That's the word we're using. And I think it is a good focus and it gives us something -- it's more than ephemeral. It's about how we take things on, how we think through things, how we say not just because we've always done it this way but because it makes the best sense for safety and for security.

And at the end of the day, when I look back on my career, what's counted the most, I think it's the people. The people I've had the pleasure to work with, to get to know, who have become my friends. They are too many to name all here. So I give you a picture of the chairman's staff when I was on it in 1990 with Chairman Carr. I'm up there second from the left in the back row. And my staff when I was in the chairman's office, many of whom are still with me today: Tracey Stokes, Sandy Cianci, Johari Moore, Jason Zorn, Steve Baggett, Kathleen Blake, Clare Kasputys, and Nan Valliere. They've been a

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

great help and support to me over these last four years and I wish them well as they continue, as well as I wish everyone from the NRC.

I don't have a clear view of the horizon. No one really does. I know there will not be a third act for me. I'm starting to fill up those boxes, seeing whether they give me joy. My wife is really pushing me on that one. And as I put away the books and souvenirs, and the memories of journeys, and say goodbye, I would like to say I've got a pithy quote for you but I don't.

So perhaps I should just do what this man did, drop the mike, say goodbye, thank you for it all. Thank you.

MR. NIEH: Thank you very much, Commissioner Burns, for those great remarks. We went a little bit over time. So you know we went all in on the app, but we forgot how to use the timer right. So please indulge us because we do have a couple questions for Commissioner Burns.

And Commissioner Burns, it's been great to work with you over the years and we're going to comfortable here.

COMMISSIONER BURNS: I feel like I'm in an Ikea showroom.

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

MR. NIEH: The chair is going to break if it's Ikea furniture.

Okay so by the way, the Peep reference, I bet that may be even an acronym in the NUREG that Commissioner Burns brought.

But Commissioner Burns, this is also the 40th anniversary of the accident at Three Mile Island Unit 2. Do you feel that the level of oversight, after 40 years of learning, improving, and enhancing, is the right size for today's industry?

COMMISSIONER BURNS: Well I think it always requires some reflection and looking at it. Obviously, I actually had written a paper for a law journal on the impacts of the three major accidents, TMI, Chernobyl, and Fukushima on the international legal framework. And it is astounding to me to read about what was or wasn't going on in 1979, in terms of things like operating experience. For example, the same event that happened at TMI happened at the Beznau plant in Switzerland. Nobody in the U.S. knew about it until we did the investigations.

So what does that tell me? It says I think we've come a long way. We've really understood that operating experience, that human interaction, that the human-machine interface, but also human

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701



behavior and thinking through how you respond. I think we've gotten better about that but you know it's something I think we can continually look at because some of the things I think we thought were perhaps most risk significant in 1979 or '80 are maybe not what are the big drivers now.

So this is this idea of being the learning organization, this transforming, reforming -- reformation and reforming that I spoke about.

MR. NIEH: Okay, thank you, Commissioner. And we'll do one final question before the break here. We received a couple of questions related to international activities.

Can you give us your sense on what you consider the benefits of NRC's international cooperative activities to the mission of the NRC?

COMMISSIONER BURNS: Well, I think there are a number of things. One I sort of mentioned is operating experience. That was something after Three Mile Island the U.S. push and actually NEA -- I'm pointing at my colleague, Mr. Magwood, over there -- the Nuclear Energy Agency and the OECD actually adopted a principle that nuclear countries should share operating experience. That grew into with the IAEA -- look at Mr. Mantilla over there -- that was

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

adopted through the IAEA and now that program is really jointly run. That's an extraordinarily important thing. So that sharing of operating experience.

Re-leverage research by cooperating internationally. I think that -- and you know that gives us a little more bang for our buck or bang for our euro or whatever currency you're using.

And finally, it is, I think, the ongoing engagement that I really enjoy meeting with our counterparts. I enjoy seeing facilities that they regulate, hearing what they see as some of the challenges are and I think that has a direct impact. This is so much more a global business or enterprise than when I came in in 1979. Yes, you know reactors are being sold outside the country and all that but the fact of the matter is what we hear and we talk about is so much more integrated. And I think that's just come over the years. I think that is one of the clear impacts of the convention on nuclear safety and also a lot of talk that's gone on since the Chernobyl accident. It has reinforced, I think in terms of Fukushima, how we look at things.

So you know for me, having worked here and also in an international organization, I am a big

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

fan, as they say, of international cooperation and the benefits it brings.

MR. NIEH: Okay, thank you very much, Commissioner Burns. It's been a true honor and privilege to work with you in your time as an NRC attorney, while you were also the chairman of the NRC, and now a commissioner.

Thanks for all the advice and the apartment in Paris. We shared the same apartment but not at the same time.

Commissioner, it's been wonderful to have you here. We're so glad for the remarks you've given us and the journey through your career. And thank you for everything you've done for the NRC, both domestically and international. Thank you so much.

COMMISSIONER BURNS: Thanks.

MR. NIEH: Okay, so thank you all for your attention here and allowing us to go about 15 minutes over. We would love you to come back at 11:00 sharp. We have Nathan Myhrvold, who will be giving us his special remarks. So thank you so much.

(Whereupon, the above-entitled matter went off the record at 10:44 a.m.)

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701