

David Blee

We'll move on to our next speaker we've got someone who's pretty exciting. I never really know what he's going to say to be honest with you. He asked today that he not be standing at the podium. He's going to be free ranging as we say. But it is really an honor to have Jack Edlow here to offer a business perspective on packaging and transportation of radioactive materials.

Jack is a lot of things, he's a pioneer, an innovator, an entrepreneur and a leader that has worked over parts of six decades but since 1969, about 44 years, in industry and he is now recognized today as one of the foremost experts in the world on the field of transportation logistics of radioactive materials.

As David had mentioned, he recently celebrated in Washington, D.C. the 50<sup>th</sup> anniversary of the return of materials from Sweden appropriately at the Sweden House, with a really distinguished lineup including Deputy Secretary Poneman and of course Dave Huizenga and others from across the world.

He is president of Edlow International. He is actually a second generation nuclear energy entrepreneur. His dad as you saw in one of the earlier slides was in the picture. Jack was again taking that picture at age 12 I believe. That's his story and he's sticking to it. I've been privileged to work with Jack on the formation of the U.S. Nuclear Infrastructure Council. He's actually the founding

chairman of the Council's predecessor organization, the U.S. Transport Council. He serves on the boards of the Nuclear Energy Institute and has served on our board, a longstanding member of our boards.

He also has served as chair of the IAEA steering group on shipment denial. He's a lecturer at the World Nuclear University, been very actively involved in the 2010 and 2012 nuclear security summit business events. And presently his most recent appointment is as chair of the U.S. Department of Commerce, Civil Nuclear Trade Advisory Commission which we both serve. So Jack, it's a great honor and privilege to welcome you here today this morning to be unplugged.

Jack Edlow.

Thanks, David. Thank you all very much, very good to be here. Thank you very much, David, for the overly kind introduction. I'm getting my props ready here because I've got a lot to talk about today. Hope you came ready to listen. So good morning.

Special Advisor to the Secretary of Energy, David Huizenga. Director of the IAEA for Transport and Safety, Mr. Pil-Soo Hahn. Secretary General Henry-Jacques Neau of WNTI. Executive Director of NIC, David Blee. Distinguished visitors from around the world. Representatives of all the U.S. government agencies. Nuclear

industry professionals. Friends and competitors. Glad to have you all here. Thanks very much.

It's time that we gather again for PATRAM. You've heard already that this is the 17<sup>th</sup> PATRAM. The 17<sup>th</sup> PATRAM. Amazing. Time really does fly, doesn't it? Is anybody here for the first time? Who's here for the first time to a PATRAM? I met some folks last night. Look at this. This is fantastic. We need new people for PATRAM because the old people are going away and we need new people to come in, but you have to understand the story of PATRAM. So I'm going to spend some time today talking about the history of PATRAM and the industry, then I'm going to talk a little bit about the present of where we are and I'm going to talk a little bit about the future today also. And I hope you'll give me some time to do that.

So let's go back a little bit and talk about PATRAM. Three cities have hosted PATRAM two times. I'll give a beer to the first person who can tell me those three cities who have hosted PATRAM two times. Anybody want to take me up on that? He said London and he's wrong. What three cities? Surely somebody knows this. Ken must know this. Who wants to take a crack at it? Las Vegas is one of course, because everybody likes to go to Las Vegas. Katherine Ann? Paris, no. Miami is two. It's Miami, Las Vegas and Berlin. You were going to say Berlin. Berlin had it two times.

Now, I suppose many of you remember number five. Number five was Las Vegas. That was the first time in Las Vegas, that was 1977. Who came to that one? Who was in Vegas in 1977? Not many people go back to number five.

Number four was the first time in Miami Beach, that was 1974. Either of you guys go? You were there. So you were the only person, Rick isn't it? So how about number three? Number three was in Richland, Washington. It was the only time we went to Richland. It was 1971. I guess nobody liked Richland because we never went back there again. You didn't make it to Richland. So the furthest back we go with you is to Miami in 1974.

Well, before Richland was number two. PATRAM number two was in Gatlinburg, Tennessee. Here are the proceedings from Gatlinburg, Tennessee held in October 1968. Ladies and gentlemen, I went to this one. This was my first. Now there's some interesting things about this. I'm just going to read you a little bit about PATRAM 1968. I'm reading from the Table of Contents.

The first paper, you have to understand that Larry Shepherd from Oak Ridge National Lab was the overall chairman and the first paper on the first day was by E.J. Wilson and A.H. Partridge, the Ministry of Transport in London. Steve, you've got to understand these are your predecessors, these are your roots. The

first paper of PATRAM, The Competent Authority: How is He Coping. Now that's very timely today that this paper could be given again. And I'm sure if we read this out loud you'd find many gems of wisdom from 1968.

But there are many, many other papers in here. One of particular note that I'm going to actually quote from is The High Cost of Red Tape by Bill Broast. Now Bill Broast was one of the pioneers of DOT back even before there was DOT. But he was the pioneer of DOT and he wrote about the high cost of red tape. I'm going to read you two paragraphs. Because I think it's very interesting for you to hear these two paragraphs from 1968.

Let me turn now to another area of high cost, the transportation itself. Freight rates for radioactive materials are generally higher than those for other hazardous materials. And yet the actuarial figures on insurance losses show clearly the radioactive materials should more properly be preferred as the preferred risk cargo. No deaths, no injuries and property loss well under \$1 million over a 25 year period. That's truly a phenomenal safety record. And yet we are faced with not only high freight rates but also arbitrary restrictions on the use of bridges, turnpikes and tunnels. Sounds like denials, doesn't it back in 1968.

Our radiation safety experts have gone to such lengths to convince the public that even one radioactive atom on the street is unacceptable and that we are

now faced with living with that skeleton in the closet. We should be making some sort of positive efforts to dispel these ideas and to recognize that there are some very significant differences between radiation that is a nonsense and radiation that can injure someone or cause property damage. And he goes on and on. I'm not going to continue. This is still our problem to this day. This, from 1968.

One other paper that I have to take note of because I promised Katherine that I was going to do that. Armand Opitee of Transnuclear, another giant in our industry. Someone on the commercial side who was really there at the beginning in the French nuclear industry wrote a paper about a 30 ton cask for the shipment of PWR fuel. There you are, 1968 they had a 30 ton cask. Amazing.

Documents like this will teach you a lot even now because the problems we face today are the same problems that were being faced back in those times. And so you should be mindful of this.

Now, before Gatlinburg, number two, there was a PATRAM number one. Nobody went to it. I didn't go to it. Somebody went to it, nobody in this room went to it. Anybody know where PATRAM number one was? Albuquerque is correct. Give that man a star.

I did a lot of research. That was 1965. I did a lot of research to determine whether Ken Sorenson was the general chairman of the Albuquerque PATRAM One. I could not find evidence. Do you think he was the general chairman back then? He wasn't born in 1965. Nonetheless there was a PATRAM in Albuquerque in 1965.

What you probably don't know is there was a pre-PATRAM. There was actually a PATRAM Zero. Here's PATRAM Zero, the symposium held by the U.S. Atomic Energy Commission on Packaging and Regulatory Standards for Radioactive Materials. Where was it held? Germantown, Maryland. How many people work in Germantown, Maryland at the DOE complex now? Anybody still working out there? Yes, there you are. In 1962, December 3, there was a symposium on transport in Germantown, Maryland. Amazing. That's 51 years ago, folks. I was looking through this and I came across the name of Samuel Edlow, the president of Edlow Lead Company, my father. My father went to this event back in those days. That's great. I guess that gives me roots. If I've got roots, I'm going to talk to you a little bit more about what I think we need to do.

Sadly, this might be my last PATRAM in the United States. I'll go to Japan, but I'm not sure I'll be here six years from now. You just never know about these things. I'm 64 now and you can't be sure what happens in six years. I'd like to still be working. I'd like to still be doing good things. We have lots of work to continue to

be done. Trying to get the work finished for Dave, for the foreign research reactor return program. Chuck Mesick tells me I've got a deadline coming up pretty soon so I've got to get cracking on that. And Chuck does great, great work for that program for Dave and needs to be recognized. I still have to make that first shipment to Yucca Mountain. I don't know whether I can last that long, but somebody's got to do it and I still think I can. There's lots of work to be done.

You never know, you may not get invited again to come back to this event. You've got to do a good enough job that they'll invite you back. So I hope I'll do a good enough job and come back. But give me a few minutes to tell you a little bit more.

You are an amazing community. People way over there, can you hear me way over there? You are part of an amazing community and people way over there are part of an amazing community, all of you. I don't think you realize how good you are. Governments, many departments, industry, many different types of industries, NGOs not many here, but NGOs, IAEA certainly, WNTI is an NGO. Nick is an NGO. All people working together for a common cause. And amazing work that you've done. Some incredible people have been involved in these industries, some with us today, some just in our memories. Some in our memories but still living and some who are passed already. All of these people, Dave



Huizenga clearly a leader in these days within DOE to accomplish these difficult paths to clean up and to move materials.

Dale Klein, one of my good friends who used to be the chairman of the NRC, but many other leaders of NRC and the staff of NRC as well. From DOT, Bill Broast, Al Grella and many others of you who are here in the room today who serve at DOT. Ron Pope, Mike Wangler, Jim Stewart who all served in capacities at the IAEA and many other very important people at the IAEA who laid the groundwork and continue to support the industry. Important people. You must remember the people who brought you to where you are today.

All these people and you have worked around the world to foster the idea put forth by President Eisenhower. I should have gone through some of my slides. That was the one book, that's the other book. This is Atoms for Peace. President Eisenhower put forth the idea of Atoms for Peace. He did it at the United Nations December 8, 1958, very important speech. I recommend you all go back and read this speech some day. It was the roots of our industry, the roots. His concept of how the atom which had been created during wartime and which had led to the Cold War could be turned and used for the benefit of mankind. A very important speech.

That's what led to the dispersal of some radioactive materials around the world, which eventually led to the first return of spent fuel that has been spoken about from Sweden. Anybody here from Sweden today? Do we have any Swedish colleagues? Down here, okay. We had the current head of Studsvic come to this event we held at the House of Sweden, part of the embassy complex earlier this year back in July to celebrate the first return of spent fuel.

The picture on the flatcar here is my father on the left and some others. It's hard for you to understand to vision some of these. This is the same picture Dave showed with the first cask being unloaded. Here's the railcar with the four casks headed west, this is from the Savannah Evening News. This is a very interesting letter, you probably can't read it in detail but it talks about how the Georgia Port Authority was so proud, they were proud to have represented to receive this first shipment. And the press, I know we only have one member of the press here today, but I'm glad you're here. The press was very happy to have this. It became a big national event.

That's the Business Week article about the shipment coming in. Here's a picture from Georgia Anchorage. A spread about how happy the port authority was to receive this fuel. Here are more pictures. This is a letter from the Executive Director of Operations from AEC about it. There's the picture Dave showed. The four gentlemen in the picture from the right, Bob Shandler who handled the

receiving facility, one of his sons still works at Savannah River. Next from the right, Sam Tetelovich from headquarters of the International Department. Next, Sy Smiley, a very famous guy, went on to work at the NRC for many years. And furthest on the left, my father.

And a letter from Glenn Seaborg, the Nobel laureate to my father congratulating him on the work that he was doing for getting research reactors and U.S. Government to work together. A very important message.

I'll show two more pictures and then I'm going to stop. This is a picture of some spent fuel. It says it's from Columbia, this was not from Columbia, it's mislabeled. But that's the exact kind of aircraft configuration that Dave spoke about what we used to move it. And this is a very famous picture that Chuck will remember which is the emergency relief shipment. Eight casks from Europe from eight different countries on the way to the Savannah River. And just to show that we do hard things, Russ Neely of my staff back there. Jamie Adam from NAC International and Russ Neely, my COO work together on this amazing project down in Chile to return some material. The day before the shipment was due to leave there was a fairly significant earthquake down there and things had to get redone. It was done just as David says, we had to do and other scenarios.

One last picture, this is a shipment also with Jamie's casks I think and Russ doing it from spent fuel from Australia to the United States. Russ, how many days at sea? Sixty-three days nonstop at sea. What you see here are extra fuel tanks being loaded onboard the ship. So it did not have to make a port of call between Australia and the United States. Now I'm done with my pictures. So now you've just got to listen to me.

We had this shipment 50 years ago that we wanted to celebrate because DOE and the community had just celebrated 50 years of shipping spent fuel successfully. Dave talked about a number of shipments, but in fact it's been hundreds of shipments going back to 1963. It's been thousands of casks and if you look at the fuel experience of shipping spent fuel internationally amongst all of the countries, there are certainly thousands and thousands of shipments and tens of thousands of casks that have moved. So this is a very significant event.

Susan Eisenhower, the granddaughter of the President, spoke at our event in Washington and she recalled the vision of the President, but yet as she finishes she says she still believes the best is yet to come in the nuclear industry. You've laid an amazing groundwork but the best is yet to come. I think we all hope that that's true.

But it has not and it will happen by chance. Just as we have established an amazing safety record and an excellent security record as well, we still face criticism. And poor Dave gets criticism all the time from governors and people like that about why are you doing that and how can that happen. Think about it. I don't know for sure, maybe Ron Pope knows or somebody else, I think there could have been one billion shipments of radioactive materials in the 50 or 60 years since we really began the commercialization of this. Do you think I'm off, Ron? Could be a billion shipments, could be more if you count radioisotopes and other things.

We've had accidents. We all have accidents. All kinds of transport have accidents, every mode. I remember I think in 1973 a TWA airplane with a medical isotope onboard leaked. That led to new standards for absorbent materials. There was a sinking of a ship called the Mount Louie in the English Channel. That was a problem, it only had some natural O6 on it but it caused a lot of publicity. There was some yellowcake spilled at sea a couple of years ago. There was a truck accident with some natural UF-6 in Staunton, Virginia just outside of Washington, that was my shipment. The truck got hit by a deer that ran onto the road. There was no leaking.

We had another yellowcake spilled in Wichita once in which we dumped some material onto a road. It was two days before Three Mile Island. Wasn't a lot of

publicity about my problem at that point. I was overshadowed. There are many other accidents. Accidents occur in transport all the time. Yet, amazingly, I think I'm pretty clear on this, no person has ever been killed during transport because of the radioactive nature of the material. Truck drivers have been killed in the accidents, people have been killed because things fall on them. That's not radiation. I don't think anybody has been killed by the radiation. Does anybody know of any fatalities? There may be a few, but I don't know of any. That's astounding. How could it be? No other type of hazardous material and no other nonhazardous material has that kind of record.

I could name a few. There was a train two months ago up in Quebec that ran away and came down the hill with some oil tanks and exploded in some town. Forty-seven people died. We knew the guy who owned the railroad actually by coincidence. But 50 people died. Does anybody remember 1947, an explosion at Texas City, Texas ammonium nitrate on a ship, happened to be a French ship but that's not the relevancy, several hundred people died. Texas City, Texas was leveled by a transport accident.

Pipelines sometimes burst. Value Jet crashed in the Everglades because oxygen tanks on the airplane were improperly stowed, 110 people killed. Tank trucks explode in flames. Railroads constantly have accidents with tank cars. The couplers have to be modified time after time because they burst these tanks.

Hundreds, thousands of people have died through transport accidents. And life goes back to normal. Yet you are an industry that's never killed anybody. Never. And what do you do? You have problems. Why? Fear.

We're not doing a good enough job. Sure, the shipments are safe and the shipments are secure, no doubt about it. You can tell anybody we're safe. Accidents can happen, but we're safe. That part is well done. But we are not telling our story as it needs to be told, even here at this conference you're not telling your story. We're all talking to ourselves. I like you all, you're nice people. I like all of you. There's nobody here I don't like. But we're just ourselves. Why are we talking to ourselves?

We don't have any political leaders who came here to listen to our message. And aside from you, I think you're the only press in the room. Any other press members here? Washington Post? New York Times? Reuters? BBC? Anybody? No. Why don't we talk to the press about what we do? I think they'd be interested.

We don't have any news conferences. Maybe this is what you want. Maybe you just wanted to come here for a few days and listen to me and Dave and then going to go out and have some drinks and go to Mirror Woods or something like that. But it doesn't really serve the public interest. And I don't think it serves your

long-term interest either, especially the ones who are here for the first time. It doesn't serve your interests. Some of us have kids and grandchildren and we know they're going to need radioactive materials. They're going to need it for power and they're sure going to need it for medical applications. So the answer is we need to tell the story.

Do you believe in what you do? Do you think you do a good job? If you think you do a good job raise your hand. If you think you don't do a good job raise your hand. You say you do a good job and you believe in yourself so why not tell people about it. What are you afraid of? Stop the fear about what you do. Tell them how good you are. It's amazing.

Franklin Delano Roosevelt in his first inaugural said the only thing we have to fear is? So okay, get over it. This is part of the problem even with denial of shipment because the industry is afraid and the carriers are afraid and I led that committee. I was the first chairman of that committee for two years. Frank Nieske from Germany, he was on that committee with me and many others as well. We had to go to these carriers and these ports and these countries and explain who we are and what we do. They didn't understand us because they're not here. There are few carriers registered at this conference. I saw one or two ocean carriers and maybe an airline aside from Vogor de Neekra who carries our material. Why aren't we filled with carriers as well? I'm telling you, you



have to put the story out and you have to tell people how good you are. They won't believe you, but you know what, facts are facts.

Let me give a few words to regulators. Competent authorities. You've done a phenomenal job. Rick thought I was going to criticize it, but no. You've done a phenomenal job. You and your predecessors have put in place regulatory standards around the world based on IAEA that are precise. Think of the job that's been done. And yet we can still function. So safety regulations, both in the U.S. and around the world have been very effective. The track record is amazing. Sometimes we have a problem, however, with homogeneity and that is one country does it here and another country does it there, and it's kind of hard to put things together and so you have to be very careful if you regulate that you don't set it in a way that you can't cross borders with things.

This happened on one particular case on thermal protection of natural UF-6 cylinders where it got kind of cockamamory in that some countries wanted thermal protection and others didn't. It seems to me that regulation was misplaced. I've spoken about that in the past because the people who have to put the thermal protection on, they get extra exposure or take it off they get extra exposure. So I think we need to watch the regulatory burdens to make sure that what we do is for good reasons. And if it isn't broken, don't try to fix it because right now you have a system that works so well the question is how

much more or what new regulations are really required? Rely on technology, new technology, new package types, new ways to track materials. Rely on technology to enhance your capabilities. Regulations for regulation's sake, not quite correct. And I urge you, do not overregulate.

Here's the toughest challenge for regulators. I know that some of you who work at the NRC for years face this more and more all the time. Try to keep the politics out of regulations. Politics becomes involved all around the world and the politics come in and make it very, very difficult for us. Do the best you can. I know you work with political leaders, the commissioners at the NRC and the U.S. are very often politically appointed now. Very complicated for the staff to deal with this. But beware of politics and regulation.

There's a very interesting book which I'll recommend to all of you. If you need a copy, you see me and I'll make sure you have a copy. It's by the current Supreme Court Justice, Stephen Breyer. It was written before he became the Supreme Court Justice, it's called *Breaking the Vicious Circle*. It's about the relationships of regulatory authorities and politics and the press and the public and how this circle continues to go round and round and round and add unnecessary regulation. And it even talks about nuclear in this book. *Breaking the Vicious Circle* by Stephen Breyer.

On the other side, to the industry members here, lots of industry people here. Good to see industry here at this PATRAM. I urge the industry members to follow best practices. This is something WNTI has been talking about and I commend them for dealing with best practices and other organizations need to adopt these ideas as well.

Do not cut corners, people. Don't try to double load. Don't try to cut the corner to make a few more bucks. Stick with the safety regime. Don't scrimp on safety. Do the job the way it's supposed to be done. One person's accident affects all of us. So if you make a mistake it affects me. If I make a mistake, it affects you. So it's incumbent on all of us to do the best we can. Accidents will happen, we know they will, but the idea is to be prepared for accidents. Have your emergency response plans ready. And additionally, have your communications plan ready because when you have an accident people want to know what's going on. And the press will be there. And you need to be ready to respond with the facts and to deal with matters correctly.

You don't have to do this all alone. There are organizations like Nuclear Energy Institute or NIC, Nuclear Infrastructure Council, WNA or WNTI who can all be helpful in you preparing your communications plan. You need to be responsible for your response plan. What will you do when you have that accident? Remember, timeliness in accidents is vital. You must be prepared to act

because the press will want to know immediately what's going on. And if you're not prepared to answer or you don't have the right information, they'll kill you. So it's incumbent on you to do the right thing and be prepared.

I want to talk about one more thing. This PATRAM child is now 48 years old. Why is the government still running PATRAM? Why is it sponsored by DOE, NRC and DOT? They should be involved certainly because they're part of the community. But isn't it time for the international nuclear industry to lead this effort? I know it probably keeps some government people busy in their spare time because it's all volunteer, right? Doug said it was all volunteer. But shouldn't we be doing it a different way now, folks, seriously?

I know the next one is going to be in Japan and Japan will run that one. And then it will come back to the United States another three years after that. I'm looking forward to going to Japan. We had a wonderful time when we were there in Yokohama. Who remembers what year that was? 1992. My staff reminded me I chartered a boat that night and took everybody from the conference out to go under the Rainbow Bridge that night. It was a great experience.

But when it comes back to the U.S. I think you have to be prepared to run PATRAM in a different way. Not just to manage it in a different way, but to have

a different process here. Personally I think it should be in Washington, D.C. for the second time. Because you have to tell your story to Washington. It's important that Washington understands how good you are. Now I know a lot of you don't like to go to Washington. You go to Washington too much. It's not fun to go to Washington. I understand that. But the purpose of this conference frankly shouldn't be fun. It should be getting your message across the way it needs to be done. I mean that. You're not going to succeed in the long run unless you, as part of the greater nuclear community, explain what you do and how you do it. Congress should be involved. We tried, we couldn't get a Congressman to come here. We tried. In their backyard they wouldn't come. We've got to do our best in Washington to do that.

I hope you don't mind my bluntness in the way I speak to you. Because I know you and I appreciate you, and I love all of you. I love you because you give me the energy to continue to do what I do which is to try to lead this industry forward to a better future. Whether it's 44 years of being involved with you or the next, I wish I had another 40 years folks, I really wish I had 40 more years because I love what I do and every day when I get up I'm happy to do it.

What I would like for you to do for me in one thing. I'd like everybody to stand up now. You've been sitting too long, stand up. Everybody stand up. I want you to shake the hands of the people next to you. And I want you to thank the

people next to you for all that they do because everybody together is a community. Thank you very much.

David Blee.

Don't anyone go anywhere. Well, Jack what can we say there? First of all, if you don't make it six years from now we're going to play this speech back. We've got it tape recorded, but we certainly hope you'll be there in person and we fully expect you to be there in person. I have to say that was better than a coffee break as far as I'm concerned.

Jack in terms of questions, just a couple of questions here. Obviously, you look at a history, it was a very parochial conference initially, it was in Germantown, Oak Ridge, Hanford, garden spots. Obviously they're not destination places. When was the first international meeting overseas?

Jack Edlow.

Berlin, 1980.

David Blee.

Started in 1965, about 15 years. So obviously you've seen this meeting go global. I guess that leads to the question and the question is, we're going to see China with 100 reactors, India with 50. We see the Russians are making a major effort in

the international arena. That's a lot of new entrants into this community that frankly I don't know how. I know we have representation from those countries here but certainly not to the extent. How do we manage that change? How do we reach out and how do we incorporate those developments into the future?

Jack Edlow.

Thank you for the question, David. It's an excellent question. It's up to the community. It's your community. It seems to me there has to be some kind of international body that is established for PATRAM. I don't know under what auspices, I don't know how to do it but those members who are not here, and the Chinese are not really here. I'm not sure if there are any members from China here. I know Raz Verma from my staff in India is here. I'm not sure there are many other Indians present at this time. There are other parts of this community that need to be contacted because an accident in China is just as important as an accident in the United States. So we have to make sure that they do the right things as well.

I think there needs to be a dialog amongst industry leaders and WNTI should certainly play a part in that although they have some members but not all members and so we have to find a way to make something happen that can include everybody. It needs to be a more inclusive, instead of, 800 is a great number, don't get me wrong, but it could be 8000.

David Blee.

Anyone up to a question to Jack?

Question.

Ron Pope. I guess my question is why are you giving up at the age of 67? Ten years ago I would have thought the same thing and here I am.

Jack Edlow.

I don't think I'm giving up at 67. I don't know where I'll be at 70. But furthermore Ron, let me tell you how I feel about this. And those people who have worked for me over the years, the people at IAEA, I could have stayed on as denial chairman at the IAEA for many, many years. I chose not to. When I set up Nick along with David and others, I could have stayed as the chairman for longer. I chose not to. I don't think you should always stay. You should contribute what you can and pass it to the people who are here for the first time who have to come up.

I've given my message and I've given my best and I'll work as long as I can, as long as I want to. But finally other people have got to step up. And so I'm not giving up, but I'm giving up the lead at a certain point.



Ron Pope.

You made the point I wanted to make. You talked about us being a special group here. When I went to the IAEA in 1983 my boss was Bill Gonzalez and PATRAM was the only standing advisory group at the agency and he was very jealous of that and he started calling us the transport mafia. We are still the transport mafia. We stick together and we have a lot of friends, we have a lot of history. And speaking of that history the proceedings you have from the early PATRAM symposia, as part of the work that we're doing on the technical basis document we're capturing all that electronically and as Pil-Soo Hahn pointed out, that will eventually be available to the world.

Jack Edlow.

Thank you.

David Blee.

Ron, thanks for your service and your involvement. Jack, thanks for your talk.

We'll have extra time for some questions here at the end for everyone.