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4 UNITED STATES NUCLEAR REGULATORY COMMISSION

5 BRIEFING ON NEW REACTOR ISSUES –

6 COMPONENT FABRICATION AND OVERSIGHT - PART 1

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8 WEDNESDAY

9 June 3, 2009

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11 The Commission convened at 9:30 a.m., the Honorable Gregory B. Jaczko,

12 Chairman presiding.

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14 NUCLEAR REGULATORY COMMISSION

15 GREGORY B. JACZKO, CHAIRMAN

16 PETER B. LYONS, COMMISSIONER

17 DALE E. KLEIN, COMMISSIONER

18 KRISTINE L. SVINICKI, COMMISSIONER

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1 PANEL 1 – INDUSTRY

2 CAROL BERRIGAN, Nuclear Energy Institute (NEI)

3 JACK LANZONI, Westinghouse

4 NAOIKI MIYAKOSHI, Mitsubishi Heavy Industries, Ltd.

5 JEFF LARSON, Invensys Process Systems

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

2 CHAIRMAN JACZKO: Good morning, everyone.

3 We have two briefings today on new reactor component fabrication

4 and oversight issues. This morning we will hear from Industry and this

5 afternoon we will hear from the staff and other regulators.

6 This is now the third briefing we've had on the Construction

7 Inspection Program, which plays a vital role in insuring quality in the

8 design, manufacturing and construction of nuclear facilities.

9 Construction and vendor inspection play a major role ultimately in

10 supporting our safety mission. Sufficient oversight of vendors is critical

11 in the supply chain for providing safe plant design and operations.

12 And of course, regulatory oversight is needed to assure compliance

13 with NRC safety requirements.

14 But in addition to our oversight programs, applicants and

15 licensees must take ownership of the quality of the products produced

16 by their suppliers and vendors. And as we have seen throughout the

17 history of this industry, a rigorous quality assurance program is

18 absolutely necessary. And this also entails the need for licensees'

19 presence in overseeing the work of suppliers and vendors. And we'll

20 hear, I suspect, from looking at the slides from many of you today,

21 about that particular issue.

22 And over the last 30 years, we've gained significant experience

23 in nuclear component fabrication, and we've seen many successes

1 and failures.

2 The current program, I think, certainly has two really noteworthy
3 changes. The first one is that we've now transitioned from primarily a
4 domestic fabrication of components to a global commerce in nuclear
5 components. And this has created new challenges and new issues for
6 the NRC, as well as, I suspect, for all of you.

7 The second change that we potentially may see is the use of
8 modular construction. And this will certainly have an impact, I think, on
9 our ability to do inspections and to establish and play the regulatory
10 role that we have. So I think this will be some very interesting
11 meetings today, as we hear about your challenges and your
12 successes and then we hear from the staff about the issues that they
13 will be addressing. We look forward to everyone's presentations.

14 And do we have any comments from my fellow Commissioners?

15 COMMISSIONER KLEIN: The only thing clearly,
16 high-quality components is very near and dear to all of us. And I think
17 one of the challenges, as the Chairman indicated, is that we are in a
18 global supply chain now. And I think this is an area where the utilities,
19 the regulators and the vendors all need to work together in an
20 international mode to make sure that we communicate clearly and
21 when there are issues found, that we work together. And certainly on
22 the vendor inspection program, as we'll hear this afternoon, there's a
23 good chance for us to work with our fellow regulators. And I'm sure

1 you all can work with your fellow international partners to make sure
2 we have these high-quality components.
3 CHAIRMAN JACZKO: Okay. Thank you.
4 Carol, we'll start with you.
5 MS. BERRIGAN: First, I wanted to thank you for
6 having me here this morning. Thank you, Chairman and
7 Commissioners.
8 It is a pleasure to be here on behalf of NEI and the nuclear
9 industry. So thank you very much for inviting us in this morning.
10 You can put my first slide, please.
11 There we go. Perfect.
12 The first thing I wanted to talk about this morning is putting this
13 issue in a little bit of context, by stressing that this is not a new issue.
14 We've been engaged in the global supply chain for some time as an
15 industry now. We have quite a bit of current experience in this,
16 including Browns Ferry, Watts Bar, major outages that have taken
17 place over the last several years. We are gaining global experience
18 with this, looking at construction overseas as well as looking at the
19 experience we have here domestically.
20 And also, that the industry has been planning for new plant
21 construction for quite some time.
22 This is not a new issue. This is something where industry
23 planning has gone on for many, many years. And I'm sure that my

1 co-presenters here will talk to you about their experience and their
2 planning process as well.
3 Move on to the next slide.
4 The first piece I wanted to stress is current plants. The supply
5 chain issues that we are talking about today affect current plants as
6 well as new plants. And I want to talk to you a little bit about how we
7 ensure quality with the current plants.
8 First, we have our NRC-approved quality assurance program
9 descriptions at the operating fleet.
10 We also, as an industry, have very clear contractual language
11 that specify that parts, materials and services that are required, and
12 the quality programs necessary for the utilities there.
13 The current operating fleet also performs extensive surveillance
14 during the manufacture of components, looking at both process,
15 paperwork and on-site inspection of those that manufacture.
16 Finally, through the auspices of organizations, like NUPIC and
17 NIAC, they are audited vendors and sub-suppliers to those vendors.
18 So there are processes in place now that are quite extensive.
19 Next slide, please.
20 Also with current plants, based on the safety significance of the
21 component that's being delivered, there are additional receipt
22 inspections that will take place, including potentially laboratory testing
23 of materials, detailed verification of documents and shipping materials

1 and other processes. Those components are then installed by
2 qualified quality technicians and craftsmen, so that's another layer that
3 is in place there. After components are assembled and installed, they
4 are further tested.
5 And then the industry does a very good job of sharing
6 information across the fleet about any issues or challenges that
7 may come up.
8 Next slide, please.
9 With the advent of new nuclear, it gave the industry an
10 opportunity to take a look at what we were doing and also make some
11 improvements and we've also added an improved NUPIC audit
12 checklist that focuses on fraudulent products, materials and services.
13 In addition, NUPIC trained its auditors on use of this new check list to
14 identify potential fraudulent parts. And we have done a lot in the
15 industry over the past year and a half to really raise awareness within
16 the vendor community.
17 I will be talking a little bit about our vendor outreach activities,
18 and a lot of that is focused on quality, quality programs, industry
19 expectations, et cetera.
20 And finally, we are seeing increase enhanced surveillance
21 being performed at vendor shops with the advent of new plants. And
22 you will hear more about that from my co-presenters with their specific
23 company efforts.

1 Go on to the next slide.

2 The one issue that you did raise at the very beginning was the
3 expanding supply chain and the globalization of supply chain. And
4 one of the efforts that's been very near and dear to my heart at NEI is
5 rebuilding the U.S. manufacturing base and really looking to see what
6 we can do to get more U.S. manufacturers back involved in the
7 nuclear supply chain.

8 When we looked at this about three years ago, we heard a lot
9 stories about the numbers of N Stamps that used to be held in this
10 country that no longer were. We looked carefully at those companies,
11 where they were today, were they still in business, did they still
12 produce the same thing that they produced years ago, but simply left
13 our quality program there because there wasn't a sufficient volume of
14 business in nuclear to keep that in place. We found very surprising
15 results.

16 There still is a manufacturing base here in the U.S. They still
17 are doing business for different sorts of industries, maybe not nuclear
18 but potentially oil and gas. They may be working for the Department of
19 Energy. They may be working for the space industry or aerospace
20 industry, but we found a lot more manufacturing base than we had
21 expected.

22 So in addressing this challenge, it was less of a develop a new
23 manufacturing base, as encourage people who were doing high-quality

1 manufacturing to come back to nuclear, to look at our industry again
2 and come into our supply chain.
3 Through that, we started an extensive series of outreach to
4 really try to educate these potential vendors to the industry, about the
5 size of the market, the potential of market, who their customers in that
6 market would be and what the quality of requirements are to enter that
7 if they wanted to seriously be part of the nuclear renaissance.
8 Go on to the next slide, please.
9 These efforts started last year, and I think we had very good
10 results. We conducted three workshops. There was one in Columbia,
11 South Carolina, one in San Antonio, Texas and one in Cleveland,
12 Ohio.
13 We had about 900 participants from 440 companies, and we
14 started to see some of the companies that came to that workshop
15 appear on the ASME N Stamp list, as getting their qualifications back.
16 So we felt very good about the success of that workshop.
17 One of the things we learned, however, through those series of
18 workshops is we needed to do a better job as NEI and as an industry,
19 educating these potential vendors about the quality programs and the
20 expectations that the industry has for their products and services.
21 So this year we are conducting another four workshops. We
22 conducted our first in Chattanooga in February. We had about 450
23 participants, which was a fantastic turnout. And we changed the

1 format, so we spent half of the day of the workshop, about three hours,
2 talking about quality expectations. What are the quality programs,
3 what are the different procedures that they needed to follow and how
4 could they get started on that road to put a quality program in place?
5 I then had the privilege of participating in a Department of
6 Energy workshop in Georgia and learned from them that they were
7 also doing really good quality workshops as part of their outreach
8 efforts to potential vendors to support the EM organization, and other
9 DOE organizations, looking at the NQA-1 requirement that they
10 incorporate. So we decided to partner with the Department of Energy
11 in our future outreach workshops.
12 We will be piloting this tomorrow in Detroit and Friday, where we
13 will conduct both a vendor outreach and education on the commercial
14 industry requirements, an additional outreach, a half a day quality
15 workshop on NQA-1 and DOE requirements to help more of these
16 vendors understand our requirements and understand how to get into
17 the supply chain.
18 We are also continuing to do more outreach through media,
19 through trade associations and many other forums to encourage
20 domestic manufacturers to get into the nuclear business and also
21 educate them about what we expect.
22 Go on to the next slide.
23 Now, I've covered most of this already in my discussion, but I

1 also wanted to point out that the NSSS vendors and EPCs also have
2 their own vendor qualification workshops and efforts to bring more
3 vendors into the fold, educate them about what their requirements are.
4 You will hear a little bit more about that from other panelists, but
5 I wanted to let you know that this is a multi-tiered industry-wide
6 outreach effort partnered with Government and also that the NSSS
7 and the EPCs were doing outreach and education efforts as well.
8 Moving on to the last slide.
9 And this is the slide that always make me smile. It's the slide
10 that shows that we have about a 20 percent increase in domestic N
11 Stamp holders since we began this program in 2007.
12 This is very exciting to see that increase, to hear from ASME
13 that they are continuing to get requests from domestic companies to
14 look at getting their qualification back. And to see some of the names
15 that have newly gotten their N Stamp domestically and recognize them
16 as people I have met through outreach efforts over the past year and a
17 half.
18 I think that's pretty much it for me. Thank you very much.
19 And I think you will get some great information from my
20 co-presenters this morning.
21 CHAIRMAN JACZKO: Great.
22 We will now hear from Jack Lanzoni, who is the Vice-President
23 of Supply Chain at Westinghouse. Jack.
24 MR. LANZONI: Thank you.

1 Like Carol, I would like to thank you for the opportunity to come
2 into the Commission and talk to the Commissioners and to the
3 Chairman and to the various folks on the panel. And hope I can
4 answer any questions that you may have. But before that, I'll take you
5 through a brief presentation and to give you just an overview in terms
6 of how we are addressing the idea of quality with our supply base at
7 Westinghouse.
8 On the first slide, you will notice an acronym there, which I
9 apologize for because we tend to use acronyms before first explaining
10 what they mean.
11 But OMA was a program we put in place at Westinghouse,
12 which is called a one-month analysis. And it turned in to be a six-week
13 analysis. And what that was, we took senior executives from the
14 company and basically backed away from the way that we had
15 traditionally done business, looked forward 30 or 40 years in terms of
16 what the industry is going to evolve to based on the growth projections
17 that we had and stepped back and said, how do we better perform in
18 those areas based on the way that we will be doing business as
19 opposed to the way that we had done business in the past.
20 As an example of that, I'll use my cell.
21 I was brought into Westinghouse about three years ago, and I
22 came in from outside the nuclear industry. And that was a conscious
23 decision that the Westinghouse executives made at that time. The
24 reason for that was that they felt that the basic technology of nuclear

1 has not significantly changed over the past 30 years; however, the
2 concepts of quality of supply management, of supply chain, of
3 manufacturing, construction had gone through significant changes.
4 And the idea was to bring in people from outside the industry to
5 compliment the experts that we already have within the company to try
6 to bring us to a different level of performance in all of those areas,
7 particularly the quality in the supply chain area.
8 The burning platform that we talked about was an analysis of
9 some of the things that we felt would be a change in expectation as we
10 start to get very heavily engaged in the production of new nuclear
11 plants.
12 It goes without saying that our customers expect flawless
13 performance. There is no room for error in the nuclear industry, and
14 we have to have our processes and procedures in place and our
15 practices in place to assure that that's the case.
16 The industry expectations and the regulations are different, not
17 only based on the time frame from when we were building plants 30
18 years ago but also because now we are going to be expanding and
19 doing a lot more work internationally than we had done in the past. So
20 not only do we have to satisfy the requirements within the U.S. but
21 also within the other countries where we will be building.
22 The culture that we have had in the past was more towards
23 identifying quality problems and then very rapidly correcting them and

1 making sure they did not occur.

2 We still have to maintain that culture but we want to complement

3 that and our programs be put in place to get more towards

4 preventative actions as opposed to responding to an error instead or to

5 look at error prevention.

6 One of the areas that came out of the study that we did in OMA

7 was that we looked at various tools we had within the company around

8 human performance, and that was managed in behavioral

9 differentiation. And those were being managed by a separate

10 organization.

11 In the future, they will be combined with the quality organization

12 so that we will be integrating not just the quality requirements but also

13 the human performance tools required to prevent problems and to very

14 quickly respond to corrective action on that.

15 Next slide, please.

16 Some of the challenges that we face as we look forward into the

17 next 30 to 50 years is that the potential for nuclear energy growth is

18 incredible. The number of new plants that are being forecasted, at this

19 point is substantial on a worldwide basis. And in the industry, we need

20 to be able to respond to that and also accept the fact that there will be

21 new challenges that we will have to face as we try to keep up with that

22 growth.

23 Other issues that we have as a company ourselves is the issue

1 of creating a new culture within Westinghouse. And this is due to a
2 couple of different facts.
3 One would be, we have a new owner now, which is Toshiba,
4 which already has brought some very, very significant changes to us in
5 terms of the way that we run our business, particularly in the areas of
6 quality.
7 We are looking at the introduction of new employees into the
8 company. Right now, we are probably very close to half the
9 employees with less than two years with the company.
10 So the culture that had been established over the past 30 years
11 is changing, and we think changing for the better because we are
12 getting a diversity of opinions, a diversity of views into the company
13 that we never had before and we are bringing expert knowledge in
14 from other industries that we can now apply to nuclear that we weren't
15 able to do before. And this is very, very true within the quality
16 organization.
17 So, we also very quickly came to the conclusion, which I think
18 all of us have, is that the status quo is not good enough.
19 That as we start looking at the growth, as we start building
20 these new plants, we have to be significantly better and we always
21 have to strive for perfection as we move forward with the new plant
22 construction.
23 Next slide, please.

1 The real core of our programs that we're putting in place, we
2 have done and maintained the traditional ways of managing the
3 quality. We subscribed to all the various programs in place and we
4 vigorously impose them on our suppliers and manage their compliance
5 with those.
6 But in addition to that, we have to change the culture of quality,
7 to look at it not just in terms of, as I said before, problem correction but
8 also in terms of prevention, how do we get in front of this?
9 We are spending a lot more time working with the processes
10 that our suppliers are using to make sure that there is integrity in the
11 process and will ensure integrity of the product as it is being
12 developed, but still conducting the proper oversight and the inside
13 on-site inspections are now required with the suppliers.
14 One of the basic things that we have done is we've raised the
15 bar in terms of what does it take to become a supplier in the nuclear
16 industry today. In the past, we focused very much on the quality area.
17 We did a very good job, but mostly in the safety related equipment.
18 What we are doing now is we're imposing many of the same
19 standards on the non-safety related equipment, or at least ISSO level
20 standards within the quality, but more importantly we have expanded
21 the view that we take of our supply base in terms of their capabilities.
22 We are now looking at things like financial performance, we are
23 looking at the use of continuous improvement tools, human

1 performance tools, are there design means, and do they have proper
2 cost controls, manufacturing controls in place.
3 And the reason for this, and Carol alluded to it earlier, is one of
4 the -- in addition to just being sure that we are getting a proper level of
5 quality, we also are concerned with potential fraud within the supply
6 basis as well. Very difficult to detect for us.
7 One of the first elements, we think the fundamental element, is
8 first deal with a supplier that you have confidence in, in their integrity of
9 producing product and their ability to maintain profit and stability within
10 the organization. So we are raising the bar in terms of our overall
11 qualification process for the entire supply base, and we're adding
12 additional qualification requirements in the non-quality area to the
13 existing quality supplier, safety related suppliers we have today, as a
14 way of raising that bar and getting assurity that we will be having a
15 higher quality of supplier within our organization.
16 Next slide, please.
17 Key to this is proactively working with our supply base. As we
18 go through the basic quoting process, we make them aware of
19 what other quality requirements. Many of the already certified
20 suppliers understand this. But we are dealing with a lot of new
21 suppliers, particularly internationally that may not understand it as well.
22 We spend a lot of time with our supply base, very clearly articulating
23 what the expectations are, what the requirements are. These are

1 written into our contractual documents and our addendums to them,
2 which clearly define what are the requirements that they have to
3 adhere to.
4 We vigorously monitor their compliance with those requirements
5 as well as having random on-site inspections as well as with some of
6 our major suppliers, having people on board or living at the suppliers'
7 location to assure that we are getting a proper quality.
8 But most importantly, we were working with the suppliers, not
9 just adherence to but also in education. We are working with our
10 suppliers in terms of to developing the proper continuous improvement
11 tools, making sure they are using the proper human performance tools
12 that we use.
13 We have many of our suppliers attend workshops, not just on
14 the AP1000 but also on what we call our customer first program which
15 deals with lean manufacturing, Six Sigma as well as the human
16 performance and behavioral development tools that we think will
17 enhance their ability to become a quality suppliers to us.
18 Next slide, please.
19 Now, the old saying is, always trust but verify. So as we are
20 starting to develop what we think is a more robust and a more capable
21 supply base, we also have to have that ability to verify that they are not
22 losing their way and they are adhering to the basic requirements we've
23 put in place today.

1 So consequently, we are expanding our supplier oversight, both
2 from a commercial and from a technical and from a quality
3 perspective. We are putting more people in shops. We are having
4 more random inspections. We will be testing not just the witness and
5 hold points but we will also be testing the processes that the suppliers
6 are using in terms of the development of the equipment, to making
7 sure that the right controls are in place there.
8 We do the usual things in terms of adhering or making sure that
9 they are adhering to the documentation requirements that are
10 required. We have a staff of people that do nothing but just track that
11 for us today.
12 But the idea is to not just trust that it will happen but also assure
13 that we are doing the proper things to make -- have absolute
14 confidence that we are getting the quality product that is expected.
15 We are corroborating -- the note here is corroboration within
16 SCM and the reason that I'm here is that the VP of quality had a major
17 conflict and could not be here today. But we work so closely together
18 between supply chain and the quality organization that I feel relatively
19 confident that I can represent him well on this.
20 Part of the reason that there is a separation is that we feel it's
21 critical that quality not be engaged in any other part of the organization
22 from a supply chain perceptive. So as we are in the supply chain area,
23 very accountable and feel the pressures of making sure we can deliver
24 the plant on budget and in on schedule.

1 The quality organization has no concern like that. They are only
2 concerned that we are delivering the plant that meets the quality
3 requirements that our customers expect. So we have this separation
4 between the quality organization and the supply chain organization.
5 However, there is very close linkages because we are literally joined at
6 the hip in terms of programs that we use with the supply base to
7 ensure that we not only meet the schedule and the budgetary
8 requirements of these plants, but more particularly, the quality
9 performance service.
10 Next slide, please.
11 We talk about how we are imposing requirements on our supply
12 base but based upon self-assessment that came out of the OMA study
13 that was done, what we really realized was that the entire organization
14 within Westinghouse has to have a quality mentality.
15 We have to all be looking at assurance of two things. Safety
16 and quality are two areas where there is no compromise, and that has
17 to be the general culture within the corporation. So we are spending
18 an equal amount of time, not just working with the supply base but also
19 working with all Westinghouse employees to drive home that point,
20 that quality is everybody's responsibility in everyday work that we do,
21 we assure -- we have to assure a certain level of quality and that
22 quality culture has to be carried over, demonstrated to our customers
23 and, more importantly, representing Westinghouse quality -- the quality
24 culture to our supply base, as well.

1 We strongly utilize the corrective action programs, the Caps
2 program within Westinghouse. We also have what we call the I Know
3 system, where we capture Lessons Learned, anything that gets
4 entered into Caps, becomes an automatic Lessons Learned that goes
5 into I Know. Everybody in the company subscribes to those areas of I
6 Know, which is relevant to their position and they get constant
7 feedback in terms of what are the Lessons Learned, either from
8 ourselves from reading, it's what we're doing with our competitors,
9 what is happening with our customers' locations.
10 One of our favorite sources of Lessons Learned is talking with
11 our customers because they have operating plant experience that we
12 need to be able to put into the construction of the plant and make sure
13 that we are building the plant not only to be constructive but also
14 operated effectively and efficiently, as well.
15 In the next slide we talk about engaging our people in the
16 Human Performance tool. The general population of Westinghouse is
17 trained in Six Sigma, we're trained in lean manufacturing, but more
18 importantly, we're trained in the Human Performance tool. That's to
19 develop a questioning attitude and practice three-way communication.
20 All those things that are intended to prevent errors. And we
21 proactively engage our suppliers in the same areas.
22 When we talk about educating the suppliers, I may have
23 mentioned this before, we are educating not just in terms of the quality

1 requirements but we also conduct workshops for our suppliers in terms
2 of the use of the Human Performance tools, including their root cause
3 analysis, as well.
4 In many cases, when we have discovered problems, we have
5 actively participated, in some cases led root cause analysis teams at
6 our suppliers and then, at the same time, we have trained them in
7 terms of the use of that tool. And in particular cases, we can
8 demonstrate that there has been significant improvement with our
9 suppliers, when we have chosen to educate as opposed to just
10 instruct.
11 Okay, the last slide.
12 Now, again, focusing here on what are our responsibilities in
13 terms of developing the quality program with the supply base, we
14 believe that that starts within Westinghouse. We have to assure we
15 have people within Westinghouse that have got that quality mentality
16 as well as a safety mentality, that we have a culture that rewards that
17 and demands it in everyday work that we do, just as a course of doing
18 business regularly.
19 We are upgrading the educational requirements within our
20 quality organization, as we are with other parts of the organization, to
21 make sure they are getting more training, better training, that we are
22 more aggressive in terms of the testing of the people after they have
23 gone through their training and then assuring that we have follow-up
24 activities later to determine that things are not being lost based on

1 time.

2 The focus again is on corrective action but also on preventative
3 action. If we can prevent problems from happening, that is much
4 better than solving the problem once it has happened. And by the
5 way, it's also more cost effective to do it that way. So there is a selfish
6 element to that, as well.

7 Lessons Learned are important to us, and that we have to be
8 sure that not only do we share within the company the Lessons
9 Learned or use the company experience as a source of Lessons
10 Learned, but we have to share those lessons with our customers and
11 share them with our suppliers, as well.

12 I don't think it is any secret to folks here in this room that any
13 problem that occurs with the supplier becomes relatively well-known
14 with customers as well as with competition and with the general
15 public very quickly.

16 So we need to make sure that we can minimize the occurrence
17 of that by focusing in on preventative action as opposed to always
18 corrective action on this.

19 And then, most importantly, in order to help us ensure that, we
20 have to make sure that we can develop elements of standardization
21 and consistency. Because as we find that there are variations or there
22 is cloudiness in this in terms of interpretations, that's when we have
23 problems. So there has to be absolute clarity in our processes, our

1 policies, our procedures, has to be a standardization both in terms of
2 the implementation and the interpretation, and these are the other
3 areas that we're focusing on to assure that we have a quality culture,
4 not just within Westinghouse but also with our supply base.
5 So I thank you very much.
6 CHAIRMAN JACZKO: Thank you, Mr. Lanzoni.
7 We will now hear from Naoki Miyakoshi with Mitsubishi.
8 MR. MIYAKOSHI: Yes.
9 Hi, my name is Naoki Miyakoshi. I am general manager of
10 quality assurance at the Mitsubishi Heavy Industries.
11 I have been working almost 37 years in the field of nuclear
12 quality assurance.
13 Next slide, please.
14 We at Mitsubishi, we just built the first nuclear reactor Tomari
15 Unit 3 in Japan. Almost ten years have passed since last construction.
16 And today, I will describe our activities to achieve quality and Lessons
17 Learned through our activities.
18 Next slide, please.
19 This slide shows Mitsubishi's activities. We, Mitsubishi, carried
20 out from basic design to site construction, including fabrication of
21 heavy components. But we also know that we cannot accomplish the
22 quality without our vendor support.
23 For example, engineering service, procured items, including
24 materials, fabrication services and construction services.

1 Next, please.

2 Overview for the supplier: As nuclear business declined, many
3 suppliers were also declined and changed, which is key managers and
4 staff have departed from their jobs. Organization and functions of the
5 company have changed like that.

6 And also, I would like to say here about the impact of ISO 9000,
7 especially in Japan.

8 The concept of the ISO 9000 is very important, I think. Such as
9 management oriented or process oriented or the source management
10 or continuous improvement. It is a very important items. Just like
11 NUREG-1055 pointed out the items to be collected. Those items
12 correspond to these items.

13 But on the other hand, ISO 9000 has its own accreditation
14 system, just like ASME N stamp. And I think this accreditation system
15 is quite valuable as long as the purpose is improvement of the
16 company. It's very useful and valuable. But I wonder if we use this
17 accreditation system to verify the capability of the company, whether
18 the company, the supplier can supply some specific products or not.

19 It's not enough. And in Japan, many people insist that qualified
20 supplier by ISO 9000 should be advantageous, have some advantage,
21 but I don't think so.

22 When I was a field manager, I requested my staff to control
23 these qualified suppliers strictly because those suppliers have less

1 opportunity to be audited. So risk is greater than other suppliers in a
2 certain sense, I think.
3 Next, please.
4 As I said at the beginning of my presentation, when Mitsubishi
5 just built the new reactor in the last ten years, the circumstances
6 surrounding nuclear business in Japan, maybe in United States also,
7 is very quite severe. And once some failure happen in new
8 construction, it might cause contrary wind for all nuclear business. So
9 we had to pay special attention to our new construction activities.
10 We did many activities in accordance with our own programs.
11 We qualified and maintained our suppliers by quality assurance audit.
12 But on the other hand, we got some negative information from the
13 people who visited the supplier's factory or who communicate with
14 suppliers.
15 And here, at this point, I asked myself, can procurement control
16 system prevent the use of improper material in the procurement of the
17 component.
18 And in my career, I have experienced relating improper material
19 usage three times. And the biggest trouble is Ohi Unit 1.
20 The trouble was the first ECCS miss operated. The reason is
21 only one pressure gauge is trouble. In the part of the pressure gauge,
22 some tube, we call tube. The tube material should be stainless steel.
23 However, rust material was installed. But manufacturer is

1 unfortunately U.S. manufacturer.

2 And once this kind of failure happen in new construction, the

3 countermeasure it is very difficult at plant level and, also, we need

4 many effort, huge effort. So I asked myself again, with our practice,

5 are our activities enough for next construction or not at that time.

6 Next slide, please.

7 I decided to perform special investigation. I believe that our

8 quality assurance program is working effectively but, however, I need

9 some special investigation.

10 The scope is 254 companies, 680 products and we tried to

11 investigate from widespread viewpoint, not only traditional quality

12 assurance aspect but also business conditions, management posture,

13 facility deterioration, personnel capability and procured items and so

14 on.

15 Next, please.

16 So the investigation result was shown deceit. One hundred

17 eighteen companies had problems. Of course those suppliers are all

18 qualified. Left half means that category of supplier, Class A means the

19 supplier supplying the Class A equipment or it's based on the

20 Japanese classification system. For your reference, safety related

21 items are included in Class A. The right half showed the counter

22 measures, stop order means just a stop order and not significant.

23 This area means that some problems and findings found. But

1 we can control these suppliers as usual. No amount of program is
2 affected, we think.
3 The problem is significant area. 70 percent of the supplier is
4 Class A in this area. And this area, we requested to take corrective
5 action, strong corrective action, I mean.
6 Next, please.
7 What are the problems in this area? From business aspect, top
8 management policy. Of course, these suppliers were qualified so that
9 they have a menu. At the top of the menu, there are some fine
10 statements. Actually the statement was not working. It depends on
11 the business condition, I guess.
12 The next one, excessive orders. The third one is spare parts
13 production.
14 In Japan, Mitsubishi usually request the supplier to keep, to
15 maintain their spare parts production line, for plant life. Usually plant
16 life. It is a rather strict requirement, but this one means those things.
17 And from technical aspect, insufficient knowledge transfer. It is
18 a common problem, generation to next generation transfer. No key
19 person, and deterioration of facilities.
20 And from quality aspect, poor quality attitude of management.
21 Quality shall be accomplished by all the people in the program. But
22 some management is not in so good a condition. And ineffective
23 corrective action and so on.

1 Next, please.

2 We found through the investigation, those are key words,

3 management participation, personnel capability, process-oriented and,

4 one more, design quality assurance.

5 In order to accomplish this quality, we need some other activity,

6 such as a mental aspect, safety culture or safety mind, in partnership

7 with supplier. The philosophy of accountability. Very important for

8 nuclear business.

9 Next, please.

10 Now, Mitsubishi is preparing many activities in the United States

11 for US-APWR. We have to incorporate U.S. requirements for new

12 reactor and, also, we are going to apply construction experience in

13 Japan.

14 Now, in order to get mutual consent, mutual understandings with

15 U.S. suppliers, we are proceeding the standardization of product

16 specification. And product specification draft is being reviewed by a

17 viable candidate and yet to be finalized. And through these pre-review

18 activities, we expect some mutual understandings established.

19 As to the Vendor Oversight Program, we are now planning

20 details in not only the final inspection of the product but, also, some

21 process modeling or design inspection and such kind of a new idea will

22 be included.

23 Next, please.

1 The final slide. I'd like to say about a supplier's requirement.

2 A supplier's requirement is essential to determine the quality

3 and price.

4 The future of the nuclear energy depends on the element of

5 safety, reliability and, also economy. And so that effective graded

6 approach, or quality assurance requirements for lower-tier

7 subcontractor, or expansion of commercial grade items, these items

8 should be considered, I think.

9 And the nuclear world, I think the nuclear world is not so wide.

10 However, the regulatory requirements and also, practices, are diverse

11 from country to country. These problems should be resolved and we

12 are expecting some other activities.

13 Thank you.

14 CHAIRMAN JACZKO: Thank you for that presentation.

15 I turn now to Jeff Larson, who is the Director of Nuclear Quality

16 Assurance at Invensys.

17 MR. LARSON: Good morning.

18 On behalf of Invensys, I want to thank you for being invited to

19 speak today.

20 First slide, please.

21 Just a little background. Invensys is a global international

22 instrumentation and controls provider. We provide equipment and

23 control solutions in the U.S. and internationally.

1 We have a story that is an old story, and also a new story for the
2 -- as far as the nuclear power industry goes.
3 The brands that you will see on my slide that we provide to the
4 nuclear marketplace are the old Foxboro Equipment, we also have
5 Triconex and we do some work with Simsci-Esscor on simulation
6 products.
7 Next slide, please.
8 First, we will talk about the older story. The Foxboro product
9 line has almost 40 years of experience in the nuclear industry. It is
10 used globally and, as the slide says, it was in the early reactors and
11 shipping port. So it's been around a long time.
12 Currently -- well, you see the date, it was '72, and we qualified
13 for nuclear in '77.
14 It's currently installed in over 130 power plants. Believe it or
15 not, we still manufacture and support the product as a nuclear
16 safety-related basic component.
17 Our manufacturing operations were moved to China back in the
18 1980s. Got quite a bit of fanfare, including President Reagan. And we
19 continue to manufacture the product there under a program designed
20 around 10 CFR 50 Appendix B in compliance with the federal
21 regulations of the U.S.
22 The other Foxboro product that we use in nuclear applications
23 is our IA or intelligent automation series products. That is a digital

1 system. That is a commercial product that we use in balance of plant
2 type of applications, nonsafety-related applications. And we have that
3 under a commercial quality program with continuous life cycle
4 philosophy where we maintain that product.
5 The newer story is on the next slide, which is our Triconex digital
6 solution.
7 This is a product that was originally designed for safety
8 applications, not nuclear but safety applications. It is a triple
9 redundant programmable logic controller that is very robust and it was
10 built and designed as a safety system.
11 Several years ago, we initiated the qualification process to bring
12 this product into the nuclear market. Working with the industry and the
13 regulators, we went through the EPRI 107330 qualification process.
14 We have also TUV testing, and submitted and received a safety
15 evaluation report from the NRC in 2001 for our version 953 Triconex
16 platform.
17 Since then, we have been dealing, like everyone in the
18 electronics industry, with obsolescence, improvements, things like that.
19 And got to the point, through our change management process, that a
20 couple of years ago we decided we needed to go back and requalify
21 the product. That changes were significant enough that it was not --
22 we were not able to do the design analysis to justify maintaining the
23 qualification base.

1 So just a year and a half ago, we completed the testing,
2 wrapped up our test reports, and now will be submitting an
3 amendment or an SER update to the Commission for review to update
4 to the latest product that is coming off of our manufacturing line.
5 The next slide, please.
6 So we will talk about our nuclear quality assurance program at
7 Invensys. And although our products were originally COTS or
8 commercial products, once we qualify the design for a nuclear
9 application, we then separate it from the commercial design and
10 control it as a nuclear design under 10 CFR 50 Appendix B design
11 control process.
12 Our components at various levels are dedicated for -- as
13 commercial graded items, again, in accordance with the 10 CFR 21
14 and the EPRI NP-5652 guidance, as was endorsed by the NRC.
15 One of the distinct advantages I have as the quality director is
16 that, as the third bullet here says, our primary equipment
17 manufacturing locations are IPS facilities. That is a huge advantage.
18 Our circuit boards, the heart and soul of our products, are
19 manufactured by IPS companies. So I control them underneath my
20 quality assurance program.
21 They have direct access to our design activities, even though it
22 is not in the same physical location. We can have electronic design –
23 design change control and communication with our factories
24 instantaneously, which is very important.

1 And then we also either audit or perform commercial grade
2 surveys depending on the quality program that's in place at our internal
3 locations to supplement and ensure that they are complying with the
4 quality program requirement.
5 Once our hardware is manufactured and dedicated, this next
6 bullet says, we provide both the hardware and the base software
7 products that are in there, to our integration group, as a basic
8 component.
9 So the integration aspects of what we do is a separate set of
10 procedures that utilizes products as basic components and does the
11 system design, system integration and system testing, using
12 third-party equipment that is also under our same level of controls.
13 Next slide, please.
14 Because we are manufacturers of products, we are very much
15 involved in the commercial grade procurement and dedication
16 processes. We spent a lot of time and effort refining our process. We
17 are standardizing it across all of our locations, so it is the same form,
18 the same process, the same engineers perform the same type of
19 activities.
20 Now, obviously, the key aspects we talked about before is the
21 product design control. Design control not only within Invensys but
22 also at our sub-suppliers. We do a very thorough evaluation of the
23 safety function of the individual components or the product at the level

1 at which we are doing dedication. We clearly identify and link, the
2 critical characteristics of the component or the module.
3 And then, we use the Standard 5652 acceptance methods
4 almost always in combinations of 1 in 2, and 1 in 3, those kinds of
5 things to make sure that we have satisfied our safety requirements. I
6 have been reemphasizing clearly that the commercial rededication,
7 processes is meeting Appendix B, not in lieu of.
8 And that is an important point within our company, is that it is
9 not an alternative to satisfying Appendix B but it's a method of
10 complying with Appendix B.
11 And then, we have very, very detailed and meticulous dedication
12 records, including the technical evaluations of the individual
13 components, the level at which we are dedicating documentation of
14 our acceptance tests and our inspections that we perform. And then
15 we do have a number of suppliers that we also have to control. Do
16 commercial grade surveys, receiving inspections and tests and the
17 like.
18 And then we obviously manage our Part 21 evaluation and
19 reporting requirements, down at the level at which we dedicate.
20 Next slide, please.
21 Now, one of the topics that we have been discussing a lot, it's
22 been in the industry – the recent NUPIC checklist change, an
23 announcement that came out, we are, I would say, slightly ahead of

1 that game but we, just as an electronic component manufacturer,
2 obviously very much aware of fraudulent and counterfeit materials
3 entering the process. And we have addressed this through our
4 corporate level policy that was issued a couple of years ago to where
5 we established a common philosophy throughout the company relative
6 to how we would control or identify, prevent these kind of materials
7 from entering our products.
8 And the basics of what we have done is we put procedural
9 controls in both our procurement and our receiving inspection
10 processes. Specifically, it's designed around the source. Where are
11 we buying it from? Are we buying it directly from the manufacturer?
12 Are we buying it from an authorized supplier?
13 And as we move down that supply chain, our controls get
14 escalated. We do more the further we go down that. And especially in
15 our old products where we were having to really go dig to go find some
16 of the obsolete components, we will do a very rigorous inspection and
17 test process before we would allow those to enter our manufacturing
18 stream.
19 So we obviously do standard physical inspections of material,
20 look at packaging, all the guidance that's out there and then we also
21 implement a test, sample test process, if necessary. If there is any
22 suspicion, or whatever, we will send things out and get testing done
23 and make sure we are putting legitimate products.

1 Last slide, please.

2 I was listening to Mr. Miyakoshi over here talk about
3 opportunities to be audited. And as a nuclear supplier that has been
4 around for a while, I can tell you we certainly have more than our
5 share of opportunities to be audited.

6 Our program -- and not only do we look internally, which I can
7 say I implement a pretty aggressive internal audit schedule within my
8 company, but also, we had multi-location NUPIC audits on two-year
9 frequencies. They have gone to our manufacturing facility in China,
10 the last several cycles, as well as the Triconex facility in Irvine, and the
11 Foxboro integration facility in Massachusetts. So we are looked at in
12 several locations. And we are getting ready to schedule our next
13 round for 2010.

14 That's always a fun process to go through. In addition to that,
15 our major customers that are not NUPIC members, the architects,
16 engineers and some of the others, will come in and do audits, DOE.
17 Several other entities come in and audit us periodically. I would say
18 my nuclear program is probably subject to an audit on a quarterly
19 basis by some external agency. And as I put down on here, in May of
20 last year, we had an NRC inspection from the new reactor's branch
21 that was -- it was a very good experience for us. It was a great
22 opportunity to assure stuff and also to interact with staff on up-to-date,

1 where we are.

2 We try to participate in the industry activities that go on. NEI,

3 we go to the NUPIC vendor meetings. We are on the NIAC steering

4 committee. So we are involved in that, and obviously pass down what

5 we learn to our sub-suppliers, both nuclear and commercial.

6 I think that's all I have. Thank you very much.

7 CHAIRMAN JACZKO: Well, thank you for the

8 presentations.

9 We will now turn to questions with Dr. Klein.

10 COMMISSIONER KLEIN: Well, thank you. Appreciate

11 the presentations.

12 Obviously, you know, we are all concerned about the quality of

13 components.

14 And Carol, I thought you made some good points. The fact

15 that, you know, while we think about the new fleet coming in and new

16 reactors, we do have that current fleet that we are concerned about.

17 Could you tell me about what -- what is your most significant

18 challenge on the quality of components for the current fleet? What are

19 some of the challenges you have hit?

20 MS. BERRIGAN: I actually have to defer that question

21 to our quality person back at NEI who handles that specifically. But I

22 hate to do that but that is something I would want to defer to the folks

1 back at our office. We can come back to you with an answer.

2 COMMISSIONER KLEIN: Okay, thanks.

3 I guess one of the things we've all watched is some of the

4 challenges with Olkiluoto being constructed.

5 What lessons have you all implemented from the NEI

6 perspective on some of the challenges of the components and,

7 certainly, the construction in Olkiluoto?

8 MS. BERRIGAN: That is actually being handled more

9 through INPO. INPO has a new construction Lessons Learned

10 process that they have been putting into place and investigating share

11 information within the industry. So we are working with our new plants

12 team in relation to NRC but the internal information sharing and new

13 construction processes is at INPO.

14 COMMISSIONER KLEIN: When you look at some of

15 your quality activities, what metrics and measures do you have for

16 your vendors? What are the metrics?

17 MS. BERRIGAN: NEI actually does not maintain the

18 metrics. That would be handled also through NUPIC, the auditing

19 organizations, and through the suppliers that are doing those audits.

20 COMMISSIONER KLEIN: And do you know what kind

21 of metrics they have?

22 MS. BERRIGAN: I'm not sure. Jeff may be able to

1 field that question. He was very involved in NUPIC prior to joining
2 Invensys.
3 MR. LARSON: Yes. My former role as vice chairman
4 of the NUPIC organization, the metrics we were maintaining really had
5 to do with findings, significance of findings during the audit activities.
6 There was also a pooled database of receiving inspection data that
7 was used prior to audits that would give us an idea of the level of
8 performance of the suppliers being experienced by the utilities.
9 COMMISSIONER KLEIN: When you work through the
10 NUPIC process, do you talk about safety culture at all in your process?
11 You know, obviously, safety culture is important from our standpoint.
12 Do you all get into that as well?
13 MR. LARSON: Again, I've been out of the NUPIC
14 organization for three years, but I will tell you when I was involved, it
15 was a routine discussion. There wasn't -- I don't believe there's
16 anything specific in the checklist that was identified as a check list
17 item, but it certainly was part of the assessment process.
18 COMMISSIONER KLEIN: Thank you.
19 Well, Jack, it sounds like you have hired a few people.
20 MR. LANZONI: We have done that.
21 COMMISSIONER KLEIN: And I think we have
22 experienced a little hiring as well here at the NRC.

1 Could you talk a little bit about how you integrate those in -- you
2 know, the new employees into your company and what kind of training
3 you go through?
4 MR. LANZONI: Okay.
5 We have developed training intricacies for all of the employees
6 based on the position that they are coming in to. We have a minimum
7 requirement and then we have more advanced requirements. And
8 then these are audited. It's the responsibility of both the employee and
9 the supervisor and manager to assure that they progress along the
10 prescribed schedule in terms of taking the training that's required.
11 The focus is on the quality area because we feel first and
12 foremost that is the area dealing with policies and procedures that the
13 people have to have immediate understanding of.
14 Now, as they go through that, each employee as part of their
15 performance metrics, has a training plan, which is reviewed at least
16 twice a year, and most often quarterly, in terms of how people are
17 progressing against that.
18 The results of that are audited by the Quality Department so if
19 there is any deviation from that plan, people are not keeping up with it,
20 that becomes a finding of our quality group on the internal audits that
21 they do of the individual organizations that we have within
22 Westinghouse.
23 Now, in addition to that, each new employee is assigned a
24 mentor, and the mentor is someone that obviously has more than just

1 a few months' experience in the nuclear business.

2 We have been fortunate in that a lot of Westinghouse

3 employees, who are close to retirement or who have retired, are

4 staying with the industry because they are excited about the

5 renaissance and they want to see it continue. And we have used

6 those people, either as employees or as consultants, and we use them

7 as mentors with the new people coming in. So we are trying that.

8 We have a formal program, which is called Knowledge Transfer,

9 where there is a mentoring program set up in prescribed areas, where

10 new employees are expected to get some learning in a timeframe.

11 There are regularly scheduled meetings and training sessions,

12 between the mentor and the individual, to assure that that knowledge

13 transfer is happening.

14 And then the managers will do some quizzing of the employees

15 in terms of how much are they absorbing that knowledge and then how

16 are they applying that knowledge to their actual work.

17 So we have an actual, what we call a peer check, where more

18 experienced members will do a check of the work that the people have

19 done and then give feedback to the individual in terms of how are they

20 applying learnings that they have gotten during the training and are

21 there areas for improvement that they need to get more competent at.

22 That's roughly how we do it today.

23 COMMISSIONER KLEIN: And obviously, then, you

1 know, Lessons Learned, you know, once they go through a training
2 program, how do you do the Lessons Learned operating experience
3 type things?
4 MR. LANZONI: We have a formal program, which we
5 call "I Know," and I Know takes anything, that -- if it is a Caps issue,
6 and we get quite a few Caps that are written daily, they automatically
7 get entered into I Know. Then, as you make an observation or if you
8 find a reading, like what may be happening with our competition in
9 Finland, that gets entered into I Know.
10 Every person in the company is expected to sign up for a
11 subscription to those areas of interest to them and/or their areas of
12 responsibility.
13 The system automatically takes anything that is associated with
14 that lesson, and then it's forwarded immediately to the people that are
15 on that subscription list. So that way we are keeping people current in
16 terms of what are the Lessons Learned that apply to their particular
17 areas of responsibility but they also have the ability to sign up for other
18 areas of interest. So they can get things -- for instance, in the supply
19 chain side, our people all sign up for the supply chain, as you can
20 imagine. But all of them also sign up for the quality part because we
21 are so technically linked with the quality organization, we want to get
22 the Lessons Learned on quality as well as with the supply chain side of

1 it as well.

2 So that is a formal program that we have. And then, those

3 Lessons Learned are typically discussed at the various staff meetings.

4 So anything that has to do with supply chain or quality, the significant

5 ones are brought to my staff meeting, we have a discussion on that,

6 and say, do we run this risk, do we have an ability, how do we know

7 that this isn't going to happen to us, what would we do to prevent that.

8 And we have those types of discussion. This is where we are

9 concentrating more on the preventive action as opposed to always

10 corrective action.

11 COMMISSIONER KLEIN: So it is good to prevent that

12 way you don't have to correct.

13 MR. LARSON: Exactly. Right.

14 COMMISSIONER KLEIN: Well, I was intrigued by your

15 experience in Japan, having had that ten-year pause. And I noticed

16 that you had said you looked at 254 suppliers?

17 MR. MIYAKOSHI: Yes.

18 COMMISSIONER KLEIN: And were those both

19 domestic in Japan as well as international suppliers?

20 MR. MIYAKOSHI: Almost all domestic suppliers, but

21 some of them, the supplier overseas, 40 countries, yes.

22 COMMISSIONER KLEIN: Did you notice any different

1 characteristics between those in Japan versus those in other
2 countries?
3 MR. MIYAKOSHI: Yes. In Japan, nuclear business
4 still continued. So nuclear business is not dead, still alive. But in 14
5 countries, the situation is quite different. It depends on the country.
6 We, in Japan, we try to transfer some 14 suppliers to domestic
7 supplier. Intentionally we go up to the supplier, so mainly for domestic.
8 COMMISSIONER KLEIN: Did you notice any big
9 differences between contractors and subcontractors?
10 MR. MIYAKOSHI: In the contractor?
11 COMMISSIONER KLEIN: In other words, if you looked
12 at a major contractor, and then you'd have subcontractors to follow
13 that --
14 MR. MIYAKOSHI: Yes.
15 COMMISSIONER KLEIN: -- did you notice any
16 patterns?
17 MR. MIYAKOSHI: Yes.
18 Most cases, as to the subcontractor, the percentage of nuclear
19 business is very small. For example, three percent to a one percent.
20 So, they watch in other directions, other than nuclear business. So, it's
21 a major difference.
22 As to the contractor, they have some percentage of the nuclear
23 business. So it's rather easy to control. But as to the subcontractor, it

1 is very difficult to control. Sometimes we don't have an order – we do
2 not want to get order, something like that.
3 COMMISSIONER KLEIN: Thank you.
4 I have a couple of more questions later for Jeff.
5 CHAIRMAN JACZKO: Commissioner Svinicki.
6 COMMISSIONER SVINICKI: Thank you. I appreciate,
7 and I have listened very intently to all of your presentations. The
8 Commission in a demonstration of its interest in new reactors, has a
9 regularized schedule for visiting new reactor topics but I think as we
10 are exploring this is something of so much more general interest than
11 just the new reactor area. So, it's interesting.
12 As you prepare for a meeting like this -- I took a little pause to
13 read some of the -- I get a lot of periodicals, as most of us do. And I --
14 I guess, in true confessions, that I can never give up topics of interest
15 to me in my issue of Defense News, which I still do read every week, it
16 was hit with this headline, that Inspectors' Lies Raise Alarms. And this
17 has to do with Newport News ship building. But they have unearthed,
18 allegedly, a falsification of an inspector on welds. And so they now are
19 going back and will have -- this individual had some involvement with
20 over 10,000 welds that now need to be reexamined on eight attack
21 submarines and one aircraft carrier.
22 So, it is interesting to me, as a D0E engineer, had an
23 opportunity to be a member of some of the QA audits. You talked
24 about DOE doing QA audits and although DOE does not impose an

1 Appendix B program, it's NQA1, and the reason -- it's really an
2 established approach.
3 And the reason we have the kind of QA recordkeeping we have
4 is just for this kind of a bad day. And I think that it's not realistic, if the
5 renaissance goes forward, to have systems that are not at least
6 cognizant that the same kind of bad day could happen in a nuclear
7 construction project. So, that's why we have these systems. That's
8 why they're so important. And this was not the nuclear industry but, of
9 course, it has all the important quality parallels that we are so focused
10 on.
11 And the other interesting thing, I appreciate the presentations
12 because -- I'm going to describe it this way and if anyone disagrees
13 with me, they can crime in. But as we get deeper into the supply
14 chain -- this is my term -- this gets murky. It gets really challenging,
15 and I think all of you were very candid about that.
16 Mr. Larson, you talked about the comparative advantage and
17 luxury of having production within your own company, so that you can
18 have -- you can be doing internal audits to your own QA program. And
19 so that kind of consistency in homogeneity is helpful, I think, for any
20 kind of a QA program. ...
21 And some of you made reference to NRC staff had done a
22 workshop on vendor oversight issues. And what was interesting is that
23 they collected questions and posted answers to those on the NRC web

1 site. And I was very thankful -- I read -- it was over -- I think it was
2 over a hundred in total questions and answers. But I was glad, after I
3 was finished looking at it, that it was not presented to me as a quiz.
4 Because -- so I told you about, I have this thin experience in QA
5 auditing. But as I went -- and if I had not read the answers, and gave
6 an answer, and formed an answer in my mind of what I thought the
7 answer was going to be really quickly, in the split second before I read
8 it, there were a couple of these where I might have answered
9 differently. So I found it interesting. And generally the ones where I
10 might have given or predicted a different answer from the NRC staff,
11 had to do with things deep in the supply chain or commercial grade
12 items.
13 And I am going to painfully make us all sit through one, because
14 this was one that I don't think was immediately obvious to me. But this
15 was, some participant in the workshop had this question:
16 "If a commercial supplier performs a machining operation for a
17 basic component and we inspect 100 percent of the machining
18 attributes under our Appendix B program, we document the inspection
19 and provide it as a part of the final inspection document to the
20 customer" -- who in this case they said would be a utility – "is the
21 component considered a commercial grade item?"
22 And the answer was, that based on that, it's of indeterminate
23 quality, so I don't -- and I'm not here to defend that question or answer,
24 but that's how situational this gets and that's how -- that's why I have

1 this term of murky.

2 I think as you get deep into the supply chain, we won't be

3 auditing 100 percent of these situations. So I appreciate that we had

4 the workshop and that staff has done a very fulsome job of taking over

5 100 Q&A's and taking a run at all of these. And some they do punt a

6 little bit and say, you know, there needs to be a good conversation

7 between the supplier and the receiver of the item, and we can't really

8 address it because we don't have additional specifics in your question.

9 But I think it's something we are going to need to have a really

10 consistent focus on, not only because of this headline and the fact that

11 if the nuclear renaissance is expansive enough, there is going to be

12 incidents that we want to prepare in a preventive sense, but I think

13 we're going to find ourselves in a corrective action sense at some

14 point.

15 And I don't think I have any specific questions, but that was just

16 some of my commentary as I listened to your presentation. If you want

17 to react to anything. I said, as Chairman Jaczko said in the past, well,

18 I can ask a question or make a speech, but I'll do one or other. I guess

19 I made a speech.

20 But based on those reactions, is there anything that if any of

21 you would like to comment on in my remaining time?

22 MS. BERRIGAN: I would, I just wanted to check to

23 make sure that nobody else wanted to make a comment.

24 Thank you very much for bringing the Defense Industry's article

1 to my attention. I'll bring that back to NEI staff. But I also wanted to let
2 you know that any of our NEI staff people are meeting with other
3 industries, to talk with them about how they are looking at quality, what
4 policies and procedures and benchmarking, not only within nuclear but
5 within other industries, as well, to make sure that we are putting the
6 best foot forward.
7 COMMISSIONER SVINICKI: Okay, thank you. Thank
8 you, Mr. Chairman.
9 CHAIRMAN JACZKO: Thank you.
10 Well, I guess I will take advantage of doing a little bit of speech
11 and then a little bit of questions.
12 This is certainly an important issue and I think, Carol, you made
13 the comment, and Commissioner Svinicki did too, that this is, to some
14 extent, not just an issue for new reactors, this is an issue for existing
15 reactors, as well. And in particular, as we have more and more of a
16 global supply chain, there are new challenges and, we certainly, the
17 power plants that we have today are not the same power plants they
18 were 30 years ago.
19 There is a lot of new parts and a lot of replacement. Obviously,
20 digital instrumentation and control is a big issue for the existing fleet as
21 parts become obsolescence in replacing those control systems. So
22 there are, I think, some interesting ideas here that, certainly, I think it is
23 important that we do follow through with on -- for the existing fleet as
24 well.

1 But you had made a comment, Carol, I think, in your
2 presentation, about it not being a new issue. And I certainly
3 appreciate that. And I think one of the things that I was a little bit
4 surprised by as I was preparing for this meeting, was the amount of
5 findings that our staff had when they went out and did audits. They
6 gave us a collection in the back of this, of some of their inspection
7 findings, from most facilities that they had reviewed for the last two to
8 three years. And in almost all cases, problems have been identified in
9 the QA programs.
10 And I'm wondering if you can comment on that a little bit and,
11 particularly, in light of your idea, your comment that it is not really a
12 new issue.
13 Where do you see us going perhaps, then, you know, as we go
14 forward? Will some of these issues start to be -- the findings be
15 reduced or do you think we will continue to see that level of finding as
16 we go forward?
17 MS. BERRIGAN: I'm not really sure. I would need to
18 check back with our quality person at the office on that. But I would be
19 happy to get back with you on that.
20 CHAIRMAN JACZKO: That's fine.
21 MS. BERRIGAN: Okay.
22 CHAIRMAN JACZKO: I think it could be helpful to hear

1 because I think Mr. Miyakoshi did a nice job, in your own internal audit,
2 of categorizing some of those findings and what the significance were
3 and some of them that we had on various levels of significance and
4 some of them are more significant than others. But surprisingly,
5 almost all of the facilities that we visited, there was one finding or
6 another, with the exception of Invensys had one minor finding, and I
7 think Mitsubishi generally had very positive results.
8 Mr. Lanzoni, I had a question for you.
9 Has Westinghouse done a similar kind of internal audit, looking
10 at all of your suppliers, and gotten a sense of where they are and what
11 the level of capabilities are, that they have similar to what we've seen?
12 MR. LANZONI: That's part of our standard process.
13 Before we will make an award to any supplier, it's part of our RFQ
14 process we go through. We go off and we'll do an actual audit of the
15 suppliers' facilities, and both the quality and technical and commercial
16 audit at that time. So, yes, that is done.
17 It has been done only on the safety-related equipment so far
18 because that's all we have actually placed orders for, for the new plant
19 construction at this point.
20 Now, speaking for my service division, which I should not do
21 because I'm not as familiar with that, they are governed by the same
22 quality organization. So the same processes, the same people, the
23 same policies are done there but there they would do it with more than

1 just the safety-related equipment. They would be doing it with the
2 commercial grade equipment or the non-safety-related equipment as
3 well.
4 CHAIRMAN JACZKO: So what are you finding? Are
5 your finding things comparable to what we heard from Mr. Miyakoshi
6 with various levels of performance among the suppliers?
7 MR. LANZONI: Yeah, I'm not as qualified because, as
8 I said, I am not the quality VP here. But I can give you some general
9 statements on that.
10 I think what we are finding is that on many of the quality
11 programs, as they're written, as a procedure, or the procedures, are
12 pretty well done. Where we are finding is the implementation of that.
13 It's not consistently applied and it's not applied with the same rigor that
14 we would have expected that that happen. So I would say that most of
15 the issues that we are finding today are less in terms of, do they have
16 the right -- do they know what is correct, and do they know what are
17 the right things to be doing. It is the consistency in terms of how they
18 are applying that. They've got some people in some parts of their
19 organizations that do it very well, others not as well. And so I think
20 that the biggest thing that we are starting to see now is to have a
21 consistent application at a higher level of performance, and I think the
22 way I have heard it explained to me would be to increase the
23 awareness and the level of nuclear discipline within the companies
24 that we don't think is where it needs to be quite yet.

1 CHAIRMAN JACZKO: And you see that -- how long do
2 you think 'til that will get to the place where you -- it's where you –-
3 MR. LANZONI: We are seeing significant
4 improvement.
5 I'll give you an example, without using the supplier's name, it
6 was an Asian supplier. And we had, what we felt was pretty grievous
7 error, okay, and we actually did stop work based on that.
8 We went in and we did the analysis, we discovered what it was.
9 We helped them do a root cause. They came back with a root cause
10 analysis on their own, which we felt was inadequate. So we went in
11 and we actually trained them on how to do that root cause analysis
12 and how to make the improvements.
13 And since we have gone in and not just identified the problem
14 and said, go fix it, we worked with them in a collaborative way to teach
15 them not just to fix the problem but what are the proper ways of fixing
16 the problem.
17 Now, we now have got significant improvement. They are doing
18 this work and they are coming back with corrective actions and with
19 root cause analysis that is far superior from what we had seen before,
20 in many cases, comparable to our own.
21 CHAIRMAN JACZKO: To what extent are you sharing
22 those Lessons Learned then with the industry? Does its go through
23 INPO?

1 MR. LANZONI: It would go through INPO.

2 CHAIRMAN JACZKO: Are they routinely sharing that

3 information with you?

4 MR. LANZONI: Oh, yeah. Quite often we find we have

5 quality problems with our suppliers before we know it, through INPO.

6 So, yes, the communication process is pretty quick.

7 CHAIRMAN JACZKO: Well, thanks. I appreciate that.

8 And I think it's -- certainly, there is a tremendous amount on the quality

9 assurance side that is, obviously, licensee or vendor dependent and

10 supplier dependent. And I think, as Commissioner Svinicki said, it

11 does get murky at some point. And keeping track of all the

12 subcontractors and sub-suppliers becomes more and more

13 challenging, I think, as we go forward.

14 Mr. Miyakoshi, do you intend to do another audit comparable to

15 what you did before, to go back and look at those companies again to

16 see if they are improving or changes?

17 MR. MIYAKOSHI: This is the first time, you know, so I

18 have never performed such special investigation. And this is -- the

19 investigation is, beyond today, my new requirement and just to my

20 idea, my anxiety. So, we are now planning to establish some system.

21 I think the result was not so good. We found many problems. That is

22 true. So that we have to improve our procurement system,

1 procurement control system, so that we are not running into ideas.

2 CHAIRMAN JACZKO: Do you think that we need to

3 make changes or others need to make changes in the minimal

4 requirements for the quality assurance programs? As you said, this

5 was -- well, you did find problems and --

6 MR. MIYAKOSHI: I think, for example, 10 CFR

7 Appendix B requirement is not quite natural and correct, but I think the

8 requirement include whole element, I understand. But, some -- for

9 example, resource management is very important. If resource

10 management is poor, the working system does not work. So the

11 supporting system is very important. So, from this viewpoint, we found

12 room to improve the requirement, I guess.

13 CHAIRMAN JACZKO: Well, I appreciate that. And I

14 think your special investigations, I think, have been very useful and

15 very interesting information.

16 But the last question I have, and this is really a question for any

17 of you: As you look out at the issues that you see, do you have more

18 concern with fraudulent and -- well, I guess I would say fraudulent or

19 detective material -- fraudulent material than you worry about defective

20 material, I guess if I could say it that way. So the -- people falsifying

21 information, people intentionally improperly fabricating materials or do

22 you see more -- it's just the -- I guess more human error type of

23 defects and problems with the supply chain?

1 Which do you see as a more substantive concern going
2 forward?
3 MR. LARSON: I can speak first from the IPS
4 perspective. I think maybe it's the product we deal with, I don't think
5 the fraudulent component is a huge issue for us. I think we -- it is fairly
6 easy to detect. We have a process in place. Managing the supply
7 chain, I don't think, is all that difficult.
8 I think the larger of the two issues would be sub-supplier quality
9 program management. It's just making sure that they are following the
10 program they have in place, regardless of the standard it's centered
11 around, be it ISO 9000 or a regulatory-based program. It's more
12 program compliance.
13 MR. LANZONI: I've got a similar response to that.
14 I think that in terms of where do we think there will be the most
15 difficulty would be in the defective workmanship or defective materials,
16 not in the fraudulent aspect of those materials. Now, having said that,
17 we also have to acknowledge the fact that the potential does exist and
18 vigilance there has to be intensified and the consequence has to be
19 much more severe than just a workmanship issue.
20 But, as I said earlier in my presentation, one of the key issues is
21 dealing with suppliers of integrity, and I think that's one of the first
22 steps that has to be done. Make sure you know who your suppliers
23 are, what is their history and are there people who have had a history

1 of being able to provide reliable, safe, quality product. I don't think
2 there is any substitute for that. But then, having said that, there is
3 always that possibility, particularly as Jeff indicated, as you go down to
4 the sub-tier suppliers and you have to be assured that your supplier
5 has adequate controls and oversight with their suppliers to assure that
6 that does not happen there.
7 But then again, as I said before, validate, Indiscriminate testing,
8 is always a good thing for us to do, which we plan to do. We will go in,
9 unannounced, and we'll make tests on material, we'll go back and
10 thoroughly go through the records of the sub-suppliers, as well. So
11 there always has to be that vigilance. But in terms of where do we see
12 more of the problems coming, it will be from workmanship.
13 CHAIRMAN JACZKO: Thanks.
14 Did you want to add anything?
15 MR. MIYAKOSHI: Yes.
16 I think this program is very difficult to control, I think, honestly
17 speaking.
18 And when we control the supplier directly, it is impossible, so
19 that we have to depend on the supplier's activities. In that case, the
20 most important thing is safety culture or mental affect is very -- mental
21 organization, I mean, including personality also. So safety culture or
22 safety mind is very essential from now on.
23 I, myself, as a member of ethic committee in Japan, and I

1 always try to improve safety mind. I think it's very
2 difficult, but we have to do. So I think it is the only answer.
3 CHAIRMAN JACZKO: Well, I appreciate that and we --
4 last week, we had a long discussion about safety culture. And we
5 have always talked about that and thought about it in terms of our
6 licensees but I think it is certainly an important point that you bring up
7 that, I think, there is also certainly an element of that in the vendor
8 supply chain, as well, where safety culture is an important piece and
9 that may be something we will consider as we finalize our work in that
10 area. So, thank you.
11 Commissioner Lyons?
12 COMMISSIONER LYONS: I certainly want to second
13 the comments that each of my colleagues made about the importance
14 of this area. This really is an absolutely vital area and I very, very
15 much appreciate each of you taking time to contribute your thoughts in
16 this area.
17 By way of a first question, it probably goes to Carol, but certainly
18 welcome any of you responding.
19 Greg mentioned that he had read through a number of the audit
20 letters that our teams have issued over the past few years. And I also
21 read through those. And by the way, just as our chairman did, I should
22 compliment Mitsubishi that came through very, very well in that audit,
23 as did JSW, Japan Steel Works.

1 But most of those letters did identify problems, as I believe you
2 already said, Greg.
3 I'm curious how those letters, if you can talk to how those letters
4 may be used within perhaps NEI, perhaps within NPO, perhaps within
5 NUPIC. Those letters are public. And taken together, they are
6 painting, I think, a very interesting picture of issues, possible concerns
7 across a very broad range of both major and lesser suppliers.
8 I'm just curious if there are any programs in place whereby those
9 letters are carefully evaluated and perhaps are being used in a larger
10 database, that is then -- I think would be very useful to industry. But,
11 Carol, I don't know if that is a fair question for you or not, but any of
12 you who would like to contribute.
13 MS. BERRIGAN: I would like to defer to the other
14 panelists because that is really not NEI's role within the industry. That
15 would be more of a question for INPO with the information sharing that
16 goes on within the industry. So I think, if I could defer.
17 MR. LANZONI: I'll take it.
18 In terms of the sharing, we agree that would be something --
19 again, I'll come back to what we call as our I Know program, which is
20 the Lessons Learned. And I have to be careful here, I don't have
21 specific knowledge that these particular issues are entered into our I
22 Know so let me preface it by saying that. But it is the type of
23 information that routinely gets entered into our I Know system. Those
24 Lessons Learned would be circulated within the company, even

1 though they apply to other companies as well, because we would then
2 go back and say, could this happen here, this is something that we
3 have adequate check and controls or are we confident enough in this
4 particular area.
5 But, again, we would then routinely share those experiences
6 with INPO and other organizations as well. And now -- again, let me
7 restate what I said I, not being the quality VP, I don't have specific
8 knowledge of the specific examples but that is the type of thing that we
9 would routinely do.
10 COMMISSIONER LYONS: I appreciate the comment
11 that you made, Jack, and I think, it does strike me that, taken together,
12 that compilation of letters is a useful set of data for the industry. And
13 I'm just hoping that somewhere it is being used that way.
14 MR. LANZONI: If I could just add to that. One of the
15 things that, as I said the OMA study of looking ahead 30 or 40 years,
16 we did some trajectories and said, if we have this many Cap issues
17 today, what would it look like as the volume started to grow. It was
18 staggering. What we basically determined was that we can't let that
19 happen. That would bring us to our knees. So we have to be able to
20 get a lot better. So in one sense, and this may sound a little odd, is
21 that we welcome that when we get those findings, when we see that,
22 because we would rather be catching them now during the early
23 stages of the renaissance as opposed to waiting until we get deeper

1 into it before we discover this. And this falls more to the preventive
2 action type of a thing. So these are the types of things, as painful as
3 they are to hear it, or to experience it, at one level we are grateful for it,
4 because if we fix it now, it won't become a problem later.
5 COMMISSIONER LYONS: I also wanted to ask a
6 question to any of you who would like to contribute. On the subject
7 that Kristine already raised, and that was that the NRC has held the
8 so-called vendor oversight workshop. I don't know if any of you might
9 have participated in that. But I would be very interested in any
10 comments that you could share as to how useful you found that
11 workshop and any recommendations on the importance of continuing
12 those workshops, without knowing who may have participated.
13 I hope somebody did. But can any of you comment on that?
14 MR. LARSON: Yes, I can comment.
15 I participated in the workshop that was in December. And first
16 let me say, I think it was a very good workshop. I think it was, my
17 opinion was, it was laying the foundation, that would be my
18 perspective walking away, having been in the industry for a long time
19 working with vendors in various capacities for a utility, NUPIC and now
20 as a quality director for a company, I think it was very good in laying
21 the foundation of the regulations and what the basic expectations are
22 to be a supplier in the nuclear industry.
23 I was telling someone the other day that I was watching around

1 the room and I saw a lot of surprised faces because I think there were
2 a lot of vendors coming there without a -- even what I would consider a
3 basic understanding of what the rules require, of what it takes, the
4 price of entry into the business. And so I think from that perspective, it
5 was very useful. I think, my personal opinion is that the next one, I'm
6 guessing, will probably be a weeding out process. I think there will
7 maybe not be as many because I think that it was communicated very
8 clearly by the staff that were there that this is something, it's federal
9 law and you have to comply. This is not something you take lightly.
10 COMMISSIONER LYONS: Probably positive if there's
11 a weeding out process, and find the people who truly do wish to live
12 within that system.
13 MR. LARSON: Exactly, I agree.
14 COMMISSIONER LYONS: Any other responses or
15 comments?
16 MR. LANZONI: I will add to that, and I say, yes, we
17 found it very worthwhile too, for the same reasons. And in one sense,
18 it overwhelmed us.
19 We just recently put in a new process where we invited vendors
20 to come into our web site and answer an initial questionnaire, which
21 we were then required to evaluate and then determine whether they
22 should go on to the next levels. We were overwhelmed by it. We had
23 so many responses coming in from various supplies that we have a

1 considerable backlog now.

2 The good news is that they have a good understanding in terms

3 of what are the requirements in the nuclear industry, which many of

4 them did not have before. And I think that understanding encouraged

5 some people to apply and other people just not to bother. And so I

6 think there was some initial weeding out done there, as well, and also

7 encouraged a lot of new suppliers to get into that industry with a clear

8 understanding in terms of what the requirements were going to be.

9 Now, we have done -- that covers the U.S. pretty well. Very

10 well, actually. We have done similar type programs in other parts of

11 the world where we have gone in and we have had what we call

12 suppliers symposiums, and do exactly the same thing, to give direction

13 in terms of what does it take to be able to do business in the nuclear

14 industry. And we have had similar results there, as well. High level of

15 interest and a much better understanding on the part of the

16 international suppliers in terms of what it takes.

17 COMMISSIONER LYONS: Okay. Thank you.

18 MS. BERRIGAN: I did not participate in it but I think as

19 much information as we can make readily available to potential market

20 entrants, I think is very important to both set their expectations, let

21 them understand what will be expected of them but, caution them a

22 little, not to scare folks off who may not be supplying safety-related

23 components or something like that. We certainly, through our series of

1 workshops, had the experience where a company that was providing
2 some services that would not be under an NRC regulation heard about
3 an Appendix B program and an N Stamp and all of these
4 requirements, and I don't recall exactly what they were providing but it
5 may have been, you know, prefab buildings for warehousing
6 separately. And they were very worried because they were hearing
7 about all of these requirements but it wasn't put into context that it was
8 something they might not have applied to the product or services they
9 are providing. So it's just a little bit of a caution in helping folks
10 understand what quality program applies to them, in addition to
11 providing that thorough discussion of it.
12 COMMISSIONER LYONS: Thank you for those
13 comments.
14 Mr. Miyakoshi, I very much appreciate the very detailed
15 presentation that you made. I thought one of your very interesting
16 comments was that we must not put too much reliance on NQA-1 to
17 maintain the confidence of suppliers. I found that to be a very, very
18 interesting comment. And I wanted to ask one more question about
19 the internal survey that you had done. I think it is somewhat similar to
20 a question that Greg asked.
21 But when you identified the 118 suppliers who had some
22 issues, were you then able to work with those suppliers to resolve
23 those issues or were those suppliers then dropped from your supply

1 base?

2 MR. MIYAKOSHI: Well, we have to have good

3 communication with those suppliers so that we assist some

4 countermeasures and also, in the process, we perform many

5 inspection hold point, in the process, and we know how important

6 these items are. The participation by ourselves increased. And finally,

7 Tomari Unit 3 was completed. Maybe one set of the 118 suppliers had

8 actually some problems on the product -- in the product, I mean, but

9 we collected those items and we didn't influence construction itself.

10 I'd like to say one thing about the construction. The fabrication,

11 we, Mitsubishi, fabricated the heavy component or main component.

12 But, the quality assurance or some control technique of fabrication is --

13 and also, plant construction is completely different.

14 For example, fabrication of heavy component is like -- just like a

15 100-meter running competition. On the other hand, plant construction,

16 is -- so it's very difficult. So, in our company, many people who

17 engage in fabrication, just like N Stamp certification. I myself used to

18 be engaged in N Stamp certification. But their thinking is very rigid.

19 One way direction only. But when it comes to plant construction, it's

20 very, very widespread and there are so many assumptions and

21 negotiations and changes, design changes, including many changes

22 happen. So we cannot plan precisely, correctly, perfectly -- it's

23 impossible. So that some back-up system is necessary.

1 At some point, we have to complete all the findings closed. We
2 call it comprehensive design check or comprehensive facility check or
3 something like that. It is an honor system. So I would like to say that
4 flexible thinking is necessary for plant construction. So that rigid
5 thinking will be broken. So my issue, from now on, is to develop and
6 improve the quality assurance of plant construction.
7 Now, I think in the area of fabrication of heavy components, I
8 think -- I think it's rather easy to control. But the problem is from now
9 on. Thank you.
10 COMMISSIONER LYONS: Thank you very much for
11 those comments.
12 So, the last comment or question I was going to make, Jeff, was
13 you talked quite a bit about commercial grade dedication and I did
14 have an opportunity a couple of years ago to visit your facility and see
15 some of what you went through for that commercial grade dedication,
16 which I found very impressive.
17 I was just curious, if over the years you have built up, say,
18 reliability experience that would -- I'm just curious if you're finding, after
19 you go through the extensive commercial grade dedication as you
20 outline here, do you then find reliability at the levels that was your goal
21 in the first place?
22 MR. LARSON: Right.
23 And the answer is yes. Like you said, that the dedication testing

1 that we do is, I would say, extremely thorough. And it follows the
2 commercial process, which is interesting. And so it's an additional
3 step. So there is an original screening process through our
4 commercial manufacturing process and then it goes into the dedication
5 testing, which is even on top of that. Based on, we regularly review
6 and trend field performance data on both our commercial and our
7 nuclear product, and the statistics would show that we do have a
8 higher performance level of items that have gone through an additional
9 step of dedication. Although there is very little weed out, it's not as
10 though we get a significant amount of failures during dedication, but I
11 think having gone through that whole process, the field performance
12 data is at a very, very high level.
13 COMMISSIONER LYONS: Thank you.
14 CHAIRMAN JACZKO: Dr. Klein
15 COMMISSIONER KLEIN: Well, Jeff, one of your
16 slides talked about counterfeit and fraudulent parts, certainly
17 prevention.
18 Could you talk about the trends? Have you seen any more or
19 less fraudulent counterfeit parts recently and, you know, is the slope
20 up, down, flat?
21 MR. LARSON: Yeah, I'm talking about the -- and
22 again, I have three years experience with IPS and obviously this is one
23 of my focuses coming into the company knowing that it was a big issue
24 in the industry, having done it at the plants and bringing it into

1 Invensys. And I was very pleased to see, though, the processes that
2 they had in place.
3 Looking at the data, I would say there is no trend. It's not one of
4 these -- I think it's like the bad weld issue that we were talking about,
5 the fraudulent weld, an inspector falsifying records, it just happens. It's
6 just a spot. I think I have seen one instance where we had a
7 suspicion. We had a higher failure rate. We went back and looked in
8 more depth and did some testing and worked with the manufacturers,
9 and finally it kind of went down the, I want to say, the lesser supply
10 chain path, where we had to go buy obsolete components through
11 maybe a third-party away from the OEM. In effect, we found out that it
12 was not fraudulent and it was not misrepresented material. So I would
13 say I don't think there's a trend in the industry. I don’t think that my
14 experience shows that there is a trend in that, but I think it's one of
15 those things -- and again, I go back to that weld, it's a great example,
16 it's there, it's going to happen now and then. At the power plant, we
17 used to always talk about, what are you going to submit fraudulent?
18 What is it going to be? We were looking at maybe an expensive valve
19 body or maybe a refurbished circuit breaker, something with a high
20 price tag. Most of the things we are dealing with is small electronic
21 discrete components where you really don't see it that much in our
22 industry, I don't think.
23 COMMISSIONER KLEIN: Okay. Well, since you are a
24 global company, have you noticed any characteristics between quality

1 and domestically versus internationally, any Lessons Learned,
2 anything that you -- any patterns you picked up?
3 MR. LARSON: I would say it's been an interesting
4 experience for me to come from working only in the U.S. and working
5 at power plants primarily with U.S. vendors to now expanding and then
6 working in different countries.
7 I think the essence of the quality standards are the same. I think
8 a lot of what we talked about, it was the mindset. So much of it is, do
9 people believe in it? And I think I found that once -- once the concept
10 of safety function and nuclear safety is understood, the standard that
11 we are using, be it the Chinese nuclear quality program standard or
12 the European standard, I think the performance is consistent. It's just
13 a matter of, I think, company specifically. I really like the quality mind
14 or safety conscious mind. I think it's really -- we are rebuilding that, I
15 think. That's my experience, in seeing, is we are rebuilding that
16 globally now that we are getting back into construction, it's starting to
17 grow again to what maybe I experienced 30 years ago when I was first
18 getting into the business, is that was very much prevalent and I think
19 we are just starting to get there again.
20 COMMISSIONER KLEIN: Thank you.
21 Well, this afternoon, we are going to hear from our staff about
22 Part 26.
23 Any issues from NEI's perspective on Part 26 -- I mean Part 21,
24 I'm sorry, not 26.

1 MS. BERRIGAN: I'm not aware of any but I can find
2 out afterwards and make sure that we forward them to you.
3 CHAIRMAN JACZKO: Okay. Well, thank you. I
4 appreciate the presentations. I think we had a very interesting
5 discussion, and I think you heard pretty clearly, the Commission has
6 real interest in ensuring that these issues, whether they be with quality
7 or fraudulent components, that they are addressed and that they are
8 addressed appropriately. And I think we certainly heard from all of
9 you, some of the challenges and some of the things that you are doing
10 to work on those. I think this afternoon we will hear, I think, from the
11 staff about how they -- what they see as the challenges and how they
12 intend to address those going forward. So again, I appreciate your
13 presentations and the discussion. Thank you.
14 And we are adjourned.
15 (Whereupon the proceedings were concluded)