UNITED STATES OF AMERICA

U.S. NUCLEAR REGULATORY COMMISSION

INFORMATION BRIEFING ON THE FUEL CYCLE OVERSIGHT PROGRAM

NOVEMBER 1, 2011

9:00 A.M.

TRANSCRIPT OF PROCEEDINGS

Public Meeting

Before the U.S. Nuclear Regulatory Commission:

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Kristine L. Svinicki, Commissioner

George Apostolakis, Commissioner

William D. Magwood, IV, Commissioner

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P R O C E E D I N G S

CHAIRMAN JACKO: Good morning everyone, we are here today to hear an update on efforts to revise the fuel cycle oversight process. The staff's goal here is to develop a new oversight process as more risk informed performance based, transparent and predictable, with performance measurements or metrics leveraging the risk insights of the integrated safety analysis. Such an approach would allow the agency to focus its resources on a more risk significant activities and will also allow the public to more easily understand the performance of a particular facility.

Since the last Commission briefing in April 2010 the staff has completed a comparison of integrated safety assessments and probabilistic risk analyses, developed approaches for cornerstones for fuel cycle facilities, developed a process to provide incentives for licensees to maintain effective corrective action programs and identified conceptual types for a fuel cycle significance determination process, so a lot of work. There is currently a paper before the Commission on these matters and we look forward to learning more today about the staff's initiatives to revise the process and where they currently are in order to inform the Commission's decisions.

We'll have two panels, first we'll hear from external stakeholders and then have some time for questions and then we'll hear from staff as well. So I look forward to the discussions. I think as we go back I think it was 2002 or around that time frame where we kind of had embarked on this effort and then took a pause and I think following an IG investigation, or an IG report in 2007,

they encouraged us to revisit and to a large extent that's why we're here today. So I think this is hopefully something that today will be the beginning of our efforts to really put something meaningful into place and figure out exactly how to do that and what the issues are as we go forward, so with that I will turn -- start with Janet Schlueter who is the director of fuel and material safety at NEI.

JANET SCHLUETER: Good morning, Mr. Chairman and Commissioners, I would like to thank you --

CHAIRMAN JACZKO: Oh, I'm sorry, did anybody make any comments? Go ahead.

JANET SCHLUETER: Okay, thank you for the opportunity today to present industry's views and our perspectives on how we might improve the current oversight process for this small yet very diverse fleet of fuel facilities. We have three individuals at the table, as you see, but we have many other fuel facility representatives in the audience and some are watching via webcast as well. Slide two please.

Our presentation is divided into three parts. First, I will provide a very brief overview of our presentation, followed by Mr. Mark Elliott of the Nuclear Fuel Services, and he will discuss program improvements which we believe are viable today with minimal resource expenditures. And then Mr. Mike Boren of the United States Enrichment Corporation will discuss our suggested path forward, its rationale, and how we might get there from here. Slide three please.

Most importantly, as we stated during the April 2010 Commission briefing on this topic, industry's first priority and responsibility remains to be the continued safe and secure operation of its plants, 24/7. We also recognize and respect the independent oversight role of NRC as the safety regulator for these

facilities. Since the process began in late 2008, we have supported the mutual goals of developing a current oversight process which is more objective, predictable, transparent, and risk informed. In that regard, we strongly support the Commission's direction to the staff last year to make modest and incremental program improvements. We do believe that that direction can be met within currently available, yet limited NRC and industry resources.

That being said, we also remain concerned about the cumulative impact of this initiative on both NRC and the industry in the absence of a clear safety driver for such a potentially complex overhaul of the current process. In this era of constrained resources, we believe that both our resources are better spent on other regulatory initiatives, some of which are higher priority and ongoing and a back up slide captures these initiatives.

As we also stated last April, we continued and continue to believe the current oversight process from our perspective is not broken; and there have not been any safety concerns identified by the NRC or the fuel facilities to drive such a change. In fact, NRC inspectors conduct exhaustive reviews of a licensed operations and they document those findings in public reports. Can the oversight process be improved; can it be more risk-informed and more performance-based? Absolutely, and as you will hear from our discussions today, industry firmly believes that such improvements should be guided by the keep it simple philosophy. Such an approach would also reflect the adequacy of the current oversight process, the relative low risk of the fuel facilities, the value of existing safety analyses which have also been supported by the ACRS and the staff in recent statements and long-standing safety and compliance records of the facilities.

With that said, I'll now turn to Mr. Elliott who will speak to Slides 4 and 5 followed by Mr. Boren who will speak to the remainder of the slides and then we will be available of course to answer any of your questions, thank you.

MARK ELLIOTT: Thanks Janet. Good morning. I too appreciate the opportunity to share our views on this important matter. Industry and the staff have identified the key elements of an effective corrective action program, here and after I'll refer to as CAP. And these attributes have been discussed at several public meetings. The fuel cycle licensees all have existing CAPs that we believe are effective and working well. It's important to industry as well as NRC, the issues continued to be identified with appropriate thresholds, and addressed in a timely manner with effective corrective actions.

Consequently, industry is open to generating an NRC endorsed CAP guidance document, that will further develop the key elements that make up an effective CAP. We recognize that while the number of NRC licensed and inspected fuel cycle facilities is increasing, the number of inspection resources is decreasing. We too face similar challenges.

So the time is right to redefine the core inspection program to one based on risk significance based from ISA data and demonstrated facility performance. Positive or improving performance in an operations based cornerstone should be recognized by adjusting inspection frequencies and redirecting inspection resources to other cornerstones as appropriate. Continuing to focus solely on declining performance without commensurate recognition of positive performance, sends a negative message to the licensees and creates a negatively biased public perception regarding the state of the industry.

The October 7 SECY paper confirms that the current program does not provide a systematic way to adjust the inspection program based on licensee performance. The October 17th ACRS letter acknowledges that the proposed process allows the staff to reduce the level of inspection oversight for licensees with effective CAPs. We acknowledge that revisions to the current enforcement policy are underway to allow NRC to dispose of severity Level 4 violations as non-cited violations for licensees that enter the issues into an effective CAP. However, further revisions may be necessary to support adjustments to the inspection program based on licensee performance. Slide 5.

The ISA has been in place since 2004 but unfortunately the ISA tool remains underutilized by the NRC in the current inspection process. The inspection modules don't set consistent guidelines on how inspectors can or should be using this information. As designed and as expected, the ISAs and safety analyses have categorized potential accidents into a hierarchy of risk within and throughout the safety disciplines. These insights command redefining the inspection program to focus NRC and licensee resources on the areas with the highest risks. These insights should also steer development of a significance determination process, through which the ISAs and safety analyses are used to properly measure an issue's safety significance.

Operations based cornerstones, as shown in our back-up slide, align with licensee programs and provide more effective communication to workers and the public. Facility issues are currently grouped into safety discipline area, such as radiation safety, criticality safety or chemical safety. Regardless of the relationship to accident scenario descriptions or selected safety controls. Licensee resources are also grouped into safety discipline

areas, subject matter experts for criticality safety are not the same as those for radiation safety and this holds true for NRC resources as well. While industry agrees in concept with the NRC's staff recommendation for a qualitative significance determination process we also emphasize that there are many details to be developed and Mr. Boren will talk about these shortly.

The current LPR process is often subjective in nature, and tends to focus solely on less than adequate performance areas. Developing a tool to provide a more objective characterization of issues throughout the period could better illustrate improving or declining performance to industry, NRC and the public. A simple and effective tool is valuable. An overly complicated ROP based action matrix does not reflect the recognized lower risk profile of fuel facilities, is resource intensive, both NRC and the industry, and is confusing to workers and the public. Now Mr. Boren will conclude our remarks.

MICHAEL BOREN: Slide six please. Slide six please. Good morning, I too would like to voice my appreciation for another opportunity to discuss this important project, one of the individuals who was involved in the '98 to '02 attempt at this, again in '06 and now. This project has faltered for various reasons in the past and we're intent on trying to make it work this time, but as my colleagues had mentioned the -- what we think is a positive in this attempt is the direction given by the Commission to make modest, incremental, risk-informed changes based on the ISAs to the current process. We believe this direction is a vision that modest adjustments to the existing program to enhance effectiveness and efficiency can be made. We characterize this as being evolutionary rather than revolutionary. This is based on mutual consensus that the current oversight process is not broken, there is no urgent need to fix it, risk informing the

oversight process using the ISA insights is now an achievable goal. This approach leverages the insights of the ISA and with some effort will increase or will result in a more risk informed performance based program that satisfies the objectives stated in the SRM. The inherent administrative burden of an ROP style process is not needed for fuel cycle and the diversity of these facilities will make such a process very difficult to implement consistently.

How do we move forward from here? These are -- the industry are project driven people, that's what we do at the site every day, so we believe that we need to prioritize these changes in a step wise implementation plan and keep it simple.

We have to have a project plan that prioritizes the critical past steps and establishes a success criteria for each step. We suggest that agreement to the performance deficiency definition and the significance determination process are critical to moving forward. These have historically been the hard climbs and getting them solidified will provide the underpinning for the rest of the project. Our goal is to keep it simple and transparent.

Improving communications, being transparent is certainly an achievable goal and one that we should strive to attain. Transparency demands using terms audiences understand. We should avoid terms that are hazard analysis or regulatory speak. For example, the term accident sequence initiators is a risk assessment ROP type term and an example of something that the public nor our workers will not understand, it is not necessary for fuel cycle.

Communication of performance must be understandable and indicative of the actual impact to the public and workers. We believe these facilities are operated safely, the oversight process currently communicates this

but enhancements are possible. For example, did the facility exceed any regulatory limits? Doses to the public and workers are far below any regulatory limits but we don't hear that communicated clearly in the current process.

Remember, keep it simple and understandable. As I said earlier, the critical first steps that we believe we must achieve are the performance deficiency definition and the methodology of the SDP. Slide 7 please.

The performance deficiency definition has been discussed a great deal with the staff in our previous public meetings. The industry has proposed a definition that we think satisfies the need to determine when an issue or non-compliance should move into the next phase of evaluation within the commitments in our regulatory basis. The NRC definition we fear would provide a disincentive by enforcing compliance with self-imposed standards. The industry strongly feels, or has strong feelings, about this because we know that it -- at our facilities this is the one thing we are going to deal with on a day-to-day basis with the inspectors. And we need to get this right. Making it transparent and understandable is very important, doing this will be a significant improvement in the current process.

Next, and just as critical, is the significance determination process. In my long history with this, attempts to revise the fuel cycle oversight process, this is where the process has broken down. This time we may have a path forward with the qualitative or deterministic approach. The PRA style quantitative method that was discussed in the past is too complicated and burdensome for the facilities with relatively low-risk profiles. Industry has shown that the qualitative approach is one that can succeed and if done right will improve the current process.

Another directive of the SRM is the credit for the CAP initiative. At recent public meetings, we've had fruitful discussions and some level of agreement on the key elements of an effective CAP. These facilities being strong in a good CAP is a critical part of managing these facilities but have varying levels of license commitments and we have voiced concerns about the level of subjectivity inherent in determining when a CAP is effective enough to deserve the proposed credit envisioned. We feel the incentive is small for facilities that do not have very many Level Four violations and so the amount of effort that could be required for some of the licensees to gain approval may honestly not be worth it.

We acknowledge the staff's paper attempts to sweeten this by adjusting the frequency of CAP inspections but that too may not provide enough incentive for some facilities since CAP inspections would be new but we continue to be positive about this improvement, we think it is something we can do now and should move forward to get done.

Once these steps are in place, we can move towards achieving a common goal of making the process more risk informed and performance based, but this also involves what we call right sizing the inspection resources and process. The key is to provide flexibility in core inspection schedule and frequency. This would allow Region management to put their inspectors where they are needed based on risk and performance rather than just following the same old schedule year after year. The current process is neither risk-informed nor performance based. If a facility has gone a number of years without a finding in an area and another facility has encountered problems in that same area, it just makes sense that the Region should have the flexibility to move the

resources where they're needed and we suggest that this could be done through maintaining the same core inspection modules, but possibly reflecting performance in the frequency of those modules and inspections at the sites.

We also believe that it's time to reevaluate the resident inspector programs, along the same line of thinking we would suggest that it's difficult to understand why one CAT 1 site has two resident inspectors, the other CAT 1 site only has one and a CAT 3 enrichment plant has two full time inspectors. None of the other fuel cycle facilities have any resident inspectors. The criteria used for assigning resident inspectors is not transparent to the industry, and does not appear to be risk informed or performance based. Slide 8 please.

So how do we get there? This effort must be prioritized along with all of the other NRC initiatives. These facilities have very limited staff; remember the process is not broken. If you look at the list that we've provided as a back-up slide there are a lot of initiatives coming to the sites these days. For one, my small staff has to prioritize what we're going to pay attention to as they come through and honestly fuel cycle oversight process doesn't make it to the top of that list. A resource loaded project plan developed with industry will allow us to move forward without the starts and stops that we've encountered in the past. The current NRC team is dedicated to improving the process to achieve these desired goals and the industry has been and will continue to support but needs to see a realistic plan to succeed.

So let's develop a resource loaded, realistic plan to succeed, get the performance deficiency definition and SDP right, allow flexibility in the core inspection frequency based on risk informed performance-based processes, evaluate the resident inspector program, which again should be, we feel, more

risk-informed and performance-based, provide a real, valuable incentive for endorsed CAPs. The bottom line is keep it simple, predictable and understandable. And again, we thank you for the opportunity to engage the Commission on this important project and look forward to your questions. Thank you.

CHAIRMAN JACZKO: Thank you, I'll turn to Linda Cataldo Monica who is the chair of the Fuel Facility Working Group at Sierra Club Nuclear Issues Activist Team.

LINDA CATALDO MONICA: Thank you. Thanks for the invitation, good to see you Mr. Chairman and Commissioners. I have a different take than my fellow panelists, that I'm sure comes as no surprise, although what might come as a surprise is that there are some aspects of the oversight process changes that are proposed by staff I believe to be sound and would be effective if the corrective action program is instituted as a license condition. I really do feel that that's important; I believe staff has placed appropriate emphasis on the CAP, that it should be a condition of the license and therefore it would be formalized by being a condition of the license so I believe that's a good thing.

Also, I believe that, however, that a CAP is a necessary but insufficient condition for transparency and accountability, because the -- and in this case, the transparency that I'm concerned about, and the accountability, is with respect to the public, that we need -- the public really does need to see. And in this respect, I suppose, I'm echoing some of what's been said by the industry reps who are here now that the public needs to see the NRC actively regulating. I know that these folks resist regulation, but sad to say they're in an industry that is regulated -- sad to say from their standpoint -- that is regulated,

and they've just -- they've got to live with that. That's -- if they don't want to be regulated, they go into another business. That's the way that the public sees it, and I hope that you folks in the NRC are disregarding their whining.

I believe also that providing incentives to maintain effective CAPs is really child's play. You should really stop treating these companies like babies. They don't need the positive reinforcement. Instead, as this business of crediting them for good behavior, as Tom and Ray Magliozzi from Car Talk might say, is bogus. You know, what do you need to be patting these folks and treating them -- and pussyfooting around with the corporations. They exist to make money for their stockholders, and that's the bottom line. The most effective regulation, I believe, would be, and Sierra Club believes in general, and I am echoing my fellow Tennesseans on this, that the most effective regulation in the face of companies who resist regulation is the almighty dollar. And I believe that current provisions are for subjecting companies who fail to comply with license conditions, too, that there are daily fines that should be -- that are in your toolbox to be assessed. And those, by the way, I believe are too small. Double them, and you'll get the impact that you desire. Double those fines, assess them frequently when these company -- and then you will see these companies buck up.

Also, by the way, I believe that there would be a real benefit to the NRC by doing that, because currently the exposé that was done by the Associated Press, and the public's impression, let's say, of the NRC is, sorry to say to you folks and to staff, is that the NRC is a toothless lap dog for the industry. So fines are -- fines would really be, I believe, more effective in also reforming the impression that the public has of the NRC.

Now the section of the proposed changes of the regulations on facility and equipment performance -- I didn't see anything on -- now that we've had damaging earthquakes in the east, I didn't see anything in that on the issue of earthquake protection of -- or protection of the fuel facility equipment against high ground velocity events. So I believe that might be a shortcoming, and should be considered by staff to make sure that companies are not allowed to be grandfathered, and allowed to intend to comply with building codes that should be in place for protecting against earthquakes, protecting equipment and the public from earthquakes.

The emergency plans should be made available to the public; I would love to see that included in the fuel cycle oversight changes. The folks in Erwin have been crying out for more guidance on what to do in the event of a disaster. We know disasters happen, and God bless the people of Fukushima, and that they are -- we know that they are still suffering from the disaster that happened earlier this year.

Further -- and I appreciate Mr. Boren having set the precedent from ignoring the clock, by the way -- we are -- when it comes to Agreement States, I'd like to see something further in the agreement -- in this fuel facility oversight changes that deal with the Agreement States. The Agreement States -- now we're -- I know we're talking about NRC licensees, but the Agreement States, in our case, Tennessee, are performing woefully inadequately in the public's view. I had the good fortune of working with the Christian Peacemaker teams over the past week on depleted uranium issues, and that's mellowed me out, so that's why I'm so mild mannered this morning.

The Christian Peacemaker teams had sent a delegation to work on

depleted uranium issues with me. And we're across the street from Aerojet Ordinance, a state licensee. And we heard from one neighbor of the plant about a plume of green fluorescent gas that -- or an aerosol -- we still haven't figured this one out -- that erupted from the plant, rose, it was -- became a sphere about 15 feet -- rose from the plant, and then it -- quickly -- and then descended behind the plant out of site. This just happened this past spring. Heard from another neighbor of the plant -- this all happened just this past Saturday.

Heard from another neighbor of the plant, that eight to 10 years ago, another plume left the plant, descended onto a ball field, corroded the kids' uniforms, made the kids sick. This happened within the past 10 years. So two events, off-site -- we're figuring they were either UF4 or UF6. State of Tennessee company, the neighbor across the street calls, no answer. Calls the NRC, no explanation for what these events were. We're talking about dangerous, off-site releases. The State of Tennessee is doing nothing. You've got to have a provision in your regulations for dealing with Agreement States who are not abiding by the agreement. Cut these people off, send in the big boys -- you guys -- and if the NRC doesn't handle it, you know, then I don't know what the public's last recourse is, maybe it's the Department of Justice, I don't know. Anyway, that's got to change.

Configuration control, back to the license revisions, the fuel facility oversight process changes. Configuration control is at least as important as the CAPs. And that also, I believe, needs to be a license condition. I know that in some companies, that is the case. And with again, with violations of licensed conditions being followed by stiff per diem fines.

Finally, the workarounds that are called -- currently called

commitments. You know that the NRC's own IG had an audit report on commitments, found very uneven application of those commitments. I look at them as gentleman's agreements between the project manager and the company. There's too uneven an application of these commitments. And there seems to be an uneven follow-up, follow through by staff to make sure that the staff ensures that the commitment made by the company does, in fact, get resolved. That, I believe, also needs to be abolished. You need to throw that out. The NRC can't have an uneven playing field for the industry where there would be one project manager saying, “Okay, let's do this workaround the license amendment and instead go the commitment route.” That would be a -- I think that would be a -- it would be much, much better to have the -- especially if it's safety related commitments, put into the license as a condition of the license.

So I guess I need to close by saying that the community -- and I was just speaking with the division director for the fuel facility oversight division -- that the outrage in upper east Tennessee regarding the FONS, Finding of No Significant Impact, for a 40 year license renewal of NSF is considered to be an outrage. And just as counterpoint to what we heard from NEI at the beginning of the -- of this panel, that I was stunned to hear that the industry is concerned about the cumulative impact of regulations. Please -- we're talking about the cumulative impact to the -- the public is concerned about the cumulative impact of off-site releases that have contaminated the Nolichucky River, the entire stretch downstream from NSF. The entire stretch, 95 river miles. If the 10 CFR 20 limits are fully protective of the environment, how do we find contamination with HEU, and possibly also plutonium, in a major river -- I mean, we're talking a big river; the Nolichucky is a big river. Ninety-five river miles downstream. I ask the

Commission to explain that. So thank you very much for your time.

CHAIRMAN JACZKO: Well thank you very much, and thank you to all of our presenters. We'll start, Commissioner Magwood, with questions.

COMMISSIONER MAGWOOD: I thank all of you for your remarks this morning, and welcome, and happy November. Let me just sort of quickly with Ms. Modica -- first, welcome back, it's -- always appreciate having you take the time and effort to come up to speak to the Commission. I always appreciate your passion and your details, and your interest in these issues. And I'm not aware -- I've never heard of the events you mentioned regarding the releases of -- potential releases of UF4 or UF6, or whatever you think might have happened, but I would ask this part of the meeting record for this that the staff look into that, and provide the Commission with whatever information is possible about the incident. If something happened, it's something we should be aware of, if it isn't already known by the staff, then we should certainly have it investigated.

I did want to -- it was interesting -- you did start off your comments by talking about the fuel cycle oversight process that's proposed by staff, and you do see some benefits in what the staff's proposed. And I found it interesting that you were -- you did give a lot of focus to the corrective action program, and that's a point in some of your comments. But I wonder if you have any over -- other thoughts about the overall approach that the staff have proposed as a fuel cycle oversight program. Is that something you think is helpful in informing the public as to the status of the facilities? Do you think it would be an improvement in public communications over what we do today?

LINDA CATALDO MODICA: Good question. I personally like the inspection program. I think inspections are good things, having resident

inspectors on site -- that's a good thing. The license performance reviews was said by the industry folks to be subjective, but a lot of what some of the companies in the fuel facilities -- some of the fuel facilities are really producing products by hand, that there is a lot of craft involved. So just like their processes are nuanced and with a handmade product, I don't see any issues with regulations so long -- I mean, you know, with the LPR process being somewhat subjective, just so long as we don't have a lack of oversights, say, by the Commission of the staff. You know, so long as the staff is being pretty even handed, facility to facility; I think that's a pretty good thing. But with respect to -- you know, I mentioned the commitments issue. I really do look at those as being workarounds of the license process, where, you know, you've got this handshake, and the company makes a proposal, “We're going -- we commit to doing this.” The audit report said that there was only one member of the public who was consulted by the IG. They should have consulted another member of the public. My friend Sue Kelly in Erwin, who put together a 47 page report on -- the IG's report was only something like 29, or 30 pages -- she put together a 47 page report on commitments made, and commitments failed to be abided by in the case of NFS. So the commitment, I really do believe that's an issue that the Commission really needs to grapple with, because it's -- in part because it's unevenly applied across facilities.

Commissioner Magwood: Okay, all right, appreciate your comments. And again, thank you for coming up.

LINDA CATALDO MODICA: All right. Okay, good to see you.

COMMISSIONER MAGWOOD: Let me turn to the industry panel. I first ask a broad question. I heard Janet sort of start off with a cautionary note

that the current processes isn't broken. But then as I heard the succeeding presentations, I did hear positives about the staff proposal. I'm a little confused as to exactly what you like and what you don't like, and I'm hoping you can give us a little more fidelity and understanding of where the industry is coming from with this.

And I understand -- one aspect I do clearly understand is that the industry has a preference for the operations based cornerstones, versus the hazard based. We'll talk with the staff about that. But beyond that, what is it in the staff proposal that most concerns you? Is there something that we're-- because I don't think the staff is proposing to use PRA's. There was some discussion about that. So what is it that the staff's proposing that gives you -- that raises concerns in the industry?

MICHAEL BOREN: I'm not certain they're concerns, they aren't critical things. They're -- it's process questions of how the process will be implemented at this point in the project. So it's like you go into any project. There's a vision, and then there's two sides of it. Well, our side differs only in the context of the subjectivity of the process, the way in which it's going to be implemented. And those are questions that are bound to come up in this type of a thing; they have in the past. I wouldn't overstress the industry's concern about the process as much as how the process will be implemented. And that's why the performance deficiency definition, and the significance determination process are highlighted so predominately in our discussion, because we feel that those are the two things that we will deal with more often than any other. And it's very critical to get correct, and right as we move forward.

I think the other part is how a condition, or a deficiency will be

treated through the proposed action matrix into enforcement space. Because oversight is -- enforcement is a predominant part of oversight. It's what the public sees, and it's a critical part of how we go about structuring our business, to meet our commitments, to follow the laws, the regulations, and to honestly get credit when we do that. But we're very open to taking our licks when we don't -- we're the first to identify a problem, that's our corrective action process that drags those things to light in front of management so that we can correct them. So that's why we feel so strongly about the CAP initiative. It's a fundamental part of the way we do business. Over the years, we've come to understand that an effective CAP, a healthy CAP, a mature CAP is a good business tool that also keeps us safe, and keeps us within our regulatory boundaries. So it's something we would do regardless of our license commitment, because we understand it's the right way -- the right thing to do, and the right way to run a business.

COMMISSIONER MAGWOOD: Okay, I appreciate that -- that actually answered another question I was going to have for you, so I won't ask it. Instead let me ask you to elaborate further on your comments about the resident inspector program. I think you clarified it somewhat by indicating that in your view it's not sufficiently risk informed regarding how the resident inspectors are in different locations. Can you give us a little bit more on that? What -- how would you suggest we approach this?

MICHAEL BOREN: Well, honestly it wasn't to suggest an approach to it, it's just to point out that the current process for siting resident inspectors is not well understood, and doesn't appear to us to be -- in all cases, I'll say in all cases -- risk informed and performance based. Through the years that Paducah operated under NRC regulation, the question of resident inspectors comes up

from time to time. You know, why is it that an enrichment facility has two full-time inspectors when the only other facilities with sited inspectors are CAT 1's.

And honestly there's a lack of understanding even with NRC of why that is. I think I know why that is; we were -- we came across from DOE regulation into NRC regulation, although it be after 40 years of operation under DOE regulation. So we were an unknown entity. I think it was correct to put inspectors at Paducah. I said even this morning that if you left the choice up to us, we would not choose to have zero inspectors at Paducah. We believe it's been a very good thing for Paducah to have a set of critical eyes 24/7, 365 watching what we do, watching the decisions that we make. So we just believe that it's time to look at -- stand back, look at performance and risk profile, and determine how inspectors should be sited based on that, rather than maybe the size of the facility, the age of the facility. We would just like to understand, or like to see a more risk informed performance based approach.

COMMISSIONER MAGWOOD: Excellent. All right, thank you very much.

CHAIRMAN JACZKO: Commissioner Ostendorff?

COMMISSIONER OSTENDORFF: Thank you, Mr. Chairman. Thank you all for your presentations today. Just to acknowledge, I appreciate Commissioner Magwood asking some further information on these two releases. I also was not familiar with these -- what you suggested, Linda, so I want to learn more about those incidents. I guess I also heard some mixed messages from industry here, so I'm trying to maybe just understand some things. Is industry and our staff far apart on what the essential attributes are for a corrective action program? I'm hearing different things from you all.

MARK ELLIOT: I don't think so. I think that we've all recognized what are the key attributes to a good program. We all recognize the benefits to a good program, and I think most of the facilities all have good programs. So I think most of these things, as Commissioner Magwood suggested, what are the differences. I think a lot of the differences are in the details yet to be worked out. And so the unknowns are the unknowns. But I think we have general agreement on a lot of the issues. It's just developing the details and the mechanics of how it will all work are the things that are being questioned, and need to be worked out.

COMMISSIONER OSTENDORFF: Anybody else want to --

JANET SCHLUETER: Yes, I would like to add that I think with the CAP, the real secret to sort of providing that incentive is to have it coupled with this phrase that we're referring to as “right sizing the inspection program.” The inspection program would be modified based on the factors of facility risk profile, and the performance history of the facility that would then determine the inspection types, and frequency for that year. So if you couple those two factors, I think the incentive would increase to move into a direction where we rely on the CAP to disposition certain low risk findings. If I could briefly kind of clarify where we're at -- I did make the remarks that the current oversight process is not broken. And we do believe that. We do believe that it is adequate today, for NRC exercising its independent role.

COMMISSIONER OSTENDORFF: But if I can say something --

JANET SCHLUETER: But --

COMMISSIONER OSTENDORFF: And ask another question, and please -- I'll just -- I'll insert this, I'll interject this question. I think I heard also from our staff, but also from industry, it is not necessarily risk informed.

JANET SCHLUETER: Correct.

Commissioner Ostendorff: And I think use of the CAP and SDP and action matrix are intended to get us more towards the risk informed approach.

JANET SCHLUETER: Correct.

COMMISSIONER OSTENDORFF: So please, I'll give you a chance to respond to that.

JANET SCHLUETER: That's correct. It's not as risk informed and performance based as it needs to be. So where we see ourselves today is an adequate process, but there are some relatively minor improvements that could be done today within our current resources. And what I mean by that is taking better advantage of the insights from the ISA, and the annual updates that we send in every January, having the staff take a look at those, inform the inspection program for that year, maybe taking a look at the higher risk activity program changes that have taken place that year, and feeding that into the inspection process. Looping back with the licensee, informing us -- I think the staff is doing a better job this past year at setting out a schedule for the inspections for the year, and informing the licensees of that schedule.

We'd also like to see the NRC put out a summary, perhaps, of its inspection findings for the year, that's consolidated for the industry, across the fleet. That would facilitate our own efforts at, you know, continuous improvement and learning. We could watch for trends a little bit better. Right now, we basically have to sort through ADAMS and all the public records to try to see, you know, what's happening across the fleet. We discuss it within the committee that we have at NEI for the field facilities.

So there are some things that we could do right now in the LPR process when it comes to the public meetings. The NRC does a very exhaustive review during their on-site visits, but in the public meetings, it's my understanding that there's not really a very balanced discussion by the NRC as to all the areas that they did look at at the facility, and perhaps not have any findings. So the NRC could, in fact, increase their own credibility with the public and others if they really portrayed a more comprehensive and balanced view of all the areas that they have looked at during their periodic inspection efforts.

COMMISSIONER OSTENDORFF: I'm going to ask you to stop right now, and come back. I wanted to ask Linda -- I know you had talked earlier about transparency and openness in your remarks. And Janet has just highlighted an area here -- I'll give you a chance to respond, or agree or disagree with what Janet has said as far as the public meetings, and transparency, and the availability of findings to be presented in some kind of capsule summary of the facilities.

LINDA CATALDO MODICA: Well, I've experienced a number of LPR meetings -- open meetings to the public, and sometimes they've been exasperating, let's say, to the public. I'm not sure if -- I'm not -- I really am not sure how to fix this. One thing for -- one thing is certain though. When the NRC sends an official to give a LPR briefing to the public, that person really needs to have a full understanding of the operations of the plant and what was reviewed, because we have had in the past NRC officials, some of them from -- most of them from Region II, who, for example, when the -- in the case of NSF when the safety culture board of advisers' reports had come out, the -- and outlier organizations was one of the issues that was raised in those SCBA reports. The

NRC officials asked -- and this was one of the meetings that I was sick for -- but I heard from my neighbors that one of the NRC official was asked, “Well, what does that -- what does it mean? What does that outlier mean?” You know, that somebody -- that a entity within a company is an outlier. There wasn't a good answer; the public was really concerned about that.

In other cases, we've had -- in other cases, we've had very, I think, very well done LPR's. You know, presentations, everybody seemed to know what had been assessed. And then again, you know, and then there were situations where we didn't quite understand why the LPR hadn't happened for so long. I like and I think the public appreciates that when a company is under escalated enforcement, the LPR should happen more frequently.

COMMISSIONER OSTENDORFF: Okay.

LINDA CATALDO MODICA: They really ought to. And they should be put on a real tight schedule. I mean, we need to see the NRC is actively regulating a company if it's under escalated enforcement. And one of those ways that the public gets to see that is by having these, you know, public meetings.

COMMISSIONER OSTENDORFF: Okay, thank you, I appreciate that.

LINDA CATALDO MODICA: Thank you.

COMMISSIONER OSTENDORFF: Mark, let me go to you. And we're out of time -- thank you Janet, and Linda. Mark, you made a comment, and I want to get some clarification, please. If I understood it correctly, I think you said that ISAs are not being fully utilized by NRC staff. Was that a correct interpretation? Could you -- if it was, or is not, can you kind of --

MARK ELLIOT: Yes.

COMMISSIONER OSTENDORFF: Expand upon that please.

MARK ELLIOT: Right. The inspection focus, if you will, and frequency of the program itself doesn't take into account, you know, the risk hierarchy of the different areas of the plant that needs to be looked at. And I think that if you look at, like I mentioned, if performance has been well in one cornerstone -- operations cornerstone, if you will -- for several inspection periods, maybe the frequency of that should be lowered, and the resources applied to other areas where it may be appropriate to apply more resources to look at that. And I -- we currently don't see that in the core inspection program that exists today.

COMMISSIONER OSTENDORFF: What I understood -- and I've got one minute left here, so I'd ask you to please answer within this time period -- but with respect to the proposed action matrix that the staff has in their paper, I understood that similar to the ROP, but not necessarily to match the ROP, the fuel cycle action matrix would get us heading in that direction to look at the risk, and have actions based on the risk that are seen in a given facility. Can you respond to that? Agree, disagree on benefits to the action matrix?

MARK ELLIOT: Certainly. Certainly the action matrix -- I think the fuel cycle action matrix is based on the operations cornerstones, rather than the ROP cornerstones. And I think that's mainly for communication to the workers and the public, and also not to bring the fuel facility risk profile up to that of a reactor in the public view.

COMMISSIONER OSTENDORFF: Okay. Thank you. Thank you, Mr. Chairman.

CHAIRMAN JACZKO: Commissioner Svinicki?

COMMISSIONER SVINICKI: Well, I give my thanks to all of you for being here today, and for your presentations. And Linda, I think I was notified that you might have a really tight travel timeframe. I spoke at an event last week, and I couldn't stay for the whole panel I was on, and I could not find that magic moment where I could make my exit without being noticed. So if that occurs during my Q & A, please, I won't take any offense at all, and I feel for you because I didn't know how to do that myself last week, so --

LINDA CATALDO MODICA: Thank you, thank you. But I'm watching the clock --

COMMISSIONER SVINICKI: Okay.

LINDA CATALDO MODICA: And I'll be all right, but I apologize to staff that I won't be able to stay for their presentations.

COMMISSIONER SVINICKI: Thank you, I just wanted to say that up front. My colleagues have asked some good questions, I've been listening to them. I think I just had a few clarifications. Mr. Boren -- or no, I'm sorry -- Mr. Elliot, this was on one of your slides. You talked about better integrating ISA insights. Can you elaborate on that? In what -- is it the -- into the inspection regime that you were just talking to Commissioner Ostendorff about, or was there something broader that you meant by that bullet point?

MARK ELLIOT: Yes, you know, industry has started back, you know, as early as the mid-90's, or early 90's, in developing these ISAs, and developing the methodology and things. And of course the Commission rulemaking came out sometime in the early 2000's. But there's been a lot of effort put forth to categorize and put in a risk based hierarchy of the things that go on at the different plants. And the plants are very diverse. So at some plants,

some operations are more -- have a higher risk profile than others. And because we have gone through and identified all of the accident scenarios, and put those into a risk based matrix at the plant, that information and that effort that went into that just commands that we use that on both sides as we use the limited resources we have to focus on the areas that are the higher risk areas, and not continue to put inspection resources and then corresponding licensee resources on programs and things that have a very low risk, and are very mature, and have been performing well for years.

COMMISSIONER SVINICKI: So your bullet point which read "better integrate ISA insights," you mean very broadly?

MARK ELLIOT: Yes.

COMMISSIONER SVINICKI: Okay, thank you for that. And Mr. Boren, you had prioritized -- I think other presenters had talked about prioritizing activities. I always kind of think to myself, well of course, that's so -- such a generically reasonable saying, that of course I think everybody can agree to that. But what -- so if you were setting priorities, and I think you also -- you mean globally prioritizing amongst everything you have going on. But I would ask you to focus that within this fuel cycle oversight process of looking at changes to the oversight process, acknowledging that you don't think it's broken. But if you were setting the priorities within this fuel cycle oversight, is there anything that you would think is a high priority that we should be working on? Or how would you -- if you could set the priorities for this batch of activities that are discussed in the staff's paper on oversight, what would you prioritize as a high priority?

MICHAEL BOREN: Like we tried to highlight, the two things that we think right now we can do, is CAP. We believe there's enough alignment

within the staff and the industry to go and implement the CAP initiative. We're not very far apart on how to do that. We think the other key piece is the performance deficiency would be a priority, get that definition right, have a definition that's workable. And it differs from site to site, because these sites are so diverse in not only what they do, but in the risk profiles; that a performance deficiency at one site just because of its risk profile will be more significant than at another site.

And the same applies to the significance determination process, with such a diverse risk profile among the industry from the CAT 1's all the way to the Part 40's -- you got to build a system, or we feel you have to build a system, that incorporates those risk profiles, those facts into that evaluation process. So I guess the three within the fuel cycle would be performance deficiency, significance determination process, and the CAP. We think the CAP is the most immediately doable; we believe that's where the alignment exists.

But I might, without taking too much time -- the overall thrust of the comment for prioritizing is not so much just for this project, but for the overall scheme of NRC initiatives. If you look at the list of NRC initiatives we provided in our backup slides, you got to understand that the Commission is --- NRC's a big group of folks. And at our sites, all of that stuff funnels down through small staffs. And some of them are more important than others. The new MC&A rule is one that we're looking at a lot right now. We believe it's going to have significant impact on our facilities. Part 40 sites -- there's only two of those, but they're very intent on looking at and working on the new Part 40. So it depends a little bit on who you are, what you do, what initiative is most important to you. But there's a lot of things coming down the pipe that honestly are more important than fuel

cycle oversight project right now.

COMMISSIONER SVINICKI: And I did take that meaning from your bullet point, which reads in full, “Prioritize with other regulatory initiatives.” The purpose of my question was to say if the Commission decides that there's merit in moving forward on fuel cycle oversight, how would you prioritize within that. So I think you've given me some specifics, and that's helpful. And I was going to ask you a follow up question, because part of your presentation you mentioned at least once that you personally are aware of, or were involved of, some initiatives on fuel cycle oversight in I think you said 1998? I think you said 2002, I think you said 2006 if I have these dates right, I didn't write them down.

But I was going to ask you, you know, why is it difficult to make progress in your view on something that is simply, you know, more risk-informed, performance-based, more objective and transparent but I think actually in the answer to my prior question in talking about why the significance determination process is kind of a sticky thing and also things like performance deficiency but if you look at it from the English language it seems like such a straight forward thing to define, but I think what you're indicating is that it is this fuel cycle facilities as a category are not as homogeneous as reactors as a category, is that the main reason why people have been, you know, decades trying to kind of get something that might parallel the reactor oversight process in its objectivity and being risk-informed. I don't know -- what's your prognosis going forward, I mean --

MICHAEL BOREN: I've been involved in all three initiatives, going back to the 2000 initiative, '98, 2000 initiative and the difficulty is finding one program, if you're going to have a very structured step by step proceduralized

list, say in hand procedure for doing this, that accommodates the varying risk profiles of these 13, 15 facilities and getting -- having one process that will fit all of those different risk profiles and honestly what they do. Enrichment is a lot different than fuel fabrication, our risks are different. Our regulations are different. We're regulated under Part 76, we've got Part 70 and now we've got Part 40, so you've got to have a system that accommodates not only the different risk profiles but different regulatory basis. So I think that that is the key, if I had to just choose one thing of what has made it difficult in the past, it is the diversity of the sites.

COMMISSIONER SVINICKI: And then, perhaps I'd direct this to Janet, I have heard that the ISAs vary a lot in terms of their, maybe, granularity or their development, is that true in your view, that there's a tremendous variability in the ISAs that have been done in terms of how much effort went into them? I don't -- I'm just trying to get another perspective, I haven't really sampled across various ISAs.

JANET SCHLUETER: Well, I think to the degree that it addresses the distinction that Mike was just pointing out, the diversity of the facilities, but of course these all went under a pretty rigorous NRC review when it comes to how the plans were put in place to do the ISAs, the methodology that was going to be used and then of course actually conducting them themselves and the NRC has a chance every year, you know, to look at the updates that the facilities send in each January and to ask probing questions and to come out and take a look anytime at the ISAs.

COMMISSIONER SVINICKI: Okay.

JANET SCHLUETER: So I'm sure that there is some diversity.

COMMISSIONER SVINICKI: Okay, thank you that's helpful. Thank you Mr. Chairman.

CHAIRMAN JACZKO: Commissioner Apostolakis.

COMMISSIONER APOSTOLAKIS: Thank you Mr. Chairman. We've heard a lot about the diversity of the facilities and that they're fairly simple and the risk is low, so why go through a complex oversight issue, a program like the ROP, but then it seems to me -- well the first question is are all the facilities of low hazard? Would you include the MOX fabrication facility in that group?

My point is, according to the hazard, maybe the oversight and the NRC activities should be, you know, if the hazard is very low maybe a simple system is good enough. If the hazard is higher, then we go to something more elaborate, because for reactors, for example, the hazard is pretty high and we have the reactor oversight process plus other regulations. So I'm wondering whether we should, instead of speaking about fuel cycle facilities, we should have maybe a categorization that some of them are of lower hazard than others and do something more elaborate for the ones with the higher hazard?

JANET SCHLUETER: Well I think that's certainly part of our message today, that the core inspections that are done today should be informed by the facility risks and in addition the performance record of those facilities that we would expect in the future some variance of the type of inspection and their frequencies.

COMMISSIONER APOSTOLAKIS: But then a blanket statement like on Slide 5, complex ROP-like action matrix not necessary, keep it simple, should not be given. It would be applicable perhaps on some facilities but not others. Is that correct? And maybe what the staff is proposing we should revisit

from that perspective.

MICHAEL BOREN: It goes back to the previous question, is how do you build one system that incorporates for each site, from the CAT 1's or MOX to the part 40's and all the risk in between? We're clearly not one risk profile like the reactors, who are closer in risk profile, clearly, among the 104 reactor sites than these 15 sites. That's really been the difficulty and we think is the challenge going forward clearly and you're exactly right, it's just common sense to think --

COMMISSIONER APOSTOLAKIS: So we should make a distinction?

MICHAEL BOREN: -- that we should have one size, because of their category of risk, should have a slightly different oversight program. They have different regulations because of their inherent risk.

COMMISSIONER APOSTOLAKIS: Okay, that's good. Commissioner Svinicki just raised the issue of ISA quality. My impression is that if I look at the report NUREG-1520, I think it is, that it describes a very nice process but then I am told that the way this is implemented varies widely. Certain important parts like a human error analysis is not included and in some cases, or maybe in all cases the issue of dependent failures is not addressed. Now these are pretty major omissions in my view, so I'm wondering, Janet said that the NRC staff gave a very thorough review to the ISAs. In the reactor arena, we have PRA reviews, in fact NEI has developed a very good PRA review that has worked very well to ensure that the quality of the PRAs is what it should be.

So I'm wondering what can be done in the fuel cycle facilities where I appreciate that there may be proprietary issues but some scheme that will bring

outsiders to review the ISAs and make sure that important elements are treated correctly because frankly right now, I mean people talk about ISA versus PRA, I really don't know what that means, I mean the ISA can be very good but it has to include potential failure modes that experience for example, tells us should be there, so is there a way of having this outside review without compromising trade secrets?

MARK ELLIOTT: When we talk about these different facilities, I think Mike just talked about, you know, we've got several different regulatory codes we're based on. The facilities are very diverse; I think trying to introduce a PRA type methodology to all those different diversities creates an order of magnitude much higher than we're dealing with currently, with a qualitative based approach. I do think that when this rule, the ISA rule, was promulgated back in the early 2000s, industry did participate, as we always do, in that rulemaking but as rules are put in place and you go through executing those things I do think that things come up that are better ways to do things, better ways to look at things and I think that you know, through an evolutionary process that we're suggesting here that we can incorporate some of those better practices, if you will, into the oversight process.

COMMISSIONER APOSTOLAKIS: I am not really saying that we should do PRAs, all I'm saying is there is a lot of judgment in these safety studies. No matter what you call it, ISA, PRA and so on. And the way we handle that in making sure that the judgment is reasonable is to have outside experts, outside from their organization, review those things and give their candid opinion and I'm not sure that that is done in the ISAs and just to say we have an ISA, we use ISA insights, I don't know how good those insights are unless somebody tells

me that the ISA is up to the current standards and I don't hear anybody saying, not just here but you know with the staff too, that we need to have some way of making sure that the ISAs are of high quality.

MARK ELLIOTT: Well one of the things that are in our current license conditions, at least I know they are in our plant and I suspect they are in others, as we focus on the discipline based cornerstones, there are requirements in our license to have third party independent reviews of those programs if you will, on some basis, whether it be biennial, triennial, that we do get outside parties that come in independently to look at those things and provide us another look-see as to how the performance is going in those areas so I do think there is some of that what you're discussing currently in the licenses.

COMMISSIONER APOSTOLAKIS: I'd like to understand a little better; maybe the staff can give us more information. I keep hearing from the industry that the system is not broken, excellent performance in the last decades and so on, but Ms. Cotaldo Modica, is that correct? I'm kind of sensitive to pronouncing last names. She painted a slightly different picture and you started responding when you were answering Commissioner Ostendorff's question again with a system not being broken, I mean what do you have to say to what Linda said?

JANET SCHLUETER: Well I think that the facilities have established a good track record as far as their compliance, they work very hard every day at ensuring compliance with the NRC regulations and also self-identifying new accident sequences or new processes and procedures that they need to evaluate and ensure that the operations are safe. The current process, oversight process, we don't believe is broken but as I mentioned there are some

near-term improvements that can be made and we have those documented in a March 2011 letter if you're interested in reading some examples there but we would like to see the program, as we've all discussed, more risk-informed and performance-based and that's where you get into pursuing the CAP element of the process and risk-informing the inspection procedures.

I think these plants, many of these plants are running 24/7 and if you really look back at the inspection histories and violations and events it's actually very, very small where you would find violations or events that in any way threatened public health and safety or the environment.

COMMISSIONER APOSTOLAKIS: Okay, thank you and last question. Mr. Boren, you said something that I found a little odd. You said that terminology like accident risk initiator will not be understood. What's there not to be understood?

MICHAEL BOREN: It's a new term.

COMMISSIONER APOSTOLAKIS: It's a new term?

MICHAEL BOREN: It's a new term for my facility, clearly. We don't -- when we did our accident analysis years and years ago and it's constantly updated, accident sequence initiator is just a term that's foreign to us.

COMMISSIONER APOSTOLAKIS: But it can become naturalized, can it not?

MICHAEL BOREN: We have initiating events and that's where we identify the initiating events and then we do the safety analysis to determine how the --

COMMISSIONER APOSTOLAKIS: So the distinction is between initiating events and accident sequence initiator, is that --

MICHAEL BOREN: It's an ROP term that was introduced into the matrix, kind of late in the game here in one of the public meetings that did take us by surprise and it's a term that we would have to explain, because it is a term that we don't use. So it's a term that, as it was fit into the cornerstone matrix, would be difficult for us -- it was difficult for us to understand why that term was being introduced into this process.

COMMISSIONER APOSTOLAKIS: I must say, it's difficult for me to understand what the issue is, but maybe I don't understand.

MICHAEL BOREN: As someone who has a PRA background I can understand your question.

COMMISSIONER APOSTOLAKIS: Well it's plain English. Accident sequence initiator. It initiates an accident.

MICHAEL BOREN: It's a term that is foreign to us.

COMMISSIONER APOSTOLAKIS: Okay, thank you Mr. Chairman

CHAIRMAN JACZKO: The staff has three options in the paper, which of the options do you guys support?

JANET SCHLUETER: Well I think if we had to choose one we're probably closer aligned to Option Three, meaning improving the current program and evolving in such a way that perhaps out of Option Two, in an a la carte type version you would select elements that we believe could be further developed and implemented in the near term and the CAP is part of that, along with right sizing.

CHAIRMAN JACZKO: The staff -- we leave the impression here that the staff has got their foot on the accelerator and we're going to wake up tomorrow and you're all going to have an action matrix. I think the staff's

schedule lays out something like continued development over fiscal year '12 and '13 of cornerstones, SDP, maybe a pilot in '12 or '13. By fiscal year '14 we would begin looking, I think, at implementing and final implementation in fiscal year '15. So if you support Option Three do you envision getting to Option Three in fiscal year '15 or would we do Option Three and then continue looking at other things to kind of move on or would you stop at Option Three or what's your sense?

JANET SCHLUETER: I think that's where we've been trying to portray our interest in seeing an evolutionary process, beginning with an Option Three like stance and evolving to where we began to further develop the CAP, the right sizing. The performance deficiency definition as you heard is a sticking point as well as the SDP. So that would be a very evolutionary process which would imply that we could work with the staff to try to prioritize this effort along with some of the other initiatives that are on that back up slide.

CHAIRMAN JACZKO: So what -- now if I look at Option Two and I mean essentially the difference between Option Two and Option Three is in Option Two we would try in some way to risk-informed base, but we wouldn't have an action matrix, we would use kind of -- we'd go to traditional enforcement as kind of our tool, I guess is the big difference. What is it about that option that you don't like?

JANET SCHLUETER: I think it's in some ways it is a matter of having a lot more detailed discussions than we've had yet. Because remember, it's really just been this calendar year that the staff has gone back and continued to develop this program further. We've had four public meetings --

CHAIRMAN JACZKO: Are you under the impression that the staff would finalize an SDP, a definition of performance deficiency without additional

meetings with you?

JANET SCHLUETER: I would certainly hope not.

CHAIRMAN JACZKO: I mean, is that -- have they communicated a plan to --

JANET SCHLUETER: No, absolutely that they have not communicated a plan.

CHAIRMAN JACZKO: Have they communicated a plan to you where they would have more meetings to work those things out?

JANET SCHLUETER: They've stated their intent for continued engagement. I think we're all interested, as we have stated as early as three years ago in seeing some sort of time line, Mike mentioned it here today, project plan, milestones, where do we engage and how?

CHAIRMAN JACZKO: So if we gave you a project plan for Option One. Would you be comfortable then in pursuing Option One.

JANET SCHLUETER: We would certainly encourage and welcome those engagements to discuss such a project plan. Certainly.

CHAIRMAN JACZKO: Okay, I'm not sure what that meant. Is the problem that we haven't given you a project plan for Option One so you're worried that tomorrow you're going to have -- you say yeah we're okay with Option One and then tomorrow you're going to have imposed on you an action matrix and a significance determination process and a performance deficiency thing that you don't understand. So if you had a plan, an -- or a -- what did we call it-- a program plan, I guess. Does that alleviate the concerns?

JANET SCHLUETER: I think it would certainly help. Maybe my colleagues would like to add to that, but in the absence of that plan we don't have

any visibility of how we would be engaged to develop some of the critical elements like the performance deficiency.

CHAIRMAN JACZKO: But you have some experience with the staff engaging you?

JANET SCHLUETER: Yes we do.

CHAIRMAN JACZKO: I mean, again, I have to say I'm a little bit frustrated here because I mean -- I read through the notes, there are four or five meetings. I mean, you all didn't want colors; we got rid of colors. There have been changes made along the way. It's not as if the staff has been sitting here doing this in a room by themselves. There's' been a lot of discussion going back and forth. So I'm a little bit frustrated when I hear well, the challenges -- the staff is just going to go off and we're not going to be included. I don't think that's what the staff has done; I don't think that's their plan. Their plan is to do this over the next four years. That's not exactly a fast track. So what I'm hearing is if you had a program plan you would be more interested in looking at Option One? Is that fair?

JANET SCHLUETER: I think it would inform the decision-making process, yes, I think that's fair.

CHAIRMAN JACZKO: So that's maybe something that we could look at doing. Getting to the program deficiency and this is kind of what comes out of the ROP, in a way it's this idea that we have things that happen that are bad, sometimes they're the results of something the licensee did. You know, if an earthquake happens, or you have an electrical storm or you have a transient -- and the reactor or the plant shuts down. That's not a great situation, sometimes maybe there's a piece of equipment that failed that was supposed to perform a

particular function so then the issue is, is there a problem? Did something go wrong as a result of that?

Now if it's a fluke of, you know, of a statistical anomaly that some particular component just happened to fail because whatever, it happened to fail, the manufacturing defect, whatever it may be, we don't necessarily ding the licensee. So the performance deficiency gets in as did they do something that -- did they not do something that they were supposed to do, that's how we determine in a way, kind of the risk significance in effect. I mean it's an artifact of the ROP that it's not strictly the risk significance; it's the risk significance at the fault of the licensee, if you will. So that concept seems like it would be a useful thing here as well, so we know where we're trying to figure out where licensee performance is not effective so what is it about the definition of the performance deficiency that you're not comfortable with, is it just the phrasing there about self kind of adopted items, is that the real issue?

MICHAEL BOREN: I think that's a predominant issue. You know, clearly the sites have hundreds, sometimes of thousands of things that we have to commit to and that we have to comply with everyday.

CHAIRMAN JACZKO: Yes.

MICHAEL BOREN: We have hundreds of procedure steps and each non-compliance with one of those procedure steps is a performance deficiency and that's not something that we're going to argue a great deal about.

CHAIRMAN JACZKO: It's not the self-imposed ones, it's the actual commitments.

MICHAEL BOREN: No, I'm just saying that we have a lot of commitments and we have procedures which are commitments --

CHAIRMAN JACZKO: Commitments to whom? To us?

MICHAEL BOREN: Yes. When we have a performance deficiency, the definition -- part of the definition that we have an issue with is that it's not just to your performance commitment deficiency wouldn't be directed at only your commitments but also at self-imposed standards.

CHAIRMAN JACZKO: Okay. So that's – it's just the word self-imposed standard in there that's the problem?

MICHAEL BOREN: It really is.

CHAIRMAN JACZKO: Well that's perhaps a solvable problem. But in principle, again, you know the idea here with this process is right now you kind of violate a regulation, we give you some -- we process it in some kind of enforcement review, we give you a severity level violation, probably have a non-cited violations and things like that. So the whole idea here is to try to put some better understanding of these hundreds of commitments that you have, how many of them really matter, largely? I guess I should say how many of those are really significant and that's what this new idea would give us is some way to kind of characterize it as you know, good, bad or -- I shouldn't say bad, well we use the words low significance, medium significance, high safety significance -- what are the terms that we would use -- that's what we get with this new process, I mean what's bad about that?

MICHAEL BOREN: A more structured process is needed.

CHAIRMAN JACZKO: But that's Option One, I mean that's Option One or Option Two.

MICHAEL BOREN: Well, you know I'm not -- again you've got to have a basis for determining the significance of a finding. If you have a non-

compliance what's the significance of that non-compliance.

CHAIRMAN JACZKO: Right that's the significance determination process.

MICHAEL BOREN: So if you do a PRA, we don't have a PRA type background for --

CHAIRMAN JACZKO: But nobody's saying you have to do a PRA, I mean the staff's proposal is a qualitative type approach using ISA, so I mean that seems to be something that makes sense. Again, but that's an element of kind of Option One, more, so what is it that you're not comfortable with there?

MICHAEL BOREN: Well, I think like Janet said I think that's something we could work with staff, staff's been very engaging on this -- on all three of these options, we had extensive amount of time to get into the details of what that option would look like, you know on the ground and we look forward to those conversations.

CHAIRMAN JACZKO: Okay, so you're not opposed to continuance -- what -- because before I was asking a question what I would have taken after I asked Janet is you want the Commission to say do Option Three, sounds like what I'm hearing you want the Commission to say is go forward with Option One or Two or Three or all of them but talk to us.

MICHAEL BOREN: That's right.

CHAIRMAN JACZKO: Which I'm fully supportive of, I think is the right way to do this and we should also make sure that Linda or one of her colleagues can be there as well, to help inform the discussion because I think she raised some good ideas about civil penalties and I see no reason why we wouldn't incorporate civil penalties into this process. It's something we didn't do

in the ROP, it's personally something I think the ROP would be enhanced by, instead of just changing the inspection activities we also coupled performance in the action matrix to civil penalties, I mean that was a decision that was made but I think it's a good suggestion. Well that's helpful I have a much better understanding of a path forward for us to pursue then, based on that. Thank you. Any other questions or comments, for this panel, okay great. Thank you.

[break]

CHAIRMAN JACZKO: Okay, Bill, if you want to get started.

BILL BORCHARDT: Good morning. As it was alluded to in the earlier session, I think the current oversight process allows the NRC to accomplish our mission. However, there's obviously some areas where we can make improvements to the process, and that's the subject of the Commission paper. We had a meeting a year and a half ago; since that time, there's been quite a bit of external stakeholder input, and just to remove any doubt, that's one of the cornerstones of the way we operate, is when we --

CHAIRMAN JACZKO: No pun intended.

BILL BORCHARDT: any of those kinds of activities that we're going to take full advantage of the external stakeholders to develop all proposals, and all things coming out of this meeting, including the ACRS has been involved over the last year and a half, and we would expect them to be equally involved in any proposals that get developed moving forward. So with that, I'm going to turn to John, who will start the staff briefing.

JOHN KINNEMAN: Good morning, again, and thank you, Mr. Chairman, and Commissioners for taking the time with us this morning. I'll give a short overview of the fuel cycle facility oversight program, and briefly discuss the

roles and responsibilities of the organizations responsible for the oversight at those facilities. Could I have the next slide, please?

Gaining efficiencies in the oversight process is important now, and it will become more -- even more important in a few years. Right now, there are 10 fuel cycle facilities subject to the inspection program. Just to note other people count them slightly differently, but that's about where we're at. In the next few years, the number of additional facilities may become operational. With a flat or even declining budget, we need to be smarter about how we verify compliance with NRC regulations and license requirements, and to right size our inspection program to effectively use our inspection resources based on licensee safety and security performance.

Currently, three offices at NMSS, Region II, and NSIR actively contribute to the implementation of the oversight infrastructure for fuel cycle facilities. The staff is undertaking a separate effort to strengthen the oversight infrastructure. And you have that in your briefing books. The safety of fuel cycle safety and safeguards -- the division of fuel cycle safety and safeguards in NMSS provides overall direction, policy, and resources for the oversight program. NMSS also assesses the implementation effectiveness of the inspection program. In addition, NMSS implements the criticality safety and MC&A portions of the core inspection program, and coordinates with Region II in assessing facility performance.

Region II is responsible for implementing the operational safety, radiation safety, emergency preparedness, chemical safety, physical protection, safeguards information, and transportation portions of the core inspection program. In addition, Region II implements the supplemental and reactive

inspection programs, and coordinates with NMSS in assessing facility performance.

NSIR is responsible for the development and implementation of oversight programs for physical protection, and information and transportation security at fuel cycle facilities. NSIR conducts information security inspections, and for Category 1 facilities, the force on force inspections.

The goal of the enhancements we are proposing is to give fuel cycle licensees credit for identifying and correcting their own issues; to increase predictability and consistency of our inspection and oversight programs; to provide an opportunity to clarify the roles and responsibilities of the NRC offices involved in fuel cycle oversight; to provide an opportunity to realign the inspection program to cornerstones and risk importance. The proposed changes should allow the NRC staff to use resources more effectively, and make oversight -- the oversight process more risk informed, performance based, transparent, and predictable.

The proposals we discuss today can be implemented incrementally, with little impact on the fuel cycle industry. The proposals include changes to our enforcement policy to give credit to fuel cycle licensees who implement effective corrective action programs; a discussion on our efforts to achieve alignment with the fuel cycle industry on what an effective corrective action program looks like; and a proposal on what cornerstone should be used for the fuel cycle oversight process, and why we should use those cornerstones.

In addition, we are proposing a number of additional enhancements that both support, and leverage the Commission direction in staff requirements, memorandum to SECY-09-0190, and SECY-10-0031. These proposals include

a revised core inspection program that considers risk insights, and the proposed cornerstones; a proposed definition of a fuel facility performance deficiency and minor issue thresholds; a proposal for implementing a significance determination process; a proposal for an improved licensee performance review process; and a proposal for a fuel cycle facility action matrix.

This concludes my remarks. I will turn to Tony Gody, who will discuss efforts made to improve the current program, and the limitations in those efforts for the current program. Following Tony's remarks, Marissa Bailey will describe the proposed enhancements to the oversight process that were provided to the Commission in SECY-11-0140. Thank you very much. Tony?

TONY GODY: Next slide. Thank you, John. Good morning, Mr. Chairman, and Commissioners. To set the stage for Marissa's discussion on our recommendations for enhancing the fuel cycle oversight process, I will describe the structure and implementation of the current oversight program that we have for fuel facilities today. Next slide.

The oversight program can be viewed as having three essential elements. And those elements would include inspection, enforcement, and performance assessment. The first element is inspection program, and it is described in NRC Manual Chapter 2600. This manual chapter defines the minimum core inspection effort for each type of fuel facility; provides guidance on a development of the master inspection plan; provides guidance on topics related to inspecting, communications, and documentation; and references other NRC guidance documents for topics such as licensee performance review and oversight, inspection reporting, handling occupation health and safety issues. It is important to note that this inspection program is currently shared, as John

indicated, between Region II, NMSS, and NSIR. Collaboration between these three offices is important to ensure consistency and predictability of inspection results. And modifications to the manual chapter over the past two years includes the addition of centrifusion inspection program elements, and back shift inspection expectations for fuel facility resident inspectors.

It is important to note that our inspection program is currently somewhat risk informed and performance based. And I will explain as I talk. We do a number of things to ensure we produce consistent results, such as inspection debriefs to peers and management, and the implementation of a quarterly inspection report process similar to the process used for reactors. These efforts have had some limited success in improving both consistency and efficiency in Region II.

It is important to note that the success of these improvements is limited by the existing inspection and oversight framework. These limitations include a need in the future to refine roles and responsibilities between the offices; establish clear guidance on a performance deficiency, the minor finding threshold, and establishing significance of inspection findings; updating our inspection procedures, and improving the efficiency and reliability of inspection; improving the use of item planning, tracking, and reporting; and communication -- excuse me -- develop knowledge management programs and tools such as the collection and communication of industry operating experience; and develop operational readiness review and inspection guidance; and improves information security guidance, both internally and externally.

Our second element is enforcement. Our most recent enforcement policy revision includes provisions that allow us to use risk insights to perform

part of the basis for assessing the severity level of integrated safety assessment related non-compliances. Specifically, this policy allows the staff to consider additional measures a licensee may have in place to help assign risk importance values in our assessment of significance. We have used these provisions on a few enforcement cases over the past year collaboratively with the Offices of Nuclear Material Safety and Safeguards, and Enforcement. And early indications show that the use of risk insights and enforcement can be beneficial for both the licensee and the staff to reach a common understanding of the significance of a non-compliant condition.

The major challenge we face today in implementing the current policy is the lack of a formal significance determination process to ensure we have consistent and predictable results. This is complicated, somewhat, by the uncertainties inherent in the integrated safety analysis. In addition, the alignment of our regulatory response to specific areas needing improvement would be more predictable and consistent if we had well-defined cornerstones, cross-cutting aspects, and an action matrix.

The third and last element of our current inspection and oversight program is the area of licensee performance assessment. It's important to note that the purpose of our licensee performance assessment process is to consider licensee performance, and decide whether additional resources or focus is needed beyond the core inspection program for areas that need improvement for licensees.

As you all are likely aware, the licensee performance assessment program is defined in NRC Manual Chapter 2604. This process is relatively antiquated, and has been viewed in the past as providing somewhat less than

consistent and unpredictable results. This past year we changed the way we implement this process within the context of the existing manual chapter in an effort to improve consistency and efficiency.

The first change that we implemented involved adjusting the schedule for conducting our assessment review. Rather than conducting the review at various times during the year, whenever the end of the licensee's review period was encountered, we moved at such that we are now conducting the performance assessment at one time in the first quarter of the calendar year. This change has made it easier for us to identify potential areas of inconsistency between licensee reviews.

Another change that we've implemented involved a clarification of our expectations on what type of information should be considered during the licensee performance review, and what additional information should be considered during future resource allocations. The current manual chapter does not clearly separate and describe the two separate and distinct decision-making tress, and as such, the staff is often confused about what information should be considered in what decision tree.

It is notable that the single act of conducting these reviews at the same thing clearly highlighted to us a number of improvements needed in our program, such as the importance of consistently assessing the significance of violation findings in the enhanced program; the need to clarify what issues should be attributed to what areas of licensee performance; and the future cornerstones in the enhanced program. Three, the need to clearly define what a cross-cutting issue is for the fuel facility, which is currently non-existent. And four, the need to clearly define action -- have a clearly defined action matrix, which is currently not

defined in our policy.

In summary you can see that we have improved our processes within the context of the existing programs. These improvements have improved communications, and have increased consistency, transparency, and predictability. Our ability to move beyond these improvements is currently limited by the construct of our existing programs. Without the implementation of cornerstones, our inspection program changes can be limited by the construct under which they're currently developed. The implementation of cornerstones will also provide us an opportunity to reevaluate our base inspection program, and right size it based on risk insights, and align with cornerstones developed from our strategic areas -- excuse me -- of safety and security, and without clearly defined minor threshold, and a significance determination process, inspection finding consistency and predictability can be limited by existing processes. And without an action matrix aligned with cornerstones, and clear guidance on assessing significance, licensee performance reviews can be limited by the current construct and improvements will be limited.

Clearly, the first step towards this change is to facilitate the development of a common standard performance and implementation of a fuel cycle, problem identification and resolution program. In that regard, let me shift our focus to the Commission's direction provided in staff requirements memoranda SECY-09-0190 and 10-0031. Next slide.

In staff requirements memorandum SECY-10-0031, the Commission directed the staff to consider giving licensees credit for implementing effective corrective action programs in our enforcement policy. The current draft of the next version of our enforcement policy is responsive to

this direction. In order to be prepared to implement the revised policy, if it is approved, the staff and the industry need to align on what an effective corrective action program is. Once we understand what an effective corrective action program looks like, licensees will need to identify gaps, and develop a strategy for closing them. We should recognize that each fuel cycle facility has a corrective action program. It's also my experience that every fuel facility licensee manager recognizes the need and the value of implementing a good corrective action program from both a business, and a safety/security perspective, and that this is the strongest motivation for the industry to align on a common standard.

The staff did conduct an internal review of existing licenses, and license applications, and identified that, indeed, every fuel facility has some form of license application or license commitment regarding a corrective action program or incident investigation program as they're likely called.

Generally, fuel cycle licensees' corrective action programs can be placed into one of three categories. The first category are those licensees who have committed to implement corrective action programs consistent with the requirements of 10 CFR Part 50 Appendix B or NQA-1. If these programs required by license were implemented properly, they would likely be considered effective programs following an inspection.

The second category would include those licensees who meet the standard review plan guidance contained in NUREG-1520 Revision 1. This guidance requires that reviewers assess license applications in the area of incident investigations and corrective action programs. Given our experience with those programs, it can be reasonable to assume that some of these licensees may be evaluated as having effective programs.

The third category of licensees would be those who have very limited commitments and programs closely resembling a broke/fix type of corrective action program for which most of those would probably not be considered effective.

So it's clear that existing corrective action programs in the fuel cycle industry vary greatly from facility to facility with both requirements and implementation. When you look at our current inspection program, you can see that most inspection procedures have corrective action program inspection elements. It is notable that the current fuel facility inspection program has no integrated periodic corrective action inspection procedure, like the reactor problem identification and resolution inspection procedure. Some elements of problem identification and resolution are inspected in our management organization and controls inspection procedure, but it's not a comprehensive review.

In addition, our reactive inspection procedure for event follow up has provisions for inspectors to conduct independent root cause analyses. During the implementation of the reactive program element, it is fairly common for our inspectors to identify issues with a licensee's root and contributing cause determination, or extent to condition review. Occasionally, these issues will highlight a failure of a licensee to develop the proper corrective actions to address all aspects of an event, or an issue. It is my personal experience that we proportionately find more issues with fuel facility corrective actions than in the reactor inspection program. In my opinion, this occurs because the fuel cycle industry is not required to adhere to a common standard of performance with respect to implementation of a CAP -- I'm going to change to the CAP, it’s

quicker. Our main goal should be to encourage the fuel cycle licensees to identify and correct issues, and prevent significant issues from reoccurring on their own. Licensees should be encouraged to do this in every aspect of our inspection and oversight program. The current paper before the Commission highlights a number of key attributes that we would expect to see in a common industry program, such as the identification reporting and documentation thresholds; the significance assessment and causal evaluations; the development of corrective actions; and the assessment of corrective action effectiveness. Each of these attributes would require further guidance to ensure consistency and predictability before implementation. And the staff stands ready to work with the industry and collaborate with the industry on those definitions. I turn the presentation over to Marissa Bailey, who will further discuss recommended enhancements to our fuel cycle enforcement process -- oversight process.

MARISSA BAILEY: Thank you, Tony. Thanks, Tony. Good morning. I'm on Slide 8. As John indicated, the goal of enhancing the fuel cycle oversight process, or FCOP, is to improve the effectiveness and efficiency of the process, to make it more risk informed, performance based, transparent, and predictable.

Over this past year we explored options for achieving this goal. Following your direction, we compared ISAs for fuel facilities and PRAs for reactors. We developed potential cornerstones for fuel cycle oversight. We looked for ways to give licensees incentives for maintaining an effective corrective action program. And we integrated the results of these activities to propose next steps for enhancing the fuel cycle oversight process.

In conducting these activities, we engage our external and internal stakeholders extensively. We held five public meetings with industry representatives. We also met with the Advisory Committee on Reactor Safeguards in five locations. These interactions have been valuable. The insights and advice we received significantly influenced the enhancements that we are considering and proposing. In SECY-11-0140 we presented for your consideration three options for enhancing FCOP. All of the options would extend credit to licensees for maintaining an effective corrective action program or CAP.

In addition to the CAP, the staff's recommended option is an FCOP with cornerstones, a significance determination process and a performance assessment process with an action matrix. Now Tony talked about the key attributes that we would expect to see in an effective CAP. In my presentation, I'll talk about the other elements of our recommended option. Slide 9 please.

As Tony mentioned, the current oversight process consists of inspections, traditional enforcement to disposition inspection findings and periodic reviews of licensee performance. The left column of this table shows the main elements of the current fuel cycle oversight process. The right column summarizes the proposed enhancements.

In our recommended option, we propose to add cornerstones to risk inform the core inspection program for a facility. The cornerstones would also be used to aggregate the inspection findings in the performance assessment process and feed that back to the core inspection program for continuous improvement. To assess the inspection results in a more predictable and risk-informed way, we propose the use the performance deficiency concepts, similar to the ROP, and a significance determination process. If an inspection result is a

performance deficiency, the staff would use a structured screening process to determine whether the performance deficiency is greater than minor. Greater than minor performance deficiencies would become inspection findings and processed through the SDP. The SDP would then be used to disposition the inspection findings in a risk-informed, objective, predictable and transparent manner.

So going through the SDP, the inspection results would fall in one of four significance levels; very low, low to moderate, substantial and high. The SDP results would then go to the action matrix and the performance assessment process. The action matrix would contain pre-determined NRC actions depending on the significance level of the inspection finding. For example, if the significance level is low to moderate or greater NRC actions would include, but would not be limited to, supplemental inspections.

The performance assessment process would also consider cross-cutting areas. Now I'll discuss the proposed cornerstones. Slide 10, please.

Slide 10 shows our proposed cornerstone, our proposed cornerstone framework for the fuel cycle oversight process with the recommended set of cornerstones shown at the bottom of this diagram.

We used the top-down approach to develop these cornerstones from the NRC's strategic plan. We started at the highest level with NRC's mission, then moved on to the second level using NRC's strategic goals for safety and security. For the third level -- or the third level is comprised of the strategic performance areas of fuel facility safety, radiation safety, and safeguards; these are derived from the strategic outcomes. Specifically, the fuel facility safety strategic performance area was derived from the strategic

outcomes of preventing the occurrence of inadvertent criticality events, acute radiation exposures resulting in fatalities, and releases of radioactive materials that result in significant radiation exposures.

In addition to radioactive materials, the fuel facility safety strategic performance area also extends to other hazardous chemicals used with or produced from radioactive material. Similarly, the radiation safety strategic performance areas was derived from the strategic outcomes of preventing the occurrence of acute radiation exposure resulting in fatalities, releases of radioactive material that result in significant radiation exposures and releases of radioactive material that cause significant adverse environmental impacts.

Finally, the safeguard strategic performance area was derived from the strategic outcome of preventing instances in which licensed radioactive materials are used domestically in a manner hostile to the United States.

With a risk informed perspective, we then identified the most important elements in each of these strategic performance areas. These elements were identified as the cornerstones for safety and security, and they make up the fourth and final level of the fuel cycle regulatory framework. And these cornerstones are: accident sequence initiators, safety controls, emergency preparedness, public radiation safety, occupational radiation safety and safety material control -- I'm sorry -- security material control and accounting.

These cornerstones will form the fundamental building block for the enhanced fuel cycle oversight process. Each cornerstone has an objective and when licensees meet those objectives that will give the staff reasonable assurance that NRC's mission is met.

The staff did consider other cornerstones, and these are presented

in the SECY paper. However, we recommend these set of cornerstones, which we call the Hazards Analysis Based Cornerstones for the following reasons: First, this approach would result in a similar regulatory framework across NRC program areas. That is, there would be better symmetry between the FCOP and the ROP.

Second, these cornerstones are organized in a way that licensees organize their hazards analysis and controls development in their ISAs.

Third, with this approach the key attributes for ISA related activities are integrated into cornerstones that reflect the way licensees develop and maintain their ISAs.

And finally, these cornerstones are applicable to all of our Part 40, Part 70 and Part 76 licensees even though their processes and hazards may vary. For example, criticality is not a hazard for Part 40 facilities, but we can still work off of the same set of cornerstones for the oversight of such facilities.

I would also like to note that the ACRS agreed that this set of cornerstones, or the Hazards Analysis Based Cornerstones is the better choice for the fuel cycle oversight process.

I'll now move on to the significance determination process. Slide 11, please.

The staff recommends developing a qualitative type significance determination process for the fuel cycle oversight process. This type of evaluation will be based on qualitative criteria, not actual numerical risk quantification; however, it would have similar risks and safety significance objectives as the quantitative SDP types. The qualitative SDP type would be based on factors such as an evaluation of the deficient condition with respect to

duration, the reduced number of quality -- the reduced number and quality of controls and potential consequences.

We envision using a refined risk index method such as what's in NUREG-1520, our Standard Review Plan. We envision this would be part of the approach along with consideration of the licensees' ISAs.

The staff recommends the qualitative SDP because it would be simpler and less recourse intensive for us and for our licensees than the other types discussed in the SECY paper. This type recognizes the limitations on the quantitative data and tools available and applicable to the fuel cycle industry. Also the qualitative type SDP would be standardized; therefore, the significance evaluation will be more predictable and consistent across licensees and types of deficiencies.

Now I'll discuss the performance assessment process. Slide 12 please.

The staff recommends a performance assessment process that includes a fuel cycle action matrix and considers cross-cutting areas. We believe that a fuel cycle action matrix is an important and necessary enhancement because the current program does not provide a systematic way of adjusting the inspection program based on performance. Also there is essentially nothing in the current guidance that would allow an outside reader to predict the NRC's decisions, based on looking at any performance evidence that might be available, such as enforcement actions or reactive inspections.

The fuel cycle action matrix would make the assessment of licensee performance more transparent and NRC actions more predictable. In addition, the action matrix would integrate safety and security issues.

Finally, I'd like to note that the cross-cutting areas in the performance assessment process would be informed by the safety culture policy statement. Slide 13 please.

In conclusion, as a path forward for enhancing the fuel cycle oversight process, the staff recommends an option that would give licensees credit for maintaining an effective corrective action program and make use of the hazards analysis based cornerstones, a qualitative significance determination process and a performance assessment process with an action matrix and consideration of cross-cutting areas. The staff recommends this option because these elements would provide the tools for inspecting and assessing licensee performance in a more risk-informed, objective, predictable and transparent way. Additionally, they will provide a systematic way for adjusting the inspection program based on licensee performance. This concludes my presentation, thank you.

CHAIRMAN JACZKO: Thank you. Commissioner Magwood.

COMMISSIONER MAGWOOD: Thank you and good morning to all of you. Thank you for your presentations. Also, I wanted to thank you for the work over the last, I guess it's been a year and a half. So it seems like my entire tenure as a Commissioner has been dominated by this issue one way or another, first big issue we had to deal with. I think the work that has been done over the last year has been very helpful and the PRA/ISA comparison paper was very good. The work on the cornerstones was very good. I appreciate everything that went into this and I thought the staff paper presenting all this was actually very well-assembled, very clear so I appreciate all that work.

I do have a few questions and let me start with something, I think,

Marissa touched on which is this discussion about the operations based versus the hazards based cornerstones and you heard the industry representatives indicate a preference for the operations based cornerstones. What that -- let me ask you to play devil's advocate a little bit with this. What's wrong with operations based? What difficulties would be presented to the agency if we were to go down that path?

MARISSA BAILEY: I think the biggest challenge that I would see with the operations based cornerstone is that it may lend some redundancy and let me try to explain that a little bit better. There are going to be similar -- if you take the operations based cornerstones and especially the ISA related ones that are going to criticality safety, chemical safety and radiation safety. I think that they may have common objectives, but then you would end up having to separate into the different inspection areas so a single failure, such as a failure in fire protection, which would be a consideration, an objective under the three cornerstones, could end up being -- having to move across the different cornerstones when you can sort of just address that under one cornerstone and that would be under safety controls in the hazards based cornerstones.

COMMISSIONER MAGWOOD: Is that because of the way that the inspection program is structured, or is that just inherent in the --

MARISSA BAILEY: I think it's inherent but maybe Tony can answer that a little bit better.

TONY GODY: It's inherent. I think the important point here is that we need cornerstones, regardless of which way it is. I think if we define a set of cornerstones operationally or with what we're proposing here, we'll design our inspection program around those cornerstones so that we focus on those

cornerstones and we'll design our assessment process and action matrix around those cornerstones so we can assess and implement in a consistent and transparent manner. I'm more of a proponent of either one. Just get cornerstones.

COMMISSIONER MAGWOOD: So you don't see inherently -- inherent conflicts, inherent problems in an operations based approach, is that what I hear?

TONY GODY: I think both can be implemented.

COMMISSIONER MAGWOOD: Both can be implemented and would simply adjust the inspection process to accommodate whatever cornerstones you had. Let me ask Bill a question, because let me get more of a big picture from you on this, because one aspect that seems to go through the paper is the concept that, as it's sort of indicated in the paper, that this cornerstone construct, I mean the operations based, will result in two different oversight frameworks for oversight within the agency, the FCOP and the ROP. And that kind of permeates the paper, the thought that the FCOP ought to be a mirror image, to some degree, of the ROP and the ACRS actually went a step further by saying you need to add the barriers cornerstone. Is there a management rationale to try to make the FCOP look like the ROP; is there a good reason to do it from a management standpoint?

BILL BORCHA RDT: I think there's a good reason, I don't think it's absolutely necessary, I think I'm aligning a little with Tony's comments, we can make either work. But there is great value in having staff go from one program to another program, being able to use inspectors and to the extent that you have a similar construct there we can learn lessons more easily from the reactor to the

materials program and vice versa. Use resources, have greater fungibility within the staff. We're striving to become more interdependent as an entire agency and this would help that overall approach.

COMMISSIONER MAGWOOD: But not -- it's a marginal -- would you call it a marginal improvement or preference or is it more?

BILL BORCHARDT: I think it could be very important, as you know we don't envision the budget scenario getting any better in the coming years. As programs size up and size down the easier it is to use resources from another program, you know, with less training. It makes us more adaptive, if we had materials inspectors that were knowledgeable of this construct we could easily move them over into ROP if we had a plant that required an extensive amount of inspection or you know program support and reactor people could help the materials side so I just think it adds to the fungibility of agency resources on the adaptability of evolving issues.

COMMISSIONER MAGWOOD: Len, Tony, any further comment on that point?

LEN WERT: No, I would echo exactly what Bill's comments are. In fact, within Region II we utilize inspectors back and forth between the division of fuel facility inspections and on the reactor side, particularly in the area of problem identification and resolution.

COMMISSIONER MAGWOOD: Okay. I appreciate that. During the industry discussion there were some conversation about the resident inspector program and the questions to whether it's easily explained and risk-informed and I want to give you a chance to react to that and give us any thoughts you have about it.

TONY GODY: Sure. If you look at Category 1 facilities, they all pretty much have resident inspectors. If you look at Category 1 facilities that have had performance issues, they have two. So that's kind of performance based. Category 3 facilities generally do not have resident inspectors. Paducah has two. We're trying to understand that. The decision was made a long time ago, we believe that it's possible, we've discussed with Congress whether that we were going to have two, we're trying to understand if we did that. The inspection program for the gaseous diffusion plants is pretty significant. It's a large inspection program, more than one FTE per resident program for the one gaseous diffusion plant that is in operation we utilize that additional resource at a nearby plant so it's very helpful, but we are reevaluating that particular facility.

COMMISSIONER MAGWOOD: So Mr. Boren was right in being confused, is that?

TONY GODY: Yes sir.

COMMISSIONER MAGWOOD: Appreciate that. One of the -- I wanted to ask a question about the MC&A program. Can you explain to me how is the MC&A program in a criticality inspection program currently integrated into the fuel cycle oversight? Is it integrated today in a consistent way?

JOHN KINNEMAN: Yes I'll take that one. And let Tony and Marissa step in where I make mistakes. The criticality and MC&A expertise largely resides here in NMSS. We have a number of very well trained individuals who focus on those activities both on program development and program implementation. As we work through scheduling inspections with the facilities, we work together with Region II to assure that we understand what inspections they're scheduling and to integrate and to sometimes overlap or not overlap

those inspections as seems appropriate. I'll be perfectly honest with that, that scenario where Tony and I sometimes do not accomplish all of our objectives, it's in an area where we're trying to focus more attention so that we accomplish everything that I just said and try to minimize the impact on the facilities. At the same time, we're also evaluating if that's the right way to go forward, we've just gathered a lot of information on that and we'll be working through that in the next couple of months.

COMMISSIONER MAGWOOD: So that's a problem with whatever the oversight program looks like, that's still -- that's an issue whether we go to the new program or stay with the old program?

JOHN KINNEMAN: I wouldn't say it's a problem; it's an area where we believe that we have opportunities to make improvements.

COMMISSIONER MAGWOOD: Okay. It's not a problem, it's an opportunity. Got it. One last question, when I was looking at the cornerstones for the operations based approach, it left out the safeguards section. Was there a reason for that? It wasn't clear in the text as to why that wasn't in there.

MARISSA BAILEY: I'm going to defer to my staff on that one, as far as the safeguards.

DAN DORMAN: Dan Dorman, deputy director of NMSS. I think in the discussion of the operations based in the paper we focused on the things that were different from the hazards based so the safeguards is in the MC&A which is in the security MC&A cornerstone, which is the same as what was described in the hazards based so it is included in the operations based, but we didn't repeat the description of it.

COMMISSIONER MAGWOOD: Okay, I see. All right. That

explains it. Thank you.

CHAIRMAN JACZKO: Commissioner Ostendorff.

COMMISSIONER OSTENDORFF: Thank you Mr. Chairman. Thank you all for your presentations, they were very informative. I think I'll start with Tony and Marissa and I'll let you guys figure out who's going to take it, but I think I'm going to focus on you two.

The first panel Mr. Boren made comments to the extent, or to the message that the fuel cycle facilities are so different that there's not really any way you can synthesize -- that's my word -- synthesize these into one common process, and I dealt with one of a kind facilities when I was at the National Security Administration, we dealt a lot with plutonium or HEU enrichment or those kind of things so I'm pretty familiar with these kinds of facilities. But I want to, at a high level, provide you an opportunity to respond to Mr. Boren's comment, then I'm going to have a couple of specific questions to follow up to that.

TONY GODY: Yes we can. We can implement one process and cover all these facilities so and yes they are very different in their specific processes, they're very diverse in their very specific processes but we ought to be able to handle an issue in the same fashion for each one of these facilities, we ought to have a consistent process to evaluate significance of issues and consider those issues in licensee performance review and predictable action matrix. And Mike knows this, I don't agree with him.

COMMISSIONER OSTENDORFF: Okay.

TONY GODY: We can do it.

MARISSA BAILEY: I just want to add that I agree with Tony that while the facilities are diverse in your processes, we can have an oversight

program that addresses them all and I think that we do that now in Inspection Manual 2600 and what we're doing is -- we're proposing here improvements to the current process that would make our oversight of these facilities even better and more effective.

COMMISSIONER OSTENDORFF: I'll put you both on the spot here, just for a minute. Let's talk the significance determination process because I think, from John, yours and Tony's comments that was the -- one of the most significant enhancements that the Option One would present and that's really kind of to the extent that there's something that's not functional currently, that's something that an SDP process would rectify a current deficiency, am I fair in saying that? John?

JOHN KINNEMAN: Yes we believe that would be --

COMMISSIONER OSTENDORFF: SDP.

JOHN KINNEMAN: Yes that would be an improvement and it would give us the opportunity to sort is a word we haven't used but it comes to my mind through findings and have them be as risk-informed as we can.

COMMISSIONER OSTENDORFF: Okay, and here's where I put you on the spot is can you give me an example and I don't care which facilities you use, doesn't make any difference to me, how the SDP could be used to provide a more uniform approach overall, going back to what Bill had said about the need to have some symmetry between the ROP and the fuel cycle action matrix et cetera. Can you give an example taking two of our current fuel facilities and perhaps walk us through how that might work, to provide greater uniformity than currently exists?

TONY GODY: I can try.

COMMISSIONER OSTENDORFF: Okay, that's fine.

TONY GODY: And I'm not going to say the name of the facility.

COMMISSIONER OSTENDORFF: Sure.

TONY GODY: But I indicated in my presentation that we have implemented the new enforcement policy which allows us to consider risk in assessing the significance of violations. A little more specifically, the current enforcement policy for example, for a severity Level 3 violation, for example, I'm going to paraphrase it, it basically says that a high consequence event is unlikely, based on a licensee's ISA.

So we had a case, this past year where some retaining pins on some filter press assemblies fell out and they weren't present and those retaining pins had a couple of functions, and that was it ensured that you could not install too many filter plates into this particular assembly and the consequence of putting too many filter plates is you could accumulate more mass in a smaller location and there's a possibility of a criticality accident. So the new enforcement policy allows us to consider risk, so what we'll do is we look at the accident scenarios for this device, because there's actually an ISA for this specific process. There were two accident scenarios that were considered in the ISA. One was wrong filter press plates used and the other one was too many filter plates were installed.

So we look at those two particular sequences for this ISA and we determine, using the licensee's ISA, you know, what controls they have in place to ensure the wrong filter plates cannot be used and we assign likelihood numbers to those sequences, if I might add. For example, one of the controls was the filter plate press design dimensions and the other one was an engineer

verification of the right one. In the licensee's ISA, one aspect is ten to the minus three, another one is ten to the minus two.

So we evaluate that and we determine that the first control was in place because they had purchased the right plates and they didn't have any plates available but the second one with the engineer verification because they missed the fact that the pins were missing didn't occur. So we would assign a likelihood of that event to ten to the minus three. As we go through that process, we review the licensee's ISA and make sure that those assumptions, and those numbers are approximately correct. It's not numerical, but it's a qualitative assessment.

The other scenario had to do with too many filter plates installed. It had two controls -- one of them was a peg and hole feature of the plate, and another one had to do with the analysis of the concentration of uranium in the fluid that goes through the system. So it turns out that when you look at the analysis for the amount of fluid in the system, in reality the numbers are significantly less than what they assumed in the analysis, and you could never get a criticality. And so in that second scenario, the peg and hole failed, so you don't give credit for that. And then we modeled the concentration of material in the process at a ten to the minus one, so we assigned a ten to the minus one to that particular scenario. So it's a big picture qualitative -- I'm not going two sites, because I'll be here for longer --

COMMISSIONER OSTENDORFF: No, this is good.

TONY GODY: So it's a qualitative assessment of the licensee's ISA, implementation into whether or not an accident sequence is likely or highly unlikely, and make a determination and a recommendation in enforcement for

that particular case. So it's done on a case by case basis on a piece of equipment basis.

COMMISSIONER OSTENDORFF: So you're looking at the site-specific configuration, and in this case, for criticality safety, materials controls, and using that basement configuration of that one site to achieve some overall standardization across many sites as to how you would approach the likelihood of having an accident, is that what I'm hearing?

TONY GODY: And that's why we need to the process.

COMMISSIONER OSTENDORFF: Yeah.

TONY GODY: Right now we're being scientists and evaluating these ISAs appropriately, but we need a process that would help us get consistent results, and predictable results. And that's what we don't have right now. So it takes a lot of management attention to make sure that we're consistent and predictable. And a lot of coordination with different offices, and the licensee.

COMMISSIONER OSTENDORFF: For those that are maybe wondering, I did not give Tony that heads up on this question. I was very impressed with his answer. Marissa, is there anything you want to add to that? That's very helpful, I appreciate that example. Marissa, in response to the question from Commissioner Magwood, you were discussing the hazards analysis based versus the operations based approaches, and my gut feel is that I don't see there's any big difference between the two. And I just want to kind of make sure that that's what I'm hearing from the staff panel here. Is that?

MARISSA BAILEY: Yeah, that's essentially what you're hearing. I think it's two different approaches to get to the same thing.

COMMISSIONER OSTENDORFF: Okay. All right. Thank you all. Thank you, Mr. Chairman.

CHAIRMAN JACZKO: Commission Svinicki?

COMMISSIONER SVINICKI: Well, I want to thank the staff as well for the presentations and for all those who have been working on this who might be listening, or are in the audience. I know not everyone's presenting today. I might start with -- this is, I think, a pretty straightforward question. In terms of a resource loaded project plan, does the staff have a resource loaded project plan, even a notional one for Option One, or would you wait to develop that upon the Commission approval of Option One.

CATHERINE HANEY: We wait to develop it until the approval. We do have some resources that we've requested through the budget, but they're minimal resources. But we can't go much further without a decision from the Commission.

COMMISSIONER SVINICKI: Okay. I know that the agency is looking at a lot of add/shed processes right now for workload, because we have emergent needs, post-Fukushima. So in some aspects, the Commission would have to make a decision on Option One without knowing the full resource of it, and how that might affect other work that needed to be shed. So it sounds like upon approval of Option One, we would get a more high fidelity estimate of exactly what it would take to develop Option One.

MARISSA BAILEY: I think that's generally true, but I think the resource estimate that we provided for Option One -- while it might change when you give us -- if you give us the permission to move forward and once we develop the project plan, I think we're pretty confident that we're pretty close

there with our resources.

COMMISSIONER SVINICKI: Okay, so that overall top line is in the ballpark? So, okay.

MARISSA BAILEY: Yeah, so I think we're in the ballpark there. It's -- if we move towards a PRA based SDP, that's sort of when we're not sure --

COMMISSIONER SVINICKI: Oh, I see, yes.

MARISSA BAILEY: We're not really -- we don't have a lot of confidence in the resource estimate there, because of the uncertainties.

COMMISSIONER SVINICKI: Okay, and I think you indicated that in the paper. Thank you, that's helpful.

Bill, returning to the question about what is the real objective in having an ROP mirror or a fuel cycle oversight process that mirrors the ROP you talked about the flexibilities of being able to take inspectors and move them maybe about as we have needs to be more flexible, but it seems to me -- and I'd like to get to your reaction -- that kind of understates the much more significant, I think, challenges, making sure that people -- if you're going to move them off fuel cycle facilities, it'd have to have all the technical qualifications on reactors, right?

So I mean, let's not overlook I think what is a significant fungability issue, is whether or not -- a lot of NRC have somewhat specialized, either in reactors or materials facilities -- so it isn't as if perhaps having a few different cornerstones between an ROP and a fuel cycle oversight, it might be that they'd have to go through a significant qualifications process on the technology itself, so that -- it seems to me that would be a greater challenge in the flexibility of moving people about, than the -- perhaps not having a cornerstones that mirror each other one for one.

BILL BORCHARDT: I mean, you raised a good point -- and Len and Tony could address what they do in Region II -- but even if it's specific to an individual inspection procedure, you know, we need to make sure the person going out to do that activity has the adequate training. That doesn't mean they have to be -- the materials person has to be an expert in all boiling water reactor issues. They need to understand the context of the specific activity they're going out to the site to do. So that's less than, you know, six months of training. But the point I was trying to make was that if you have a comparable oversight program, at least there's already an understanding of how the finding is used, how it's assessed, how the feedback to the licensee and interaction with the public occurs. So that's the main benefit.

COMMISSIONER SVINICKI: Okay. Thank you. And I don't know if we've talked much about it today, or it got much coverage in the SECY paper, but there had been previous Commission discussion of a pilot, of -- you know, some or all parts of whatever enhanced or revised system we put in place. If the Commission approved Option One, does staff have a notion of when it might be ready to initiate a pilot, and what might that look like? And I'm just talking generally what range of years.

MARISSA BAILEY: Yeah, I think if the Commission approves Option One, we would pilot the performance deficiency and minor threshold concept, and we would do that during the developmental phase, so that would be 2012/2013 timeframe is when we would be piloting that. We would -- we don't call it a pilot, we would test -- we would develop and test the significance determination process, and then that would also be during the developmental phase. So the 2012, 2013, and 2014 timeframe. And our plan right now isn't so

much a pilot of the big picture, but the initial implementation similar to what they did with the ROP. So it would be initial implementation in calendar year 2015. That's what we proposed to do. Initial implementation, and then after a period of time, assess, and then adjust the program.

COMMISSIONER SVINICKI: I guess that's a little earlier -- and I appreciate the distinction on not piloting the whole thing versus piloting or testing aspects of it -- but to be piloting while you're exploring some of the underlying definitions, it seems to me, from the prior panel, there's quite a bit that's yet to be defined, or fully developed. And it sounds like you're saying you would be piloting aspects while you're engaged in defining them. Am I misunderstanding that?

MARISSA BAILEY: Well, I think we are going to engage with our stakeholders in defining and then we would pilot -- it's sort of a matter of timing. But it would all be under -- it would all be during that timeframe when we're developing the enhanced fuel cycle oversight process.

COMMISSIONER SVINICKI: Okay, so it's more of a phase?

MARISSA BAILEY: It's more of a phase, developmental process where the last part before you go into initial implementation would be a pilot, and then an adjustment based on the pilot.

COMMISSIONER SVINICKI: Okay.

BILL BORCHARDT: I think that general approach is not different than what we used in developing the ROP. We were running parallel systems for awhile, you know, using at that time traditional enforcement and the SDP. And even for just a subset of sites. But just to see how the results compared using each of the two processes, so we could get an assessment.

COMMISSIONER SVINICKI: Okay, thank you. And Tony, I think you had made a statement during your slides, and it said our main goal -- and I always like a statement that starts out that clearly, so my ears perked up -- our main goal should be to encourage the fuel cycle licensees to identify and correct issues and prevent significant issues from recurring on their own. And, so, we also heard from the prior panel their concern about the definition of performance deficiency, so if the staff proceeds with performance deficiency as defined in inspection manual Chapter 0612, which does include this -- it says a performance of deficiency can exist if a licensee fails to meet a self-imposed standard, and I think we heard some from the prior panel about that -- this term wasn't used, but this is my paraphrasing -- that that is a disincentive to self-impose maybe higher standards.

So, do you see that it's difficult to, would you agree it's difficult to reconcile that our main goal is to encourage licensees to prevent issues from recurring on their own at the same time that we would move forward with a definition of performance deficiency that says we can find a deficiency and enter you into a process based on self-imposed standards?

TONY GODY: No. We do this today. A recent issue that we identified at a licensee site involved locking a source, and we, their procedure was clear. They had to lock this particular source. But --

COMMISSIONER SVINICKI: Was that a regulatory requirement?

TONY GODY: That's exactly where I'm going. We evaluated that and determined that that was not a regulatory requirement, that it was, the source material was of a small enough quantity that we would not require a licensee to lock that material. So, we didn't cite it. It wasn't a violation. I mean,

their procedure was conservative. So, I don't think that would be any different in the fuel cycle oversight process. I think the piece that self, if the performance deficiency brought into the self-imposed standard as whether it was a performance deficiency or not, I think we would likely screen those out as minor. So, I think it's very important for you to understand, for us to understand, how the definition of performance deficiency and the minor threshold definition play with one another, how they interact with one another, because to build trust amongst the public and the industry and the regulators in understanding the process, you've got to understand both pieces of that so that clearly, even if it was a performance deficiency, it would, it could likely be screened out as a minor issue.

COMMISSIONER SVINICKI: So, I'm interpreting your main response to be that it isn't so much the category of performance deficiency or that label, you would point to what comes after that in terms of the assessment and whether or not it has any, it's significant enough for further action?

TONY GODY: Yes, ma'am.

COMMISSIONER SVINICKI: Okay. Thank you. Thank you, Mr. Chairman.

CHAIRMAN JACZKO: Commissioner Apostolakis.

COMMISSIONER APOSTOLAKIS: Thank you, Mr. Chairman. I will start with a couple of questions I asked the earlier panel. When we were starting to think about risk informing the regulations for the reactors and then the ROP came later and so on, a constant theme was the quality of PRA, and we ended up with the NEI PRA review process, and we ended up with technical societies issuing standards, the ANS and ASME. I don't hear anything about the quality of ISAs here, and I don't understand that. In fact, I haven't done an ISA

myself, but I read that they don't include human error and so on, and, should there be some effort to establish some minimum standards as to what a good ISA is, because that's really what ASME and ANS standards do for PRA's. They say these are the minimum things you have to do without specifying how to do it. Should we have anything like that here so I will feel -- well, no, you're not doing it for me. I mean, we'll all feel more confident that the base line methodology is meaningful, and, you know, there are all sorts of diverse implementations and so on. Yes, Marissa?

MARISSA BAILEY: As far as ISAs go and what the staff would find acceptable, we do have some guidance in the SRP, and the only thing I could say about the quality of ISAs is that, based on our review of the ISA summaries and an audit review of the actual ISAs themselves, and the ISA methodologies, the staff at least found the ISAs to be of sufficient quality to meet the regulatory requirements, and for us to be able to conclude that licensees have established a safety program and to have an ISA that's good enough for them to be able to make a decision under safety program.

Should we establish more rigorous requirements on the ISAs? I guess I'm not sure. I would have to defer to my, to Dennis Damon on that to see what his thoughts are. It probably couldn't hurt. But, I think the bottom line is, for us, anyway, is that we, and we discussed this in the ISA/PRA comparison that we found -- find a quality of the ISAs to be sufficient to meet the regulatory requirements and for us to conclude that the licensees have established a safety program based on those.

COMMISSIONER APOSTOLAKIS: Well, you could have said the same thing about reactors, and yet we did go to technical societies, and they

established the standards. I mean, they issued the standards, which, and they took quite some time to do that. There was give and take with the industry, and so on. And I don't see any of that here. I mean, just to say we are satisfied, maybe, I don't want to put down your judgment, but there were other instances where the staff also said the same thing. But, and yet, we did go to technical societies. It seems to me the quality of the ISAs is an issue that should really be explored and not just say, you know, we're satisfied. I mean, have some minimum standards that everybody will implement.

MARISSA BAILEY: Well, can I add a little bit to that? That, while we think that the ISAs are sufficient to meet the regulatory requirements, using it for a significance determination process is another matter, because the ISAs were never intended to provide an estimate of risk. So, if you are now trying to use the ISAs for a significant determination process, then we might have to take a closer look at the quality of the licensee's ISAs and maybe have some modifications to it.

TONY GODY: Can I add one thing? We are looking at the ISAs. I mean, whenever we have an issue in a specific area, we go through the ISA in detail. We've actually identified what I could characterize as generic issues with a specific licensee's implementation of the ISA program and engage that licensee in public meetings and improving their ISAs. But, so, the staff is interacting significantly with the industry with respect to quality of ISAs --

COMMISSIONER APOSTOLAKIS: Would you oppose trying to have some standards from a technical society?

TONY GODY: No, sir. I would not oppose having standards. I would actually prefer to have guidance internally. But, I wouldn't oppose

standards.

COMMISSIONER APOSTOLAKIS: Good. The diversity of facilities, again, that was another question I asked earlier. I appreciate Bill's answer about the value of having the same -- similar approaches between reactors and facilities and certainly within facilities. But, on the other hand, though, we do take into account the hazard that is imposed by, that is present in a facility, and we have the appropriate level of defense-in-depth and so on and so on. So, if we have here such a diverse set of facilities, why can't we say we will have maybe Category A facilities for which more rigorous approaches will be applied ROP-like and so on, and Category B for which we're going to do something even simpler? So, the industry will feel better, too. What's wrong with that? Why should I treat MOX fuel fabrication facilities the same as enrichment facilities?

TONY GODY: Clearly, the answer is yes, we could do different programs for different facilities. But, I think it speaks to Bill's answer earlier about how we manage as an executive of our programs and developing inspectors. I think it would be very confusing for inspectors to have to implement multiple programs and multiple assessment of methodologies. I think it's most apparent when you look at our construction inspection program and an operational inspection program at a specific facility that has both going on at the same time. It's very confusing to the staff when they've got a set of guidance in this area and a different set of guidance in another area. So, it's very hard to implement and manage a program like that.

COMMISSIONER APOSTOLAKIS: Well, it seems that confusion is, the industry is confused by your accident sequence initiators, other stuff --

CHAIRMAN JACZKO: I think they're unhappy. I don't think they're confused.

CATHERINE HANEY: I think, Commissioner, If I could add to that, what, I think we recognize that there is a vast diversity between the licensees. But, part of the process that we're trying to develop and the focusing, John mentioned the 10 facilities and I'm recognizing there are new facilities coming online. We're trying to build a process that would actually accommodate and easily adjust to all those differences, so that's the benefit of moving forward with the FCOP and staff's proposal because we think that process will do that.

COMMISSIONER APOSTOLAKIS: So, when you say adapt, do you mean that maybe the STP will be different?

CATHERINE HANEY: I think what it is is you would look at the risks associated with the different facilities, and then, based on the determination on the risks, it would feed into the process. So, the process is the same thing, but you would anticipate that with one of the facilities, like, a lower-risk facility would obviously not come out as a concern.

COMMISSIONER APOSTOLAKIS: So, is it the same thing as saying that the action matrix would be different depending on risks?

CATHERINE HANEY: I'll defer --

JOHN KINNEMAN: Commissioner, no. I think the action matrix will be the same, but one of the things that, as we look at it, is there may be some facilities where it will be difficult to -- that's not quite the way I want to say it, but it will be difficult to have a finding that is of great enough significance to move across the action matrix. That's, I think, one of the things that we're trying to fully understand is if you have a lower-risk facility, is there anything that they could fail

at that would cause a large enough finding that you would actually move them across the action matrix, and we need to make sure that we structure that action matrix well enough so that you can, in fact, respond appropriately to the low-risk facilities, but you don't over respond to the high-risk facilities. So, there's some challenges in there, but --

COMMISSIONER APOSTOLAKIS: Yeah, I'd like to understand it a little better, but maybe not now.

JOHN KINNEMAN: Okay. Thank you.

COMMISSIONER APOSTOLAKIS: And, on Slide 10, which is the hazards based set of cornerstones, have you tried to combine perhaps the operations based and the hazards based diagrams? For example, you have -- oh, it's too small -- fewer facility safety. Can you replace that by criticality safety and chemical safety and then have -- now, I understand that you may have some redundancy there, but how about the opposite question? Are you lumping things that you should not be lumping together if you go with just safety? I mean, have you thought about it at all? You don't have to answer now --

MARISSA BAILEY: Well, we --

COMMISSIONER APOSTOLAKIS: Huh? You have?

MARISSA BAILEY: We can talk about it. I think, in a sense, that we have combined already, you know, if you look at fuel facility safety and underneath that you've got safety controls, under safety controls, that's where you would find criticality safety controls, chemical safety controls, and, I think, maybe we're at safety controls. So, we could break it out even further, but, I think, in a sense, we have. There are elements of the operations based cornerstones incorporated into hazards based cornerstones, and you can

probably go the other direction where you can take some, the elements of hazards based cornerstones and find it within the operations base cornerstones.

COMMISSIONER APOSTOLAKIS: And under -- just one minute -- under occupational radiation safety, couldn't you also have accident initiate or some variant and controls? I mean, it seems to me that, in some cases, we use the triplet. In other cases, we don't, and I don't understand the implications of that. Are these going to be clarified if you do a pilot, or what are --

MARISSA BAILEY: Well, yeah, we think so. We think we can clarify this. But, I think some of your suggestions we could incorporate that in there, but, you know, it' something that --

COMMISSIONER APOSTOLAKIS: If you could discuss --

MARISSA BAILEY: -- to think about --

COMMISSIONER APOSTOLAKIS: -- possibly the blending of the two, maybe the industry will feel better, and it will be clearer where you're coming from.

FRED BROWN: I'm sorry to interrupt. Fred Brown, from the reactor oversight process. And just, the staff and the industry are both correct. You could approach the cornerstone construct in either way. The thing to understand is that the cornerstones are intended to separate out issues that shouldn't be aggregated from each other but allow issues that should be aggregated to prevent fracturing. And if you think about the ROP construct, we don't separate organizationally the maintenance department into mechanical and electrical areas because an electrical problem is organizationally different than a mechanical problem, but they can affect the same system and have the same functional outcome. So, multiple problems that occur on systems that mitigate an

accident under the ROP are aggregated for multiple greater than greens within a cornerstone.

The nuance is whichever path you pick is going to have ramifications on implementation. And, so, a glove box at a fuel cycle facility that affects all three operational cornerstones as the industry described it could result in three inputs into the action matrix, and there's nothing fundamentally wrong with that, but it will change the paradigm that exists today where we only, in general, have one input per performance deficiency.

So, I think the Commission's policy decision isn't so much could we do either, but it's how much new ground you want to plow in the implementation details that you have to work out based on this decision. Sorry to interrupt.

COMMISSIONER APOSTOLAKIS: Have you decided to ignore the ACRS recommendation to include the barriers?

MARISSA BAILEY: No, we did not decide to ignore the ACRS recommendation.

[laughter]

CHAIRMAN JACZKO: Well, and, Fred, maybe you can come back up.

[laughter]

-- and ask your question. I mean, is it never the case that we, I mean, I guess it depends on what we're looking for. If we're looking for a problem with a glove box, then we'll find, we'll have a problem. But, if what we're looking for is a problem with criticality safety, then we'll find a problem, you know, then, I mean, the same problem will just be looked at in different, I mean, our inspection program will be tailored to be looking at criticality safety, not to be

looking at the glove box. Wouldn't you get the right, logical outcome that way?

FRED BROWN: To expand the scenario I had in my mind, a glove box can protect workers from chemical hazards, at the same time, protect from radiological hazards, and, at the same time, be a criticality control, either for mass or geometry controls.

CHAIRMAN JACZKO: Right.

FRED BROWN: If a glove box were found to be defective, that impact would be assessed conceptually --

CHAIRMAN JACZKO: Well, no, I appreciate that, but it's, depends on what you're looking for. I mean, if we're looking at it from the context of an ROP where we're looking at it from safety systems, we're looking for the glove box. But, if our inspection, if our cornerstones are criticality safety, chemical safety, we're going out and doing an inspection that's looking at criticality safety. We may then uncover, as part of their criticality safety program, they have a deficient glove box. So, it's just, if you structure the inspection program the other way, you, don't you wind up kind of in the same place?

FRED BROWN: This is an issue not for the inspection or the performance deficiency description. It's for the significance determination process.

CHAIRMAN JACZKO: Yeah.

FRED BROWN: So, you end up with three different significances potentially for that glove box issue, and if it's in three different cornerstones, now you've got an entry into each of those cornerstones --

CHAIRMAN JACZKO: Yeah.

FRED BROWN: -- which may or may not make sense, depending

on how you go with this policy.

CHAIRMAN JACZKO: Yeah.

FRED BROWN: Under the ROP, we specifically have distinctions between those things that we treat in the initiating events cornerstone as separate from the things in the mitigating cornerstone, as separate from barrier protection. And, so, there's only --

CHAIRMAN JACZKO: Don't we have any -- we have no system that can account, that can appear in multiple -- I mean, we have some, I mean, we have some barrier failures, and you've got, I mean, you could potentially impact public dose, or, you know, particular, I mean, if you've got a contamination event, you probably had a failure somewhere in barrier integrity, and then you have a worker who then gets contaminated, leaves the facility, and winds up contaminating people external to the facility. You've had multiple cornerstones impacted by that.

FRED BROWN: You can have multiple cornerstones impacted, but not typically by the same performance deficiency because of the rules we've put in place for practice. So, the worker that left the site and spread contamination, the first performance deficiency is how they got contaminated, and a separate one is they're leaving the site and spreading contamination.

CHAIRMAN JACZKO: Okay.

FRED BROWN: But, that really goes back to my fundamental point, and I try to be clear, it's not that there's a right or a wrong. You have options. But, if you want to apply the rules of practice that the industry is used to, the public's used to, and the staff are used to, then there's a real advantage to sticking with the basic construct that those rules of practice are based on. If you

change the rules of practice, you will reopen all of those. If you change the construct, you'll reopen all the rules of practice.

CHAIRMAN JACZKO: Thanks.

BILL BORCHARDT: Yeah. I think we were heading down the line of making individual judgments about how you might deal with the particular performance deficiency --

CHAIRMAN JACZKO: Yeah.

BILL BORCHARDT: -- and one of the principles we really, I really think is, needs to be held is the idea about being transparent and predictable.

CHAIRMAN JACZKO: Yeah.

BILL BORCHARDT: And if, when every time you have to make an individual decision because of some uniqueness, you lose a little bit of that predictability and transparency, and that's why we think our option is preferable because it helps align the performance deficiency to an actual area in a predictable way.

CHAIRMAN JACZKO: So, and this is an unfair question, why doesn't the industry like that approach? And I should have asked them, probably, but I didn't. Why do you think, or, what have they told us?

MARISSA BAILEY: Well, what they've told us in public meetings is that the operations based cornerstones is better for them to communicate primarily with their own operators. It aligns with the way that they've established their safety programs, and so it's a better communication tool for them. It's a little bit more difficult for them to communicate the hazards based cornerstones.

CHAIRMAN JACZKO: Okay. Well, it is an interesting topic. I don't know if, you know, what the right answer is here, but it sounds like a good area

for discussion. But, it seems like a solvable problem. I mean, I don't, it doesn't seem like this is one where we can't figure out the right approach. To follow up on Commissioner Apostolakis' point, which, I think is a very good suggestion about having a standard, who would develop a standard for ISAs? Is there, I mean, ANS? Who would, who could do that if we were to reach out to somebody? Would ANS be the best one?

DENNIS DAMON: I'm Dennis Damon. I'm the senior level adviser for risk assessment for NMSS. Actually, there were substantial efforts made over a period of many years in both proceeding the making of the Subpart H rule, required ISA, of any, I actually wrote a guidance document on how to do a good ISA. And subsequent to the rule being put in place, there were workshops, as the licensees, the licensees had four years to do the ISAs, 2000 to 2004. During that timeframe, there were multiple workshops held as the licensees were doing the ISAs and problems were encountered of interpretation or what's the best way to do something, and interim staff guidance documents were developed by the staff, and there was an interaction back and forth with the industry. And then, after the ISAs were reviewed, which was in the subsequent to 2004, and it was in the 2004 to 2006, '8 timeframe, what also, what happened is near the end of that process, we took those interim staff guidance documents and put them in the standard review plan. So, the current standard review plan, Chapter 3, that deals with ISAs has a tremendous amount of guidance in it that directly reflects the experience the industry had. So, it's not like you can't -- that there hasn't been already a process of developing standards and guidance. There was a lot of development of guidance --

CHAIRMAN JACZKO: But, there's not been one by independent

standards --

DENNIS DAMON: But not by a professional society. It was really done under the use of NEI and a direct NRC licensee interaction process.

CHAIRMAN JACZKO: But if we wanted to go that route, is there a natural, is it, I mean, is it ANS would be the right one to do?

DENNIS DAMON: Yeah. There is an ANS division that relates to fuel cycle facilities.

CHAIRMAN JACZKO: Yeah. Okay. Thanks. Last question. Marissa, you talked a little bit about the resources. And, if you look at the qualitative approach for the significance determination and kind of the Option One played on over a couple of years, approximately what kind of resources are we looking at each year? Turn on your mic.

MARISSA BAILEY: Sorry. We're talking about three to four FTE each year, and --

CHAIRMAN JACZKO: Million dollars in contracting?

MARISSA BAILEY: And, in contracts, I think we estimated about half a million dollars.

CHAIRMAN JACZKO: Okay. So.

MARISSA BAILEY: About 500k, yes.

CHAIRMAN JACZKO: Reasonable amount of --

MARISSA BAILEY: Yeah.

CHAIRMAN JACZKO: Okay. And is that, I mean, is that, for you, a significant challenge to your program?

CATHERINE HANEY: With the current program that I have right now, but there are some external factors on the program. Commissioner Svinicki

referenced the --

CHAIRMAN JACZKO: Yeah.

CATHERINE HANEY: -- support to Fukushima --

CHAIRMAN JACZKO: Yeah.

CATHERINE HANEY: -- and the Japan follow-up, but, in the current budget, we're adequate with that.

CHAIRMAN JACZKO: Okay. Good. Thank you. Any other questions or comments? Okay. Well, thank you all for a very good meeting and presentation.

[Whereupon, the proceedings were concluded]