of which had any responsibility for Y-12. So the people that populate the Service Center didn't come from experiences that were -- they don't come with experience at the Y-12 Plant.

So my question is what is the level of support that you get to augment your 80 people from the Service Center, and are the skills and abilities of the people at the Service Center tuned to the needs of the safety issues at Y-12 since there weren't any people out of Oak Ridge now in the Service Center?

MR. BRUMLEY: The Y-12 Site Office has in place a formal service arrangement with the Oak Ridge Operations Office to define the relationship. In many ways they are our service center, particularly with respect currently to financial matters, the allotment process and our HR [Human Relations] authority still goes through Oak Ridge.

We do not depend heavily at this point on either Oak Ridge or the Service Center for technical expertise to support operations at Y-12.

CHAIRMAN CONWAY: Okay. Thank you.

Mr. Dennis Ruddy, General Manager of BWXT at Y-12.

And your prepared statements runs 27 pages. I'd like to put it in the record --

And my testimony gets into substantiating some of those improvements and quantifying some of those improvements. But what I'd like to point out is that we've based those improvements and we based our future plans basically on a few fundamental principles. One of them is kind of simple, but it's back to what we were talking about before; establishing clear roles and responsibilities and accountabilities that go with it.

What are the requirements that you're working to everyday? We can get lost in some of the high level things. Certainly the work that we're doing to be in compliance with 10 CFR 830 are very, very important. But it's just as important, as Bill commented, that he worries most about fires. Well, housekeeping is fundamental to providing fewer combustibles so that you can worry less about that and concentrate more on the more arcane sources of fire and fire threats.

Better planning. And we've put an awful lot of work into planning, but we still haven't migrated that over to integrated maintenance planning, and it's a future task that we're working on right now.

Program and project management exists, and

they're strengths of the companies that we have. But improved feedback and communication at all levels is extremely important. And you know some of the programs that I've implemented here, the "no more surprises" program, the monthly management meetings, the roundtable meetings. All of these supplement the more formal means of communications because they are daunting to the average person in the Plant.

When you go back, and some of the detailed questions that you asked Mike and Dan before about procedural compliance, a lot of those issues are burdens that our people carry every day that we haven't addressed very well. And we need an open source of getting that kind of feedback.

And finally, issues identification and performance improvement are fundamental to the things that we want to do.

Since I arrived, we've moved into a different phase. When we got there, there were an awful lot of things that had to be done right away; restarting operations that had been shutdown at that time for over six years. Getting enough room to start some of our infrastructure initiatives. Just putting in place some of the principles of program management and project management.

And as a consequence, we grew a rather large general manager staff because we had a lot of experts concentrating on specific things. But since I've been there, we've reduced that by a factor of a third. We went from 34 people reporting to me to 22 people reporting to me, and we incorporated a lot of the improvements that we had put in there.

An example is we had five different people reporting to the General Manager that were worrying about various aspects of infrastructure. Now we have a single one. Because we've come sat on the right approach to doing those things, and we want to get consistency of approach that helps our people.

We're also reorganizing manufacturing, and we've spoken about that in the past. But we're going from some places where we had eight layers of management down to a maximum of four, and generally three. That gives better line of sight between the people on the floor and the upper level management. And it facilitates the kinds of things that you were asking Mike Mallory about: presence on the floor. We have some departments that do have a formal Management By Walking Around program. And we actually measure the amount of time that people spend on the floor. But all of these face-to-face meetings when I get all

the first line supervisors together on a monthly basis, when I get all of the middle managers together on a monthly basis, give us a granularity of communication that facilitates the improvement that we're making.

We've added metrics. I talked about the "no more surprises" system. Surprisingly enough, for the first time this year, we're linking our company performance in the measures that Bill talked about, our performance on deliverables we call them PBI [performance on deliverables], and performance in the management areas that we call our comprehensive performance measurements. We're tying individual performance to that through organizational grades and individual grades that all match the company's grades so that people can see, again, as Mike mentioned, how their individual performance impacts company performance.

We use our feedback systems to look for opportunities. And, again, I talked about how troublesome it is to have other organizations coming in and finding issues with us. And one of the constant sources of irritation to me was the fact that Bill's nine Facility Reps tended to outstrip my organization. And one of the insights that we gleaned

from that was the fact the people that we're expecting to do some of those same activities have multiple responsibilities; the first line supervisors, engineers, tooling engineers, production people, Quality Assurance people. And so we're in the process right now of launching what we call a CONOPS (conduct of operations) Rep program to the same qualification standards, to the same requirements that the federal Facility Reps. And right now we're in the process of getting a dozen people to put into those roles, and we'll start their qualification process toward the end of this year, with qualifications sometime next year.

Now, what we believe is that that will reduce the numbers of these quality or safety escapes from our system. Because we will have people acting in a role that's been shown to be successful when other people do it. Whether that impacts Bill's oversight or not, really not an issue to me. Because I believe I'm not living up to my responsibility now of providing a well documented Contractor Assurance System so that he can come in and assess the places where he believes the risk is high enough where he wants to concentrate on his efforts.

If we can have that chart back?

CHAIRMAN CONWAY: Let me ask you, putting

a special guy to CONOPS. Shouldn't your Facility Manager be that fellow? The Facility Manager ought to be the guy picking up some of these things, shouldn't he?

MR. RUDDY: Yes, and the CONOPS person will be the person who does these on the floor reviews, who does do the critical reviews, who can get down to the granularity of looking at a procedure and comparing the intent of the procedure to the written word, to what he's actually seeing in performance.

A Facility Manager has a lot of responsibilities. And we can't lose the macro as well micro view of these things. And so we've got to put people at every level in the organization that can make those contributions.

The Facility Manager in my mind should be linking the things that the CONOPS Reps find, the things that our internal assessors find, the things that our quality people who are going around on the floor or our safety people and looking for the linkages in those things so that we can improve our processes.

We've designed our Contractor Assurance System basically on a very simplified view of Quality Assurance. And you've seen this before, I think I

drew on a flip chart for you a year and a half ago or two years ago. But essentially, you assure compliance or you ensure quality by one of two ways. Either by process control, controlling a process that gives you a reliable output every time, or by inspecting of individual pieces. And we do that across the board. We do it in our finance areas, we do it in our business areas, we do in the safety areas. And so we've created this simple model. Again, Dr. Matthews asked about what is the model. This is our simple model. And your oversight happens at each one of those yellow arrows on that. Each one of those yellow arrows is an opportunity to make sure that the linkage is solid and that the performance is consistent to ensure that either your system is working to give you consistent output or that the individual products meet whatever the criteria are.

A significant thing here, though, is acceptance criteria. And we've had some discussions today. A simple example is: one writes in a specification that all welds must meet the chemistry requirements of the base material, but we don't sample every single weld to chemistry. So we have to have an agreement by all of the experts, and this gets into the assignment of risk. This is the place when you

come up with your acceptance criteria or your inspection criteria going down the other leg, is where you assess the probability of concurrence and the risk associated with failing to meet that requirement or the consequence of it.

And so using this simple model, if we could put up the next one, we've moved into a model for our Contractor Assurance System, and this is pretty busy. But I think that you can see that it starts with the compliance matrix is the fundamental place where we've documented what the requirements are and how we satisfy them.

Now, we're going to do that whether or not the NNSA continues with what's been called low cast or if we just have to continue to operate in the same model now. But the beauty of it is, is that it clarifies for our management as well as any oversight activity how we go off what our intent is in meeting all of those requirements.

CHAIRMAN CONWAY: But you as a contractor should be doing this anyway, whether or not DOE modifies, changes its method of oversight and/or administration.

MR. RUDDY: That's exactly right.

CHAIRMAN CONWAY: So you're not dependent

upon their changes?

MR. RUDDY: Absolutely not.

CHAIRMAN CONWAY: This is something you should be doing anyway?

MR. RUDDY: Absolutely not. And that's the point that I want to make here, and Bill said it succinctly. At a meeting that we had with our collective management teams, he said he believed and he had been assured by me that we would be doing what we're doing right now whether or not there was an NNSA drive to implement this oversight philosophy.

We're going to bring ourselves to the point where we're confident that when we deliver a product or service, whatever it happens to be, whether it's an engineering calculation, a design for HEUMF or a product going out the door, secondary, or a surveillance report, that those thing meet all of the requirements and all the intents. What that does is it frees the oversight people to look more at intent and risk than compliance. And so we're going to clarify and make basically transparent to ourselves and the world the linkage between what we do and what's driving us to do it.

We're going to use metrics to do things. To establish goals, and they'll be mutually agreeable

goals in each one of these areas. And also to measure our performance to those goals. And this will give us a direct linkage down into the organization.

This is just an example of how the Environmental Health and Safety organization at Y-12 would track a single item like a radiological controls. There would be certain measures that we would use. We wouldn't measure every activity. We wouldn't be doing tensile tests on barrier ropes or things like that, although we would be in compliance with requirements there. But there will be certain leading indicators and certain bottom line indicators of how successful our programs. They'll eventually be agreed upon by Bill and me through our organizations, and then we will go off and that will become the basis of their evaluation of us while we are making sure that we use the compliance metrics.

The other value that it has is that it puts our whole system under change control. So that if a new requirement comes along or a new finding comes along, another as-built from Pantex or somewhere else or from the Laboratory, we can go immediately into our system and know what we have to change in order to move our compliance to the next level.

CHAIRMAN CONWAY: Then are you opening to

questioning right now?

MR. RUDDY: Absolutely. Absolutely.

I would make, you know, one other point. We've all talked about the Columbia thing. And I would remind you that I spent 25 years in the Rickover system, so I think at least that 25 years says I could survive in the system. I may not have been an expert in it. But I would observe three things.

It's very clear from that report that organizational structure is as important as technical performance. Because the technical data was known, but the organization didn't permit that information to reach the right decision-making levels.

And one other point. I think, you know, a lot of people including the Challenger people, have looked at the NR system and they're kind of quizzical as to why it works. There's been a lot of comments here today about the number of people in a Headquarters operation and the expertise they have, and that kind of stuff. But I would challenge the world that the Naval Reactors group is a very small, compact group.

DR. MANSFIELD: But expert.

MR. RUDDY: But expert. But I would say also that the fundamental quality and safety principle

in the Naval Reactors program is that you're guilty until proven innocent. And I think the Columbia reminded us with every single one of those flights having had a problem with that piece of foam, that they were operating under an innocent until proven guilty. And we're going to base our contractor assurance system on guilty until proven innocent.

DR. MANSFIELD: Prove it's safe.

CHAIRMAN CONWAY: Any questions at this time?

VICE CHAIRMAN EGGENBERGER: In the interest of time.

DR. MANSFIELD: Just one short one, who pulls the string? Another precept of Rickover's organization is when something is a little wrong, you pull the string until things start to unravel so you can find out what's really wrong. And it's based on the fact that the organizations, you know, and without intending to, don't make their faults that obvious to the people on top.

So does anybody at Headquarters pull the string, peck away and bother you about details to find out, for instance, if you've combustibles in the basement? Does anybody at Headquarters seem to have such involvement in the safe operation of your system

that they pull the string?

MR. RUDDY: Well, I would say, you know, you've asked a lot of people that are kind of down in the engine room what's going on on the bridge today. And I'll take a shot at it.

I feel enough pressure Dr. Beckner, from Dave Beck, from other people in Headquarters. One of the nicest things that's happened to me since I got to Y-12 was at the end of an OA review, Glenn Podonsky stood up and told an assembled group of people that he was shocked at the amount of improvement that had been made. And, frankly, he didn't believe it until he had done some personal testing of the findings of that review.

We feel significant pressure from Headquarters. We do see them digging in into the details in many, many areas. But I would also say that as a Headquarters organization, they're very much like a corporate head office. There is only a certain level of granularity that they belong into. When one procedure is violated, I don't expect the involvement of Headquarters. When two or three are violated and a pattern arises or there's linkage to other things, I think our Headquarters people are seeing those things. And I believe both anecdotically as well as

in my own personal experience that there is some pressure from Headquarters. Whether or not it's in all of the areas that we need it or there should be, I can't speak to that. But I can feel that pressure through Bill and into my organization.

CHAIRMAN CONWAY: Dr. Matthews?

DR. MATTHEWS: It seems you referred to contract requirements as one of the three inputs into your requirements matrix. I'm just curious on comments on how that contract is negotiated, what you see as the balance between mission related and safety related, and what's Headquarters' role in that contract negotiation, or is that strictly between you and the Site Office?

MR. RUDDY: We attempt to operate by saying that there is a safety envelope and a quality envelope that's inviolate. You have to be in a safety envelope and you have to be inside a quality envelope before you can talk about productivity and deliveries and the like.

We can't make a delivery with a deviation. I mean, we're an organization that has a reputation, is continuing the reputation of delivering a 100 percent of our products on time.

Now, it's going to get to the point where

if we don't restart some operations pretty soon, that's going to put a heavy burden on us, and we know that. That's why we restarted some of the wet chemistry operations, and we're heading down that line. But there's never a question in my mind, and I don't think there's a question in anybody's mind, that we have to be within the right safety envelope and quality envelope in order to proceed with our work.

The problem, and I'll get back to it again, is that we in some cases have not communicated standards for all the people's behavior. A lot of people were satisfied with the mess in the bottom of E Wing. They had all the good reasons in the world why that was the best they could do under the circumstances. And so the over checks and overviews that happened within our organization, have to spot that those things are amiss, and have to put the right standards in place.

I hope that answers your question. We don't negotiate safety and quality against productivity. There is no negotiation. There's an acceptable band that we have to work in.

DR. MATTHEWS: Well, not really, because what you refer to is staying inside the safety and quality are legal requirements.

MR. RUDDY: No. No. I don't believe that.

DR. MATTHEWS: There are rules. Okay.

MR. RUDDY: Because most of the real requirements that I work to, I created. Most of my real acceptance criteria, I created. Yes, I have rules on me that says you have to have a well-documented safety basis, and you have to go through, and you have to analyze all the hazards, and you have to mitigate if you can, you know, if they're over a certain level, etcetera, etcetera. But the real controls are the ones that I put on myself. And therefore, I have a lot of flexibility as long as I stay within the safety envelope. And I think that's a point that we have to consider here.

I estimate, and I can't back it up today, but I estimate that one-third of my people are involved everyday in oversight activities. And fully a quarter of the full-time equivalents that I have on staff at the Site are involved in oversight activities. Because they run the gamut of everything from checking expense accounts to making sure that money's going to be available to complete key projects; all of those things factor into safety.

We talked about emptying the column in 9206. Well, why were we fussing at each other for a

year or so? It was because of availability of money. And the way we solved the problem was not by having any big technical breakthrough. We just went off and threw down a million and a half dollars and emptied the damn columns.

So, you know, each one of these things ties together, and you've got to be thinking about in enablers in the system. These things that sound mundane like budget management and things like that are fundamental to the decisions that you make every day on what's going to come up, and what you're going to fix, and how you're going to move forward.

And I got to tell you, if there were all the money in the world, we wouldn't be living in a lot of the buildings that we're living in at Y-12. But there is an established process with recognition of risks, and we're going through that. And we get the participation of a lot of people, including yourselves, in making those decisions.

So, we're worried about the quality of them.

CHAIRMAN CONWAY: Okay. Well, we thank you very much, both of you. And I'd say we may have some additional questions which we would send to you once we review the transcript.