

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

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

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

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

21 CHAIRMAN CONWAY: Okay. Thank you.

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

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

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

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

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

25 Program and project management exists, and

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

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

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

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

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

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

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

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

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

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

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

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

24 If we can have that chart back?

25 CHAIRMAN CONWAY: Let me ask you, putting

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

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

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

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

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

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

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

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

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

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

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

24 MR. RUDDY: That's exactly right.

25 CHAIRMAN CONWAY: So you're not dependent

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1 upon their changes?

2 MR. RUDDY: Absolutely not.

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

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

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

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

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

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

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

25 CHAIRMAN CONWAY: Then are you opening to

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1 questioning right now?

2 MR. RUDDY: Absolutely. Absolutely.

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

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

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

23 DR. MANSFIELD: But expert.

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

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

8 DR. MANSFIELD: Prove it's safe.

9 CHAIRMAN CONWAY: Any questions at this
10 time?

11 VICE CHAIRMAN EGGENBERGER: In the
12 interest of time.

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

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

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1 that they pull the string?

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

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

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

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

6 CHAIRMAN CONWAY: Dr. Matthews?

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

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

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

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

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

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

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

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

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

2 DR. MATTHEWS: There are rules. Okay.

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

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

24 We talked about emptying the column in
25 9206. Well, why were we fussing at each other for a

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

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

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

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

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

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