

1 sub-tiers. So you might have to go through two or
2 three parts of that organization before you could get
3 an answer to a particular question or a decision.

4 So I would say two or three tiers have
5 been eliminated because of the removal of the
6 Albuquerque Operations Office.

7 VICE CHAIRMAN EGGENBERGER: Any tiers at
8 Headquarters?

9 MR. ERICKSON: I would say no.

10 VICE CHAIRMAN EGGENBERGER: Okay. But
11 now, you do have a tier still existing if you desire
12 to use the Albuquerque Service Center, is that
13 correct?

14 MR. ERICKSON: I don't see that, I guess,
15 as a tier. I see that as a Service Center. They
16 provide service. They provide individual expertise,
17 federal for the most part, but they also have some
18 very valuable non-federal people under contract that
19 we also can utilize.

20 VICE CHAIRMAN EGGENBERGER: I see. Thank
21 you.

22 MR. ERICKSON: Okay.

23 CHAIRMAN CONWAY: Admiral Nanos, we will
24 turn to you now.

25 ADMIRAL NANOS: Okay. Mr. Chairman,

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1 members of the Board, thank you for this opportunity
2 to provide testimony on Los Alamos National
3 Laboratory's Performance Assurance System.

4 With over 35 years of experience
5 successfully managing large, complex, and high-risk
6 nuclear and non-nuclear activities in the Navy, I
7 fully recognize and embrace the importance of a
8 comprehensive, robust assurance system as an essential
9 and critical management tool. I also recognize that
10 the Laboratory does not meet your, the Department of
11 Energy's, and my expectations for a robust assurance
12 system.

13 Many of the performance issues we have
14 been addressing in recent years would have been
15 prevented if potentially adverse trends were
16 identified in a timely manner and effective corrective
17 actions were developed and implemented.

18 It is clear that we must strengthen our
19 assurance system to identify and correct emerging
20 performance issues before they become significant, so
21 that improvement is assessment-driven, not event-
22 driven. To that end, we are taking actions to improve
23 our assurance system regardless of how and when DOE
24 and NNSA expectations for line oversight and
25 contractor assurance are articulated.

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1 Ultimately, that overarching assurance
2 system will provide us an integrated performance
3 management tool for all facets of laboratory programs,
4 management, and administration, business practices,
5 and operations. I will focus this testimony, however,
6 on those aspects of the Laboratory's assurance system
7 most relevant to the Board's interest.

8 I will describe the current status of the
9 Laboratory's assurance system and actions underway and
10 planned to strengthen this important management tool.

11 In doing so, I will address the Laboratory's ability
12 to fulfill the intent of the draft DOE-P-226.1,
13 *Department of Energy Oversight Policy*, and the draft
14 NNSA Line Oversight/Contractor Assurance System Policy
15 Letter.

16 The Laboratory's Performance Assurance
17 System is driven by a variety of requirements,
18 foremost of which is 10 CFR 830, Subpart A, Quality
19 Assurance. Contractual drivers include clause H.007
20 of the University of California's contract for the
21 management and operation of the Laboratory.
22 "Performance-Based Management" is the title of that.

23 I have provided you a copy of that clause
24 in Attachment 1 to my written testimony. The
25 contractual expectations of the clause are reinforced

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1 by requirements identified in Appendix G of the
2 contract and the associated Work Smart Standards.

3 Key examples of contractual standards with
4 assurance-related requirements include DOE-O-414.1A,
5 *Quality Assurance*, and DOE-O-5480.19, *Conduct of*
6 *Operations Requirements at DOE Facilities*. In
7 addition, the Laboratory is subject to many assurance-
8 related requirements embedded within the contractual
9 standards, ranging from the quality requirements of
10 QC-1 [Office of Defense Program, Standard for Quality
11 Assurance of Nuclear Weapons Activities] and NQA-1
12 [American Society of Mechanical Engineers, NQA-1,
13 Quality Assurance Program Requirements for Nuclear
14 Facilities] to activity- and function-specific
15 assessment requirements.

16 Institutional implementation of these
17 requirements is effected through Laboratory
18 Performance Requirement 307-01-00, Performance
19 Assurance, Laboratory Implementation Requirement
20 307-01-01, Management Assessment, and Laboratory
21 Implementation Requirement 307-01-03, Issues
22 Management.

23 Appendix F of the University's contract
24 for management of the Laboratory is the nexus of the
25 Laboratory's Performance Assurance System. This

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1 performance management process underwent significant
2 revision in FY03 [Fiscal year 2003], and is being
3 tailored further in FY04 to assure NNSA, the
4 University of California, and the Laboratory are
5 provided a foundation for risk-based management and
6 decision-making.

7 The critical few contractual performance
8 objectives and measures defined in Appendix F drive
9 improvement in meeting technical objectives and due
10 diligence in the oversight of management systems. The
11 joint University of California/Laboratory contract
12 evaluation plan defines the processes for the review
13 of contractual performance measures.

14 Importantly, senior Laboratory managers
15 are directly involved in the real-time management and
16 oversight of Appendix F performance through the
17 Contract Performance Evaluation Board. The
18 Laboratory's Performance Assurance System directly
19 supports the overarching objectives of Appendix F.

20 Most of the elements of that system, shown
21 in Attachment 2 of my written testimony, are in place.

22 Their implementation, however, is not always
23 effective. In a few cases, primarily in the area of
24 corrective action management, system elements are not
25 sufficiently mature -- for example, causal analysis --

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1 or are not formally defined -- for example, corrective
2 action change control processes.

3 That said, the Laboratory suffers most
4 from the poor definition and management of the
5 functional interfaces between assurance system
6 elements. Perhaps the best illustration of this
7 shortfall is the inconsistent use of assessment data
8 to drive improvement.

9 Innumerable internal and external
10 assessments provide volumes of performance data. Far
11 too often that information is not used effectively, if
12 at all, to improve performance, because clearly-
13 defined mechanisms for translating assessment findings
14 into viable corrective action plans are inadequate.

15 I have taken specific near-term actions to
16 address these shortfalls by strengthening the roles
17 and responsibilities of the Director's Central Safety
18 and Security Committee, and the establishment of the
19 Nuclear Safety Executive Board. The explicit intent
20 of these groups is to assure focused senior management
21 engagement in the oversight and resolution of both
22 non-nuclear and nuclear safety and security issues.

23 I chair both the Central Safety and
24 Security Committee and the Nuclear Safety Executive
25 Board. Members include my Deputy and Associate

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1 Laboratory Directors. I will address initiatives to
2 better manage the interfaces between assurance system
3 elements and improve corrective action management
4 later in this testimony.

5 The Laboratory's assessment program is
6 comprised of three major elements -- management
7 assessment, independent assessment, and program
8 review. Sub-elements are often executed at multiple
9 levels within the Laboratory's organizational
10 structure and hierarchy. For example, self-assessment
11 can and must be conducted at virtually every
12 hierarchical level, from post-job meetings at the work
13 level to management walk-arounds and formal line self-
14 assessments.

15 The semi-annual Appendix F performance
16 reviews conducted by senior Laboratory management, the
17 University of California, and NNSA leadership, are
18 supported by these subordinate levels of self-
19 assessment. Many elements of the Laboratory's
20 assessment program serve as both management and
21 independent assessments.

22 For example, an assessment of a specific
23 functional area, such as radiological protection, is,
24 from the perspective of the Laboratory, a self-
25 assessment of the institutional radiological

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1 protection program. That same functional assessment,
2 however, serves as an independent assessment of
3 organizations or facilities responsible for
4 implementation of the radiological protection program
5 requirements.

6 In the following discussion, I will focus
7 on the two areas of assessment most relevant to the
8 Board's interest. The management assessment program
9 addresses the full spectrum of laboratory operations
10 and includes both routine, i.e. proactive, and for
11 cause, i.e. reactive, assessment activities.

12 Performance expectations and criteria for
13 the management assessment program are driven by the
14 performance-based nature of the University of
15 California contract, to include Appendix F, and
16 Laboratory policies and values defined by the
17 Director's Central Safety and Security Committee and
18 the Nuclear Safety Executive Board.

19 DR. MATTHEWS: Admiral Nanos?

20 ADMIRAL NANOS: Yes.

21 DR. MATTHEWS: Can I interrupt with a
22 question --

23 ADMIRAL NANOS: Certainly.

24 DR. MATTHEWS: -- in the middle of your
25 testimony? You said in the beginning that the

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1 Laboratory wasn't up to your expectations in self-
2 assessment.

3 ADMIRAL NANOS: That's true.

4 DR. MATTHEWS: Mr. Erickson sort of said
5 the same thing about the Site Office. Simply, the
6 question I have is, I see you've got a lot planned,
7 but when are you going to be ready to take over the
8 new roles and responsibilities? I'm asking both of
9 you that question.

10 ADMIRAL NANOS: Well, we're not sitting --
11 I'll give you my answer. We're not sitting by idly
12 waiting for something to happen. If you've been
13 observing what's been going on, I'm sure you're aware
14 that as a result of some of the activities and lack of
15 attention -- lack of performance in this area, that I
16 have accelerated some very important processes at the
17 Laboratory to get at the critical areas, what I
18 consider to be the most lacking areas in the
19 Laboratory.

20 The three areas that I feel most concerned
21 about are integrated work control, adherence to
22 procedure, and probably the one that's the overarching
23 one that causes the most difficulty with all of those
24 is the whole aspect of communication -- basically,
25 thin layers of management that aren't carrying the

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1 message from my level down to the working level in the
2 Laboratory.

3 This has been complicated at the
4 Laboratory over the years by a sense that open
5 discussion on vital issues is potentially a cause for
6 retribution. I've got a couple of cases that I'm
7 investigating now in some of the groups where people
8 have come to me and said that, for example, when they
9 disagree or want to discuss management's position,
10 they are forced to apologize, for example.

11 This is one case I have going right now,
12 and I have about 20 people who have -- who are willing
13 to testify to that effect. So we're undergoing an
14 investigation to find out why I can't get the kind of
15 open communications in the Laboratory I need to
16 conduct this kind of business.

17 We have taken action to go at integrated
18 work management. I have accelerated that to the point
19 where I did not wait until everybody got all of the
20 procedures and the paper dry. I demanded that we
21 actually start doing integrated work management on --
22 in the beginning of November before I knew that we
23 could -- actually, in advance of the time I knew we
24 could actually fully accomplish it.

25 And I've had a lot of support, and that's

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1 why, as Ralph has told you, he has put his full
2 support behind getting that done. As a matter of
3 fact, he has been fully supportive of these kinds of
4 activities. He does keep me abreast of his opinions
5 on where I and the Laboratory fall short. We take
6 those aboard.

7 And I guess what I'm -- the message I want
8 to give you is that we're not standing by. We've
9 implemented new organizational -- organizations. We
10 are pulling together our event tracking system. Any
11 time I have a major incident I demand that a -- an
12 Associate Director level review be done of serious
13 safety incidents to get the top management of the
14 Laboratory down into the details of the issues that
15 are going on in the Laboratory.

16 This sort of thing takes time, but, you
17 know, I think we're starting to see some results, at
18 least in awareness.

19 DR. MATTHEWS: So are you saying that even
20 though there's work to be done --

21 ADMIRAL NANOS: Well, there's a lot of
22 work to be done.

23 DR. MATTHEWS: -- you're good enough right
24 now to --

25 ADMIRAL NANOS: No, we're not good enough.

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1 All I'm saying is --

2 DR. MATTHEWS: So when are you going to be
3 good enough? That's --

4 ADMIRAL NANOS: Well, no. Well, the point
5 is it's hard to know. I have, you know, 20 -- well,
6 it's hard to go back 20 years. But I'd say
7 demonstrable problems over the -- in this area over
8 the last decade, and particularly organizational
9 issues that have grown up with them, and the cultural
10 issues, do not get changed overnight.

11 But I think that -- the reason I reacted
12 the way I did is the characterization that we are
13 waiting somehow for some sign from above to get on
14 with business is a mistaken impression, because we're
15 not. We're actively pursuing improvements.

16 MR. ERICKSON: With regard to the NNSA
17 side, much like as was found in the Columbia report,
18 culture is the key. And we have a lot of culture to
19 change, both within the Laboratory and within the Site
20 Office. We're having to relearn some things
21 ourselves, learn that we have responsibility and
22 authority, and know how to impart this attitude to the
23 the the staff that we're trying to hire.

24 That's starting to change, because of
25 recent relaxation in our ability to hire outside of

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1 NNSA. So we'll be able to reach out to places like
2 Rocky Flats and hire some FRs from there, I hope,
3 reach out to some other parts of the Department and
4 outside of the Department even to hire some subject
5 matter experts.

6 But as Pete is saying, we're not waiting
7 for some sign from above. We're actively moving out,
8 and it is going to take time. Culture doesn't change
9 in a month or six months or even a year. But if we
10 don't start, then it will never change. And I believe
11 that we need the commitment to change, and that we are
12 changing.

13 ADMIRAL NANOS: I would like to add one
14 other additional thing. I said earlier if you go to
15 the NR or the SP, or even the model I was setting up
16 in NAVSEA, it's dependent on a proactive examination
17 or a full court press on issues.

18 One of the things I found when I came to
19 the Laboratory is what I think is a lack of skill in
20 just management walk-arounds, for example, people
21 being aware, having the skills to go through a space
22 and examine and say, "Okay. What's in this corner?
23 What's right? What's wrong?" and moving on and being
24 aware of what you're seeing.

25 So we've gone so far as to hire safety

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1 experts to come in and train and conduct guided walk-
2 arounds with our senior managers to train them to do
3 what we would call in the Navy, "Zone Inspections,"
4 proper Zone Inspections, so that we get the kind of
5 active feedback on issues that we think are necessary.

6 Self-assessment. A variety of activities
7 fall into this category and include management walk-
8 arounds, formal line organizational self-assessments,
9 and Appendix F performance evaluations. Managers are
10 required to conduct a minimum of three formal walk-
11 arounds per quarter. We have taken actions in recent
12 months to improve the quality of walk-arounds.

13 The line organization self-assessment
14 program has been revised in the last year to better
15 engage my senior executive team in defining
16 expectations and to better tailor objectives and
17 criteria to areas of institutional emphasis. Line
18 organizations are required to conduct these
19 assessments on a quarterly basis. Line self-
20 assessment data are reviewed by the Director's Central
21 Safety and Security Committee.

22 And I'd like to add to my written
23 testimony, one other thing I've done at the Laboratory
24 is I hold quarterly retreats at the division level.
25 The main reason for doing that is to make sure the

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1 critical issues in the Laboratory -- that I have a
2 dialogue at the second-line supervisory level within
3 the Laboratory to make sure that these issues -- that
4 my feeling and emphasis on these issues are strongly
5 transmitted to the rank and file.

6 Too many times we found out that, you
7 know, all of the furor at the top end of the
8 Laboratory never made it to the group level.

9 Functional assessment. These assessments
10 focus on 11 functional areas -- emergency management,
11 environmental protection, facility management, fire
12 protection, management systems, occupational safety
13 and health, packaging and transportation, quality
14 management, radiation protection, safeguards and
15 security, and nuclear safety basis.

16 The functional managers for each area are
17 required to conduct assessments of their respective
18 institutional program on a semi-annual basis. As with
19 the line self-assessments, the results of functional
20 assessments are reviewed by the Director's Central
21 Safety and Security Committee.

22 The results of these assessments
23 contribute directly to Appendix F performance
24 evaluations. We are better-defining the roles and
25 responsibilities of the functional managers to

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1 strengthen this program.

2 Readiness -- the Laboratory formalized its
3 readiness program in late 2002 with the issue of a
4 formal requirements document and associated guidance
5 that drive implementation of DOE-O-425-1C, *Startup and*
6 *Restart of Nuclear Facilities*. Program implementation
7 is still immature as evidenced by the number of pre-
8 start findings identified in Readiness Assessments.

9 We are seeing improvements, however. Most
10 recently, an NNSA Readiness Assessment of Laboratory
11 packaging and transportation activities concluded in
12 two days, due in large part to the quality of the
13 Laboratory's Readiness Assessment.

14 Non-conformance reporting -- although non-
15 conformance reporting is formalized in several
16 organizations and programs -- for example, the weapons
17 Quality Assurance organization -- we do not yet have
18 an institutional non-conformance reporting program in
19 place. This initiative is included as part of our
20 institutional Quality Management Implementation Plan.

21 Incident investigation and reporting. The
22 Laboratory maintains a robust occurrence investigating
23 and reporting program in accordance with the
24 requirements of DOE-O-231-1A, *Environment Safety and*
25 *Health Reporting*. In January 2004, we will implement

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1 a Laboratory-wide incident reporting system to capture
2 events that do not meet formal reporting criteria but
3 have the potential to provide valuable data that would
4 indicate the onset of adverse trends.

5 Price-Anderson investigation and
6 reporting. The Laboratory's Price-Anderson Program
7 has been strengthened significantly in the last year.

8 The Nuclear Safety Executive Board directly involves
9 senior Laboratory management in assessment and
10 mitigation of nuclear safety vulnerabilities and
11 provides oversight and direction on all Price-Anderson
12 related issues and actions.

13 The Price-Anderson Program Office
14 coordinates activities of the Price-Anderson
15 Corrective Action Working Group, which is comprised of
16 representatives from each Laboratory directorate and
17 division with nuclear safety responsibilities.

18 Employee concerns. Group-level nested
19 Safety and Security Committee meetings provide
20 employees a venue to communicate safety concerns. As
21 necessary, those concerns are elevated to the division
22 and directorate levels, and, if still not resolved, to
23 the Director's Central Safety and Security Committee.

24 Employees may also communicate through the
25 Laboratory's Safety Concern Program. This web-based

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1 program directly engages the responsible line manager
2 and tracks concerns to closure.

3 I would also add that I get personal
4 e-mail and personal e-mail where people's identities
5 are protected. And I do get feedback when that system
6 apparently is not working, and I get a chance to dig
7 deeper to make sure that we're doing what we need to
8 do.

9 Independent assessment. The internal
10 independent assessment program is managed by the
11 Laboratory's Audits and Assessments Office. This
12 organization also coordinates external assessment
13 activities. The office reports administratively to me
14 and functionally to the University of California
15 auditor. That endures independence.

16 I have just established and chaired the
17 Audits and Assessments Work Group. Comprised of
18 senior Laboratory managers, the work group provides
19 input to the auditors and assessors on risk
20 identification and mitigation strategies, to assist in
21 ensuring timely follow-up on corrective actions, and
22 to create a forum for auditors and assessors to
23 communicate with senior management about significant
24 findings and trends identified throughout their work.

25 The University auditor is a member of the

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1 LANL Work Group.

2 Internal independent assessment. The
3 Internal Assessments Group, AA-2, conducts
4 performance-based and compliance assessments and
5 reviews of Laboratory processes and activities. These
6 reviews include the 11 functional areas addressed in
7 the management assessment program.

8 Evaluation schedules are risk-based.
9 Unscheduled reviews are conducted throughout the year,
10 as requested by Laboratory managers or as deemed
11 necessary by the Audits and Assessments Office. As
12 warranted, I task my associate directors with
13 conducting independent for cause assessments of
14 abnormal events.

15 Corporate assessment. The University of
16 California provides corporate oversight through its
17 Regents' panels. In mid-November, the University
18 rolled out plans to strengthen its Laboratory
19 governance model.

20 Key elements include a strengthened
21 Laboratory management organization, the establishment
22 of a Laboratory Management Council, and a National
23 Security Laboratories Board of Directors, and plans
24 for the addition of industrial partners to assist in
25 the management and oversight of the Laboratory --

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1 essentially, to get additional talent, mature talent,
2 into the Laboratory to help us with the issues.

3 Third party assessment. Although the
4 Laboratory does not yet have a formal program in this
5 area, we recognize the value of independent third
6 party assessments. Recent examples of such
7 assessments include the Price-Waterhouse-Coopers
8 review of business operations and the BWXT assessment
9 of nuclear facility operations.

10 We intend to strengthen this program in
11 the coming year with assistance from the University of
12 California. In addition, the University and the
13 Laboratory are exploring industrial partnerships to
14 provide cutting-edge expertise in areas of nuclear and
15 higher hazard facility operations and business
16 practices.

17 External assessments. The Audits and
18 Assessments Office serves as the institutional liaison
19 for routine and for cause external assessments. The
20 Laboratory coordinates its internal assessment
21 schedule with external assessments conducted by NNSA's
22 Los Alamos Site Office.

23 Ongoing real-time external oversight is
24 provided by that Site Office Facility Representatives
25 and is augmented by formal assessment activities by

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1 the Site Office and the Office of Independent
2 Oversight and Performance Assurance.

3 DOE and NNSA oversight and assurance
4 models. As noted by Ambassador Brooks in his
5 testimony to the Board on October 21, the NNSA's
6 oversight policy builds directly on the draft
7 oversight policy -- DOE-P-226.1 -- and contains three
8 fundamental elements -- critical, honest self-
9 assessment; line management reviews; and independent
10 oversight reviews.

11 Contract clause H.007, Performance-Based
12 Management, directly supports these elements in
13 defining expectations for a broad-based, comprehensive
14 Performance Assurance System of which Appendix F is a
15 key component. In turn, the Laboratory's assurance
16 system model identifies three major attributes that
17 support both the ideals of the draft oversight policy
18 and contractual expectations.

19 Governance. Formal processes exist for
20 establishing and maintaining dialogue between the
21 contractor and Site Office to address key issues and
22 formulate appropriate risk-based decisions.

23 Assurance. Periodic and systematic review
24 and evaluation of performance is afforded through
25 assessment processes and systems that support

1 Appendix F.

2 Improvement. Processes and mechanisms are
3 in place to assure appropriate, risk-based actions are
4 developed and implemented to improve performance.

5 As I noted earlier, many of the elements
6 necessary to support this model are in place.
7 Significant changes have been made in the last year to
8 the management and administration of the contractual
9 performance evaluation process defined in Appendix F.
10 Those changes are consistent with the draft oversight
11 policy and assurance system model.

12 Other recent initiatives supporting the
13 ideals of the draft oversight policy include the
14 establishment of the Performance Surety Division in
15 April 2002, the implementation of new and revised
16 Assurance System elements -- readiness, management
17 assessment, issues management -- and the development
18 and execution of an institutional Quality Management
19 Implementation Plan.

20 A number of actions are necessary before
21 the Laboratory can fully meet the intent of the draft
22 oversight policy, and, more importantly, have
23 confidence that we are capable of adequately
24 identifying and managing our issues.

25 As I discussed earlier, work remains to

1 fully define both the functional and organizational
2 interfaces of the Laboratory's assurance system
3 elements to assure roles, responsibilities, authority,
4 and accountability are clear and understood. We must
5 also strengthen our corrective action management
6 program to assure necessary actions are efficiently
7 and effectively implemented.

8 Many of these improvements are underway,
9 and others will be initiated in the coming months as
10 part of our implementation of the institutional
11 quality management program. I expect that it will
12 take a year and a half to two years before our
13 Performance Assurance System is sufficiently robust
14 and mature. During that period, I both expect and
15 welcome a level of NNSA and DOE oversight commensurate
16 with the level of risk presented by Laboratory
17 operations and the maturity of our Assurance System.

18 In the interim, I am taking a risk-based
19 approach in the implementation of compensatory
20 measures to address shortfalls in the Laboratory's
21 assurance system. Many of these measures are
22 associated with the commitments I made to the
23 Department of Energy's Office of Price-Anderson
24 Enforcement -- EH-6 -- in March 2003.

25 As you know, our appearance before EH-6

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1 stemmed, in large part, from failures in our assurance
2 system. Specifically, our inability to proactively
3 identify and resolve issues resulted in nuclear safety
4 violations, and ineffective corrective actions
5 resulted in recurring violations.

6 Examples of some of the compensatory
7 measures I have implemented include: establishment of
8 the Nuclear Safety Executive Board, augmentation of
9 the Price-Anderson Program Office staffing,
10 appointment of a nuclear safety functional manager,
11 and increased emphasis on implementation of the
12 institutional Quality Management Program and
13 components thereof -- for example, Software Quality
14 Assurance, management assessment, etcetera.

15 More recently, the University of
16 California and the Laboratory have embarked on
17 developing industrial partnerships. This
18 unprecedented initiative will integrate proven
19 industrial expertise into key Laboratory management
20 positions. The explicit intent of these partnerships
21 is to accelerate the implementation of programs that
22 are important to formality of operations.

23 I would welcome the opportunity to discuss
24 this initiative with you in more detail.

25 It is important, obviously, to develop and

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1 monitor metrics to determine if the Performance
2 Assurance System is meeting expectations. The
3 Laboratory can no longer rely on the all-too-familiar
4 lagging indicators to tell us our management systems
5 are not adequate. We intend to work closely with the
6 University of California and the Los Alamos Site
7 Office to develop appropriate leading indicators and
8 metrics.

9 Many of the elements of the Laboratory's
10 Performance Assurance System are in place. That
11 system, as it matures, will meet the intent of the
12 draft DOE oversight policy. Hence, relatively few new
13 staff will be required to implement and maintain the
14 assurance system.

15 Those functional areas in which staff
16 augmentation will be required include causal analysis,
17 issues management, and trending and analysis.
18 Personnel with the needed competencies for these areas
19 exist within the Laboratory and subcontractors.

20 Organizational realignments -- for
21 example, the establishment of the Performance Surety
22 Division -- have allowed us to take advantage of
23 economy of scale and reduce potential organizational
24 interface conflicts by collocating assurance system
25 responsibilities in a single organization. Additional

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1 organizational realignment is likely in the coming
2 year to further enhance our ability to manage the
3 Performance Assurance System.

4 And I intend to integrate -- obviously,
5 integrate this with our industrial partners as they --
6 as their resources become available.

7 As is the case throughout much of the
8 complex, the Laboratory's corrective action management
9 program has been the weak link in our Performance
10 Assurance System. The Laboratory does not currently
11 have a well-defined, overarching corrective action
12 management program. Various elements exist throughout
13 the Laboratory, but they are not formally linked,
14 vertically or horizontally.

15 The Nuclear Safety Executive Board and its
16 protocols serve as compensatory measures for higher
17 hazard nuclear activities pending broader Laboratory-
18 wide implementation. Similarly, efforts are underway
19 to increase the effectiveness of the Director's
20 Central Safety and Security Committee.

21 A new issues management requirements
22 document -- LIR 301-07-05, Issues Management -- was
23 developed in June 2003 with full implementation
24 scheduled in FY04. The Audits and Assessments Office
25 manages and tracks corrective actions originating from

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1 external assessments and their internal independent
2 assessments. But we do not yet adequately assess
3 corrective action effectiveness in all areas.

4 A notable exception is the Price-Anderson
5 Program Office's assessment of the effectiveness of
6 selected corrective actions important to nuclear
7 safety. Increased emphasis on assessment of
8 corrective action effectiveness will be integrated
9 into the management assessment program.

10 To support these activities, we are
11 actively working to identify and implement an issues
12 management tool that better facilitates life cycle
13 management of an issue from the point at which it is
14 identified through the closure of the corrective
15 action and a subsequent review for corrective action
16 effectiveness.

17 Basically, we can't afford to just focus
18 on the nuclear part of this, because the larger
19 culture has to support the nuclear activities within.

20 Until recently, formal causal analyses
21 were limited to formal investigations and occurrence
22 reports. We have developed and are applying more
23 formal causal analysis protocols for nuclear safety
24 issues. The Nuclear Safety Executive Board is
25 responsible for the oversight of that process. We are

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1 in the process of extending and formalizing these
2 causal analysis protocols Laboratory-wide.

3 The Laboratory's Occurrence Reporting and
4 Investigation Group is developing a causal analysis
5 process based on Integrated Safety Management [ISM]
6 that will be defined in a forthcoming revision to the
7 requirements document and supporting guidance on event
8 reporting, LIR 402-130-01, Abnormal Events.

9 We have taken strengths to -- taken steps
10 to strengthen and formalize our trending and analysis
11 and performance indicators programs through the
12 combination of two organizations within the
13 Performance Surety Division. Significant efforts in
14 trending and analysis of events reportable under
15 DOE-O-231.1A will be expanded for broader application
16 to other types of events.

17 All these efforts are important, but are
18 of no value if not effectively communicated. To that
19 end, we are taking actions to better disseminate
20 lessons learned, as evidenced by several new
21 Laboratory lessons learned publications.

22 These include: First Take, immediate
23 dissemination of event-specific lessons learned
24 information important to protecting the health and
25 safety of the public, workers, and the environment;

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1 Final Take, follow-up to First Take communications to
2 -- it provides lessons learned information, including
3 event causes and corrective actions, when the final
4 investigation report becomes available; and The
5 Mirror, a quarterly summary of lessons learned
6 information.

7 The full development and implementation of
8 the Laboratory's corrective action management program
9 will be the rate-limiting step in being able to
10 demonstrate a sufficiently robust and mature
11 Performance Assurance System. Recognizing the
12 importance of this issue, we have worked through
13 DOE/EH to schedule a technical assistance visit from
14 INPO [Institute for Nuclear Power Operations] in
15 January 2004 that will focus explicitly on improving
16 the Laboratory's management of corrective actions.

17 In summary, I want to reinforce that I
18 have no greater personal responsibility than for the
19 safety of the public, workers, and the environment. I
20 am fully committed to do what I can to fulfill that
21 responsibility, and have made it clear to my senior
22 management team that my priorities are their
23 priorities in this regard.

24 The Laboratory has made significant
25 progress in the last year. I am proud of our

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1 collective efforts, but we are not resting on those
2 accomplishments. Obviously, we can't. We fully
3 recognize there is much work to do before we meet the
4 expectations of our stakeholders and customers, as
5 well as our own personal expectations for excellence
6 in all that we do.

7 We are taking a risk-based approach in the
8 implementation of compensatory measures as we develop
9 and implement the management systems and tools
10 necessary to fully support the draft DOE and NNSA
11 oversight policies. With the continued support and
12 partnership of the DOE, NNSA, the University of
13 California, and your constructive oversight, I have no
14 doubt we will succeed.

15 On a closing note, we are aware of both
16 the Board's and the Department's interest in the
17 results of the Columbia space shuttle accident
18 investigation. We share your desire to understand how
19 lessons learned from that tragic accident can help us
20 do our work more safely.

21 To that end, we have engaged in
22 discussions with the University of California and
23 hosted a visit from Mr. G. Scott Hubbard, Director of
24 NASA [National Aeronautics and Space Administration]
25 Ames Research Center, on December 11th. Mr. Hubbard

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1 was the sole NASA official on the Columbia Accident
2 Investigations Board.

3 We will also participate in formal
4 discussions with Professor Karlene Roberts of the
5 University of California/Berkeley at the January 2004
6 meeting of the University of California Regents' ES&H
7 [Environmental, Safety and Health] Panel. Professor
8 Roberts served the Board as a consultant on
9 organizational causes.

10 Again, thank you for the opportunity to
11 present this testimony to you today. I will gladly
12 entertain your questions.

13 CHAIRMAN CONWAY: Thank you, Admiral
14 Nanos.

15 Dr. Eggenberger?

16 VICE CHAIRMAN EGGENBERGER: Help me. I
17 understand, I believe, the self-assessment system and
18 assurance activities. And it appears to me that it
19 applies very well to operational activities -- for
20 example, activities that are going on in TA-55 and
21 things like that. I understand that.

22 Now, the thing that I'm having a
23 difficulty in dealing with is, how does this apply to
24 new activities? And let me explain. And we talked a
25 little bit about this previously. Let's take a large

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1 project, new project, and where what you have done is
2 you have set up an organization to provide a machine
3 and an activity that you haven't done before.

4 For example, DYNEX [Dynamic Experiment] --
5 I would call that a large new project that is doing
6 things. Now, how does this work as applied to an
7 activity like that?

8 ADMIRAL NANOS: Well, it's --

9 VICE CHAIRMAN. EGGENBERGER: Does that --
10 do you see my problem here a little bit?

11 ADMIRAL NANOS: Yes. Of course, what you
12 have to -- there are several levels at which that has
13 to be addressed. First of all, you have to address
14 the new activity in some detail. In other words,
15 there's clearly Authorization Basis. There's a lot of
16 thought that needs to go into constructing the
17 environment, the facility, the operating environment.

18 And there has to be a real addressing of the hazards.

19 What I have done at the Laboratory, and
20 the thing that is part of what I consider to be the
21 cultural change that leads to these things, is
22 actually at the core of the integrated work management
23 work control process that I've jammed into place; is
24 the identification of what I call the Responsible
25 Division Leader, and the accountability of the

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1 Responsible Division Leader. And what I have to
2 convince the laboratory of, is that at a -- and the
3 Responsible Division Leader is the one who owns a
4 facility, and is the one who I hold accountable for
5 the operations and quality of operations, and the
6 safety of operations within that facility.

7 This can be a Facility Manager in the case
8 of an office building for white lab space. But in
9 general, I demand that it is the person who has both
10 the technical knowledge, because of the ongoing
11 operations, because of the technical background. And
12 also, the accountability for that facility because of
13 their organizational position. And those are the
14 individuals that I'm going to hold accountable for
15 making sure that the proper activities are generated.

16 And more importantly, particularly when
17 work is going on in facilities; and you'll note that
18 probably one of the biggest problems we've had in the
19 last year at Los Alamos has been the inability to
20 correctly identify hazards associated with ongoing
21 work. And almost everything has revolved around this
22 inability to properly walk the work site down,
23 identify the hazards, and make sure that the workers
24 are properly trained, qualified, protected, and
25 instructed, etcetera.

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1 That's the critical issue. It's this
2 issue of accountability that I think undergirds all
3 that. We have slowed down the DYNEX experiment. We
4 have done that to make sure that we have reviewed, and
5 make sure that we are procuring the proper equipment
6 facilities in order to be able to do that safely, and
7 that we will not proceed with that project without
8 proper mitigation. And so I personally set that back
9 in time while that gets done. I'm not allowing the
10 programmatic schedules to override that decision.
11 That's causing some discomfort, but we'll get over it.

12 VICE CHAIRMAN EGGENBERGER: Thank you.

13 CHAIRMAN CONWAY: Dr. Mansfield.

14 DR. MANSFIELD: Thank you for a very
15 complete presentation. Could you explain the
16 distinction for me between your desire to improve --
17 let me phrase it differently. You want improvement to
18 be assessment-driven, not event-driven.

19 ADMIRAL NANOS: Yes. When you've had an
20 event, you're in trouble.

21 DR. MANSFIELD: Yet you distinguish
22 between proactive and reactive, i.e., for cause
23 assessment activities. Is there a distinction there?

24 ADMIRAL NANOS: Yes. The issue of
25 proactive, go back to even my preliminary comments

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1 before we've gotten into our testimony: proactive is
2 management walk-around, management attention, is your
3 assessment organizations, people going around with
4 their eyes open, asking questions and developing
5 issues.

6 I think the secret of Naval -- actually,
7 the secret of not only just Naval Reactors in its
8 operation, or SP and its qualities -- the fact that
9 they had organizations which were tasked with an
10 aggressive pursuit of issues and truth. And they
11 would ask questions, and they would develop point
12 papers and issues. And the people who owned those
13 activities would have to respond and get into that
14 dialogue.

15 I remember my experience in working in a
16 Naval Ship Yard, as a young officer in the Naval Ship
17 Yard, watching this in activity, not just in the
18 Nuclear Reactor area, but that attitude. And, you
19 know, confession is good for the soul, almost
20 religious fervor that goes with that particular
21 culture has a transformative effect throughout the
22 organization. And so that's what I mean by proactive.

23 Actually, you know, rather than sitting
24 there waiting in your foxhole hoping that lightning is
25 not going to strike you, you get out there in the

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1 middle of the action and make sure that your lightning
2 rod is in place, and your grounding girdle is in place
3 so that you don't get a problem.

4 DR. MANSFIELD: Yet, there is a role for
5 cause reactive assessment.

6 ADMIRAL NANOS: Yes. And I think when you
7 have an incident - of course, when you have an
8 incident, it's too late to prevent it and have a good
9 safety record. Now you're at the bottom of the heap
10 trying to work yourself up out of the hole. And my
11 view on that is put - particularly the serious issues
12 - put senior managers not in the same organization in
13 charge of the investigation.

14 That has had two effects. First of all,
15 I've had some absolutely superb analysis done.
16 Secondly, it has really made the managers aware of the
17 issues associated with the operations and the culture
18 at Los Alamos. And so, instead of -- they are now
19 unable to operate at a level where they're
20 manipulating symbols. They have to get down into the
21 issues associated with the operation, and I think
22 that's -- it's getting the senior management engaged
23 proactively in the safety process, and the development
24 of communications which will help them, and a culture
25 that will help them get their concerns down to the

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1 workforce level.

2 That's probably the biggest barrier we
3 have at Los Alamos, I think, is the combination of
4 proactive engagement and communication going with it
5 to get those concerns truly down to the first line
6 supervisor.

7 CHAIRMAN CONWAY: Dr. Matthews.

8 DR. MATTHEWS: Yes. You've described a
9 very thorough and elaborate self-assessment system
10 that I have no doubt when implemented, it will meet
11 the goals and improve safety at the Laboratory. I
12 want to ask a question that's a little bit outside of
13 that box, if you'll allow me.

14 As you know, the weapons laboratories have
15 the responsibility for the safety and reliability of
16 the stockpile, and for safely managing nuclear
17 materials. This role, as you also know, has to be
18 underlined by scientific technical expertise and
19 unique facilities. Some of the other recent changes,
20 and these are my interpretation of what I read from
21 DOE, is changes in the way contracts are managed, more
22 emphasis on deliverables, more likelihood of contract
23 changes, contractor changes, contract management
24 changes.

25 Both Los Alamos and Livermore have carried

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1 the stewardship role on for the last 60 years, so my
2 question to you is, with the changes - and I'll ask
3 Mike the same question - with the changes that are
4 occurring, how do you plan to set in place this
5 foundation that is crucial to the safety of the
6 stockpile and nuclear materials? Have you thought
7 about that issue?

8 ADMIRAL NANOS: Well, I think when you say
9 put it in place, the changes -- I guess I would tell
10 you that my view of this is that I am not going to
11 allow the changes to impact the safety and security of
12 the stockpile. My responsibility --

13 DR. MATTHEWS: Maintain, I should have
14 said.

15 ADMIRAL NANOS: Yes. And so the point
16 here is that - and I think Mike probably feels the
17 same way - it's our job every year to inform the
18 country independently, and without any sort of
19 coercion or pressure from NNSA, UC, or anybody else on
20 our personal take on the safety, security, and
21 reliability of the stockpile. And the mechanisms by
22 which I assess that, and the mechanisms by which I
23 assure that the resources are correctly allocated, in
24 that regard, is very direct and personal. And it's
25 clearly the key function of the Laboratory for this

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1 country -- weapons laboratory, as distinct from
2 another facility or manufacturing Site.

3 I mean, we do, too. We're the second
4 largest manufacturing Site in the complex, but we're
5 also a weapons design laboratory. And you're talking
6 about that particular function. And we can't allow,
7 and I won't allow these changes to impair that
8 function.

9 CHAIRMAN CONWAY: Am I right in
10 concluding, with the possible exception of the third
11 party assessment, that the changes that you are
12 implementing you would be doing whether or not NNSA is
13 changing its method of oversight?

14 ADMIRAL NANOS: Yes. I think the issue
15 here is that you can't operate a facility like Los
16 Alamos to the level of professionalism and performance
17 you want to, without a level of formalism and
18 attention to detail, and the formalism to get there.
19 And remember, with the NR, SP, NAVSEA, all those
20 organizations are basically oversight organizations,
21 but they fundamentally are there to ensure that the
22 contractor has mature systems to enable the degree of
23 control and compliance that you want.

24 And unfortunately, our systems are weak,
25 so we've got to -- regardless of whatever happens,

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1 whatever oversight system you want to put on it,
2 adequate performance is going to depend on us putting
3 the systems in that everything else rides on.

4 CHAIRMAN CONWAY: Let me put it a
5 different way then. What changes, if any, are you now
6 going to implement because NNSA is requiring you to do
7 something different, or because of their changes that
8 they are making from their point of view? So I've
9 concluded you would be doing this anyway.

10 ADMIRAL NANOS: Yes. No, I can't think of
11 anything that I'm going to change, unless they decide
12 to forbid us from doing things. If you're trying to
13 get done. And Ralph has indicated he's going to
14 forbid me making any improvement.

15 CHAIRMAN CONWAY: With that, then I want
16 to thank you very much for the time and effort you put
17 into preparing your testimony, and we wish you success
18 in your operations. Thank you all. And with that,
19 we'll ask for the contingent from Livermore. We'll
20 start with you, Camille, if I may.

21 MS. YUAN-SOO HOO: Okay. That's fine.

22 CHAIRMAN CONWAY: If you want to at any
23 time put your statement in the record to summarize,
24 they'll do it whichever way you want to do it.

25 MS. YUAN-SOO HOO: I shall do that.

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