

1 proposed new initiatives and what impact, if any,  
2 they may have upon assuring adequate protection of  
3 health and safety of the public and workers at DOE's  
4 defense nuclear facilities.

5 I welcome the witness this morning,  
6 Brigadier General Ronald J. Haeckel. He is the  
7 Principal Assistant Deputy Administrator for Military  
8 Application of the National Nuclear Security  
9 Administration [NNSA] within the Department of  
10 Energy.

11 And with that, we turn to you, General,  
12 and, again, I welcome you here this morning.

13 GENERAL HAECKEL: Thank you, sir. I've  
14 been fitted for hearing aids that are due to be  
15 delivered next month. So [Pointing to own hearing  
16 aids] I may ask you to repeat questions if I don't  
17 catch all the words, but I apologize for that.

18 DR. MANSFIELD: I have sympathy for you.

19 (Laughter.)

20 GENERAL HAECKEL: Mr. Chairman and  
21 Members  
22 of the Defense Nuclear Facilities Safety Board, thank  
23 you for this opportunity to provide you with an  
24 interim report of the National Nuclear Security  
25 Administration's review of the Columbia Accident

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

1 Investigation Board [CAIB] report of the loss of the  
2 space shuttle Columbia.

3 We've nearly completed our review, and  
4 recommendations are being developed. Today, I'll  
5 provide you with some of the general highlights.  
6 Once the report is complete and has been received by  
7 our Leadership Coalition, I'd be pleased to provide  
8 you with a copy of the report, along with more  
9 details on our lessons learned, recommendations, and  
10 suggested way ahead.

11 We anticipate completion of the report by  
12 the middle of this month. The results and suggested  
13 way ahead could be presented by our Leadership  
14 Coalition as early as March.

15 Additionally, our report will be  
16 forwarded to the Office of the Secretary of Energy as  
17 a potential source of recommendations which may be  
18 applicable Department-wide.

19 The 13-member NASA [National Aeronautical  
20 and Space Administration] CAIB spent nearly seven  
21 months investigating the root causes of the loss of  
22 Columbia and had over 125 dedicated investigators,  
23 consultants, and assistants at their disposal.

24 As a result, the report was exceptionally  
25 well detailed and thorough in its analysis and

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

1 provided succinct recommendations to NASA for  
2 improving their organization and minimizing the  
3 chance of another disaster of equivalent scale.

4 Ambassador Linton Brooks, the NNSA  
5 Administrator, after reading the CAIB report and its  
6 conclusion that organizational causes were key  
7 elements of NASA's failure to identify and evaluate  
8 critical safety issues, realized that there were  
9 likely to be valuable lessons learned within the  
10 report that could be developed, could be used to  
11 develop, recommendations to improve the NNSA of the  
12 future.

13 Accordingly, on September 9, 2003, he  
14 directed me to lead a NNSA team to assess the  
15 following questions.

16 First: is NNSA's management and safety  
17 culture appropriate for an organization managing high  
18 technology, high-risk activities?

19 Second: are there issues raised by the  
20 CAIB report that should be considered as we implement  
21 NNSA's new organization model?

22 Third: will the re-engineered NNSA  
23 provide for the necessary technical capability for  
24 properly executing NNSA's safety management and  
25 regulatory responsibilities?

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

1                   And fourth and final: what changes would  
2                   you recommend that NNSA adopt in light of the lessons  
3                   learned by NASA?

4                   I assembled three sub-teams as part of  
5                   our internal review, one for each of the first three  
6                   questions posed by Ambassador Brooks.

7                   Each sub-team was comprised of NNSA  
8                   employees from Headquarters, the NNSA Service Center,  
9                   and the Site Offices. In all, over 30 people have  
10                  directly contributed to the review, and many others  
11                  have contributed indirectly through side discussions  
12                  and meetings with review participants.

13                  Our first action was to read the CAIB  
14                  report in detail and to identify the Board's  
15                  conclusions regarding their assessment of NASA.  
16                  These conclusions were then assigned to one or more  
17                  of the sub-teams: culture, organizational structure,  
18                  and technical capability.

19                  The sub-teams used these conclusions as  
20                  guiding points in assessing and comparing NNSA with  
21                  NASA. The review was strictly limited to the context  
22                  of the CAIB report.

23                  Individual sub-teams met as required to  
24                  conduct their review, and the composite team met on  
25                  seven different occasions for progress reports and

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

1 discussions.

2           These discussions were lively at times  
3 and demonstrated some of the best open communications  
4 between Headquarters and field elements that I've  
5 [seen] during my tenure at NNSA.

6           I believe that when complete, the report  
7 will be of great value to our organization and will  
8 make significant recommendations that have the  
9 potential to greatly improve the safety of our  
10 operations and the overall effectiveness of NNSA.

11           As you know, the CAIB focused their  
12 review on NASA's high-risk, high-consequence  
13 activities related to human space exploration.

14           The NNSA CAIB Lessons Learned Team also  
15 focused its efforts on potential high consequence  
16 activities internal to NNSA, namely the operation of  
17 nuclear facilities at NNSA Sites and the nuclear  
18 weapons production program.

19           We did not examine our relationship with  
20 the DoD [Department of Defense], where the NNSA  
21 functions as a partner in designing and supplying  
22 weaponized nuclear explosives to the U.S. military.

23           In short, the most important result of  
24 the NNSA review is the need to understand and shape  
25 NNSA's safety culture through leadership,

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

1 organizational alignment with safety requirements and  
2 policies, and the maintenance of adequate technical  
3 capability.

4 There are striking similarities between  
5 NASA and NNSA when comparing the two organizations'  
6 safety systems and culture.

7 Both organizations were built on the Cold  
8 War rivalry with the former Soviet Union, and both  
9 suffered similar uncertainties in their missions with  
10 the collapse of the Soviet Union.

11 The CAIB report states, "The end of the  
12 Cold War in the late 1980s meant that the most  
13 important political underpinning of NASA's human  
14 space flight program, U.S.-Soviet space competition,  
15 was lost, with no equally strong political objective  
16 to replace it."

17 NNSA's core mission, nuclear weapons  
18 design and production, suffered a similar loss of  
19 national priority, and both organizations have  
20 pursued similar paths in dealing with this loss,  
21 mainly downsizing personnel, consolidating  
22 operations, and relying more and more on contractors.

23 Both organizations have a proud tradition  
24 of scientific and technical excellence. This led  
25 NASA to view itself as a perfect place. This in turn

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

1 led to NASA managers losing their ability to accept  
2 criticism, leading them to reject the recommendations  
3 of many boards and blue-ribbon panels.

4 A parallel to NASA's perfect place  
5 culture within NNSA would be the nuclear weapons  
6 design laboratories, commonly referred to as the  
7 nation's crown jewels.

8 Also like NASA, DOE has been criticized  
9 for years by Congress, GAO [General Accounting  
10 Office], the IG [Inspector General] and others. For  
11 example, the June 1999 report by the Special  
12 Investigative Panel of the President's Foreign  
13 Intelligence Advisory Board, the March 1999 Report by  
14 the Commission on Maintaining United States Nuclear  
15 Weapons Expertise, and the March 1997 120-Day Study  
16 by the Institute for Defense Analysis.

17 DOE has been criticized for its  
18 reluctance to adopt changes recommended by outside  
19 organizations. In fact, it was this very criticism in  
20 part that led Congress to create the NNSA as a  
21 semi-autonomous agency within DOE.

22 The NNSA CAIB Lessons Learned Review Team  
23 identified several potential attributes of an  
24 effective NNSA safety culture, including: a visible  
25 commitment to safety, both corporately and

1 individually along with genuine concern for coworker  
2 safety; trust; support of open communications and  
3 valuing a diversity of opinions coupled with senior  
4 management embracing the concept that healthy tension  
5 is good; determination of NNSA's safety performance  
6 baseline and the establishment of performance metrics  
7 and indicators; rigorous self-assessments along with  
8 objective evaluation and consideration of outside  
9 reviews and recommendations; visible accountability,  
10 that is, a system of rewards and punishments; a  
11 technically competent staff that is committed to and  
12 involved in assuring the safety of operations.

13 The NNSA Review Team found that the  
14 organization was lacking in varying degrees in all of  
15 the above attributes. However, changes in an  
16 organization's culture cannot take place without the  
17 buy-in and active leadership of top management.

18 The NNSA Review Team believes that to be  
19 effective, the NNSA Leadership Coalition and other  
20 senior managers must fully and actively support  
21 NNSA's safety culture in order for individual  
22 employees to commit themselves to a culture of safety  
23 excellence.

24 The NNSA leadership must develop and  
25 establish clear safety values and expectations in



1 order for safety to be an organizational value that  
2 is a fundamental part of mission accomplishment.

3 They must also demonstrate a genuine  
4 attitude of ownership for safety within NNSA.  
5 Although cultural values are intangible, these values  
6 as fully espoused by senior leadership can lead to  
7 tangible improvements for the safety of operations.

8 The NNSA Review Team also acknowledges  
9 that it is important for NNSA to be able to judge the  
10 status and effectiveness of its safety culture as it  
11 exists today and in the future, as well as identify,  
12 and track trends in its effectiveness.

13 DOE and NNSA have invested many resources  
14 in Integrated Safety Management [ISM]. The team  
15 believes that ISM could serve as a model of a system  
16 that has demonstrated its value and that has survived  
17 multiple changes of leadership in DOE and NNSA.

18 It's our belief that ISM can help lead  
19 NNSA and its contractors to a stronger safety  
20 culture. ISM is a key enabler of safe operations for  
21 the use of effective work planning, hazards  
22 identification, the development and implementation of  
23 work controls, performance of work within those  
24 controls, and feedback for improvement.

25 However, without robust and active

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

1 support by NNSA senior management, ISM will not lead  
2 to an enduring NNSA safety culture, nor is ISM  
3 specifically designed to improve an organization's  
4 safety culture.

5 The majority of the NNSA Review Team  
6 believes that NNSA has adequate concern for safety  
7 for potentially high consequence programs, such as  
8 nuclear facility operations and nuclear weapons  
9 design and construction, including adequate systems  
10 to ensure that operations are proven safe prior to  
11 initiation or deployment.

12 But additional cultural change is needed  
13 to maximize the assurance of safety in those  
14 high-risk activities. NNSA needs to actively  
15 encourage diversity of views, accept outside  
16 criticism, and avoid oversimplification of technical  
17 information.

18 Additionally, NNSA must be vigilant in  
19 guarding against the organization being conditioned  
20 by past successes. As the CAIB report states, and  
21 with which the team agrees, organizations that deal  
22 with high-risk operations must always have a healthy  
23 fear of failure. Operations must be proven safe,  
24 rather than the other way around.

25 The CAIB concluded that within NASA, the

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

1 loss of truly independent robust capability to  
2 protect the system's fundamental requirements and  
3 specifications inevitably compromised those  
4 requirements and, therefore, increased risk.

5 In particular, they found that  
6 organization responsible for program accomplishment  
7 decided on its own how much safety and engineering  
8 oversight was needed.

9 The CAIB concluded that separation of  
10 authority of program managers, who by nature must be  
11 sensitive to costs and schedules, and owners of  
12 technical requirements and waiver capability, who by  
13 nature are more sensitive to safety and technical  
14 rigor, is crucial.

15 The ability to operate in a centralized  
16 manner or decentralized manner, as appropriate, is  
17 the hallmark of a high-reliability organization.  
18 However, complex organizational structures, such as  
19 NASA, that mix centralized and decentralized  
20 functions, or split functions into centralized and  
21 decentralized pieces, can hinder effective operations  
22 and result in severe consequences.

23 The CAIB determined that NASA failed to  
24 operate effectively in both centralized and  
25 decentralized modes based on the roles,

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

1 responsibilities, authorities, and relationships that  
2 developed over time.

3 As a result, organizational complexity  
4 created artificial barriers to effective  
5 communications throughout the organization.  
6 Assigning individuals to multiple and in some  
7 instances competing places in the organization  
8 complicated the problem.

9 Confusion about decision-making processes  
10 within NNSA, the attenuation of technical  
11 information, and the lack of clear accountability  
12 created by redundant management activities, were  
13 previously significant concerns with NNSA.

14 The "NNSA of the Future" model, with its  
15 line management responsibility for safety, eliminates  
16 much of the complexity and confusion that previously  
17 existed by now clearly holding Site Office Managers  
18 accountable for the operational safety and security  
19 of their Sites.

20 The NNSA Safety Functions,  
21 Responsibilities, and Authorities Manual, the FRAM,  
22 published on October 15th, 2003, is an important step  
23 in eliminating any remaining confusion about those  
24 responsibilities.

25 NNSA's new organizational model depends

1 heavily on decentralized decision-making by Site  
2 Office Managers.

3 As NNSA's risk acceptance officials, the  
4 primary responsibility of Site Office Managers is  
5 operational safety and security.

6 NNSA has intentionally optimized its  
7 organization for decentralized risk acceptance  
8 decision-making to ensure the risk acceptance  
9 authority is delegated to the technically competent  
10 senior managers who have access to the most accurate  
11 and current information.

12 However, some confusion still exists  
13 regarding the role of centralized decision-makers  
14 with respect to operational safety oversight given  
15 that NNSA has a limited independent safety  
16 organizational construct.

17 NASA's organizational structure changes,  
18 designed to approve efficiency, undermined the  
19 redundancy essential to successfully operating a  
20 high-risk enterprise.

21 NASA's contractual arrangements,  
22 organizational structure, and downsizing together  
23 undermined the adequacy of federal oversight of a  
24 contractor, and resulted in the transfer of too much  
25 authority for safety to the contractor.

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

1           The team concluded that for NNSA,  
2           redundancy and the level of oversight should be  
3           proportional to the risk, that is, higher risk would  
4           equal more redundancy.

5           No hazardous facility or operation that  
6           presents a risk to the public and/or co-located  
7           workers should be without redundancy in oversight  
8           processes.

9           And NNSA Site Managers do have multiple,  
10          although not necessarily redundant, federal sources  
11          of technical information to support risk acceptance  
12          and safety assurance decision-making, including  
13          Authorization Basis [AB] professionals, Facility  
14          Representatives, and Subject Matter Experts [SME].

15          Additionally, the DOE Office of  
16          Independent Assessment [OA] provides the NNSA  
17          administrator with an independent audit function,  
18          although the Office of Assessment has no day-to-day  
19          safety assurance function. However, the team  
20          believes NNSA can enhance the levels of redundancy in  
21          its oversight processes.

22          Finally, the CAIB determined that NASA's  
23          complex and often hierarchal organizational structure  
24          diffused and confused responsibility, essentially  
25          leaving no one person accountable.

1                   NASA's culture also lent greater  
2                   technical credence to communications that originated  
3                   from higher in the organization. The organizational  
4                   structure often stifled or blocked communications.

5                   The NNSA Review Team identified several  
6                   potential attributes for an effective NNSA safety  
7                   organization, including: effective centralized and  
8                   decentralized operations requiring independent,  
9                   robust, safety and technical requirements management  
10                  capability; assuring safety requires a careful  
11                  balance of organizational efficiency, redundancy, and  
12                  oversight; and, finally, effective communications  
13                  along with clear roles and responsibilities are  
14                  essential to a successful organization.

15                  The team agreed that NNSA should consider  
16                  establishing the position of Chief of Defense Nuclear  
17                  Safety in lieu of an ES&H advisor.

18                  This individual would be responsible for  
19                  developing, maintaining, and overseeing corporate  
20                  technical, environment, safety, and health policies  
21                  and standards, including reviewing and approving any  
22                  waivers to those policies or standards.

23                  He or she might also be empowered to veto  
24                  NNSA Headquarter's programmatic or budget decisions  
25                  deemed unsafe or in violation of existing policies

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

1 and standards potentially leading to an unsafe  
2 condition, until resolved to the Chief's or NNSA  
3 Administrator's satisfaction.

4 The Chief could also be tasked with  
5 monitoring the health of NNSA's ES&H technical  
6 staffing. Additionally, this office would provide  
7 technical staffs a place in Headquarters to  
8 communicate minority opinions that have been  
9 overlooked or rejected in other parts of the  
10 organization.

11 The combination and interrelationships of  
12 contractor and Site Office self-assessment and  
13 oversight by Headquarters should not be permitted to  
14 tip in either direction. The careful balance between  
15 organizational efficiency and the adequate assurance  
16 of safety through redundancy and oversight must be  
17 maintained.

18 With regard to the implementation of the  
19 Line Oversight/Contractor Assurance Systems or  
20 LO/CAS, the adequacy of these new assurance systems  
21 should be verified before reducing existing  
22 oversight, particularly in high hazard operations.

23 NNSA should consider reinstating  
24 Headquarters line management oversight practices to  
25 address self-assessment and external review of

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701



1 federal and M&O [management and operating] contractor  
2 operations until LO/CAS is fully implemented.

3 The importance of fully evaluating and  
4 considering minority opinions cannot be overstated.  
5 The Naval Reactors [NR] program has embraced this as  
6 part of their culture from the program's inception,  
7 and NNSA as a whole should embrace it as well.

8 It may be necessary to provide a new or  
9 revitalized organizational conduit along with revised  
10 decision-making processes as a means to encourage the  
11 airing of minority opinions and the effective  
12 evaluation of their input into NASA's  
13 decision-making.

14 In regards to technical capability, the  
15 CAIB concluded that NASA, one, became dependent on  
16 contractors for technical support. Two, contract  
17 monitoring requirements increased. And three, as  
18 engineers were placed in management roles, their  
19 positions were subsequently staffed by less  
20 experienced engineers.

21 Years of workforce reductions and  
22 outsourcing culled NASA's layers of experience and  
23 hands-on systems knowledge that once provided a  
24 capacity for safety oversight.

25 Safety and mission assurance personnel

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

1 were eliminated. Careers in safety lost  
2 organizational prestige, and the respective program  
3 manager decided how much safety and engineering  
4 oversight was needed.

5 The CAIB also concluded that NASA had a  
6 number of information systems for reporting and  
7 capturing information with potential safety  
8 significance.

9 However, information captured in those  
10 systems was not consequently analyzed, tracked,  
11 trended, or acted upon to resolve underlying causes,  
12 and this failure was one of many root causes in both  
13 the Challenger and Columbia accidents.

14 Finally, the CAIB concluded that NASA did  
15 not have a recurring training program, was not  
16 aggressive in training, and did not institutionalize  
17 lessons learned into training. The CAIB was appalled  
18 that the Navy had trained more personnel in the root  
19 causes of the loss of the Challenger than had NASA.

20 After studying the CAIB report, the NNSA  
21 Review Team highlighted three items with regard to  
22 adequate technical capability, including workforce  
23 reductions, outsourcing, and loss of organizational  
24 prestige can cause an erosion of technical  
25 capability;

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

1 technical capability to track known problems and  
2 manage them to resolution is essential; and a quality  
3 technical training and qualification program is vital  
4 for the success and safety of high-risk operations.

5 Similarly, the erosion of ES&H technical  
6 capability may be a serious issue within NNSA. As  
7 the organizational transition progresses, that is,  
8 stand up of Service Center in Albuquerque, it is not  
9 clear whether the Site Offices have sufficient ES&H  
10 support.

11 Consolidation of personnel into the  
12 Service Center has already resulted in a large loss  
13 of ES&H nuclear safety expertise. Over 50 percent of  
14 nuclear safety experts within the ES&H Department  
15 have taken other positions or declined the directed  
16 reassignment.

17 Headquarters, the Service Center, and  
18 Site Offices must establish clear mutual expectations  
19 of each other's technical capabilities and support  
20 plans.

21 Although each recently completed and  
22 validated individual staffing plans, a deeper,  
23 integrated review may be useful in ensuring that  
24 adequate technical capability is maintained, and  
25 sufficient capability and processes are in place for

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

1 the recruiting, training and career development of  
2 technical personnel.

3 Like NASA, NNSA has access to a wide  
4 variety of information management systems, including  
5 local issue tracking and management systems with the  
6 contractor.

7 Examples include: NNSA Lessons Learned  
8 System; Occurrence Reporting and Processing System or  
9 ORPS; Safety Issues Management System [SIMS] for  
10 DNFSB-related issues; Corrective Action Training  
11 System for OA findings and corrective actions;  
12 Significant Finding Investigations or SFIs for weapon  
13 related issues; and Government-Industry Data Exchange  
14 Program for suspect or counterfeit materials issues.

15 Also like NASA, NNSA needs the ability to  
16 capture, analyze, and share safety information but  
17 has limited capability to do so in some areas. NNSA  
18 may need to consider establishing an analysis and  
19 trending function for complex wide issues at either  
20 Headquarters or the Service Center, to be  
21 periodically reviewed by NNSA senior leadership.

22 Additionally, NNSA needs a process to  
23 identify and evaluate operation experiences outside  
24 of itself and DOE, such as the Davis-Besse near miss  
25 and the Columbia, to disseminate the lessons learned

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

1 from those experiences, and to develop and implement  
2 recommendations resulting from those lessons learned.

3 Finally, NNSA requires a cadre of  
4 technically trained personnel in order to properly  
5 perform its mission. This includes key senior  
6 management positions, such as Site Office Managers,  
7 whose responsibilities include safety of nuclear and  
8 other hazardous facilities and operations.

9 Formal qualification and experience  
10 requirements, training and/or compensatory measures  
11 must be identified for those individuals with NNSA.

12 The Technical Qualification Program or  
13 TQP remains an important and valuable tool within  
14 NNSA that must be well-utilized and managed to be  
15 useful.

16 The Site Offices and Headquarters have  
17 recently re-baselined their TQP requirements, and  
18 review and analysis of that effort is underway.

19 In closing, these same interim results  
20 will be presented to senior managers at our NNSA  
21 Safety Summit tomorrow. I think it's clear that the  
22 NNSA CAIB Lessons Learned Review Team believes  
23 further changes are needed at NNSA to ensure the  
24 safety of future operations and to avoid the pitfalls  
25 experienced by NASA. In particular, the need to

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

1 assess and as necessary alter our culture will be a  
2 significant challenge.

3 NNSA is committed to objectively  
4 reviewing and considering the recommendations of the  
5 Review Team.

6 At this time, I would be happy to answer  
7 questions.

8 CHAIRMAN CONWAY: Thank you, General  
9 Haeckel. Dr. Eggenberger?

10 VICE CHAIRMAN EGGENBERGER: Do I have to  
11 be first?

12 CHAIRMAN CONWAY: Yes.

13 VICE CHAIRMAN EGGENBERGER: Okay. When  
14 do you expect your report to be finished and handed  
15 out?

16 GENERAL HAECKEL: We expect that the --  
17 that our writing will be completed, and that the  
18 report will be signed the middle of this month, and  
19 that it will get to the Leadership Coalition for  
20 their digestion in the Leadership Coalition meeting  
21 in March.

22 VICE CHAIRMAN EGGENBERGER: Okay. The  
23 three things that you talked about, safety management  
24 and culture, organization and technical capability,  
25 I think I understand them. I think everybody kind of

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

1 understands them. And my belief is that you will  
2 probably put out a set of recommendations that  
3 follows each one of those categories, or could at  
4 least be grouped into those categories.

5 And a couple things always bother me in  
6 that when one makes recommendations, people tend to  
7 look at them as single entities and not grouped  
8 together such that one can understand the effect of  
9 one on the other. And I believe that's very  
10 important to end up with a good implementation plan.

11 So is it your expectation that DOE will  
12 now prepare, the management people will prepare, an  
13 implementation plan for your report? Do you believe  
14 that's probably how it will go?

15 GENERAL HAECKEL: When we were putting  
16 our recommendations together, it was clear to us that  
17 several of the recommendations spanned or could span  
18 all three categories.

19 VICE CHAIRMAN EGGENBERGER: Yes.

20 GENERAL HAECKEL: And we attempted to  
21 identify those and cross-reference those so we could  
22 capture that, and document that, so that people  
23 would have the mindset of looking at a certain  
24 recommendation and realizing that this affects the  
25 culture and technical capability and organizational

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

1 efforts all at the same time, and could be a very  
2 significant effort to the overall effort.

3 I have not discussed with Ambassador  
4 Brooks how he plans to use this. He did meet with  
5 our group and express his support for us and his  
6 desire for these recommendations. He met with us  
7 personally. So I believe that he's very serious  
8 about this, and in subsequent conversations, he has  
9 expressed his seriousness.

10 And I would hesitate to guess what -- how  
11 Ambassador Brooks would proceed, but I know that he  
12 plans to discuss this with the Leadership Coalition  
13 in March.

14 VICE CHAIRMAN EGGENBERGER: Okay. Let's  
15 just take for an example the corporation  
16 organization. You made a statement in here that --  
17 it says, "The NNSA of the Future' model with its line  
18 management for safety eliminates much of the  
19 complexity and confusion that previously existed, now  
20 clearly holding Site Office Managers accountable for  
21 the operational safety and security of their Sites."

22 There's an awful lot in that sentence.  
23 And the details and the understanding of that, as it  
24 relates to some of the recommendations that you've  
25 essentially woven in here, it's not clear to me, or

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701



1           how all this fits together.

2                       And let me give you an example, and then  
3           I'm going to say something that I think would be very  
4           helpful.

5                       I think we're talking basically about  
6           operational safety here. And if you can go back, you  
7           can go back into recent occurrences at some of the  
8           Sites. And one can write down a list of occurrences.  
9           And I think it would be useful to attempt to analyze  
10          them in light of the recommendations that you are  
11          going to make to the Ambassador and in light of how  
12          his implementation plan will address those.

13                      And let me -- this is kind of jargon  
14          here. But people that have been working in NNSA, I  
15          think, will understand those. And I'll give you  
16          three examples that just came to my mind.

17                      One is the situation with the Plutonium  
18          Recovery Line at Los Alamos. That's one. A second  
19          one is the cracked high explosive at Pantex. And the  
20          third one is the multiple staging of units at Pantex.

21                      And I think if one looks at the three  
22          things that you talked about -- basically, culture,  
23          the organization, and the technical capabilities --  
24          how those reflect on the either correct or incorrect  
25          decisions that were made on those three different

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 projects.

2 And you can go through and you can list  
3 more of these. And I think then that would at least  
4 give you a state. You could then define the state at  
5 which NNSA is in.

6 So I -- this is a little bit of a  
7 lecture, but I'm trying to be helpful. And at the  
8 same time, reports tend to get glossed over. And I  
9 think it would be very bad if this, your report, was  
10 glossed over by others.

11 MR. AZZARO: Excuse me. Mr. Chairman, if  
12 I may, General -- Dr. Eggenberger was saying a number  
13 of different things, and I noticed that you were  
14 nodding your head several times. The court reporter  
15 doesn't capture that.

16 Can you respond to some of that verbally,  
17 what those nods meant, that you understood what he  
18 was saying or agreeing with him?

19 GENERAL HAECKEL: I understand the  
20 specific incidences that you were pointing out.

21 VICE CHAIRMAN EGGENBERGER: Yes.

22 GENERAL HAECKEL: And I also understand  
23 that to address an environment between centralized  
24 Headquarters and decentralized Site Managers, you  
25 have to understand the environment for the things

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

1 that you're trying to improve, and that these  
2 specific incidences here which shed light on what the  
3 environment was and what you were trying to  
4 strengthen.

5 Is that right, sir?

6 VICE CHAIRMAN EGGENBERGER: The gist is  
7 it would then give you the state of affairs at points  
8 in time at particular Sites.

9 GENERAL HAECKEL: Yes.

10 VICE CHAIRMAN EGGENBERGER: That's right.  
11 And again, I'm taking too much time. But this whole  
12 concept, you used some powerful terms like risk  
13 acceptance official. And the three, your three  
14 things of, again, of culture, organization, and  
15 technical competence, all relate on that.

16 So, again, the devil is in the details  
17 here. And with that, I'll - that's all I'm going to  
18 say for now.

19 CHAIRMAN CONWAY: At this time.

20 VICE CHAIRMAN EGGENBERGER: At this time.

21 CHAIRMAN CONWAY: Thank you. Dr.

22 Matthews?

23 DR. MANSFIELD: No, Jack Mansfield, not  
24 Matthews.

25 CHAIRMAN CONWAY: I'm sorry. I looked at

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

1 you and I was thinking of Bruce.

2 (Laughter.)

3 DR. MANSFIELD: But thank you, General.  
4 I see in the NASA experience, and I can see in DOE's  
5 practice, a difficulty for Headquarters to exercise  
6 detailed insight into what's going on at the Sites.

7 The -- it's true it's -- I recognize that  
8 you've assigned Site Office Managers responsibility  
9 and accountability for operational safety. But I  
10 don't see in Headquarters the ability to do what, for  
11 instance, Naval Reactors does: demand to be notified  
12 of every irregularity so that someone at Headquarters  
13 can do what the Site Manager may not have time or the  
14 responsibility to do: pull the string on details.

15 That's what I see about the Challenger  
16 accident. I asked the question, who at NASA  
17 Headquarters knew of the history of foam strikes, you  
18 know, that they were defined in standards and specs  
19 as abnormal but accepted as normal? You know, who at  
20 Headquarters knew that? Who was even notified when  
21 foam strikes occurred, at Headquarters?

22 Gosh, I'd want to know that. If that  
23 were Naval Reactors -- I'll make up a story because  
24 I don't want to get into any particular details on  
25 Naval Reactors. But suppose periodically some welds

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

1 in HY-80 [high yield] steel had a different color.  
2 And no submarines had collapsed or sunk, but nobody  
3 understood why the welds were a different color.

4 You know, I'm almost sure that Naval  
5 Reactors wouldn't do any welds until they figured  
6 that out. And that's what I saw missing at NASA.  
7 And I don't see that at NNSA. I don't see someone at  
8 Headquarters demanding to know every irregularity so  
9 that they can pull the string and get someone to  
10 look, dig into it, and find out what's wrong.

11 I see the -- for instance, you know,  
12 ISM, I commend [you] for your account of how ISM can  
13 provide a safe work environment. But ISM by itself  
14 doesn't automatically discover design issues that  
15 might lead to unsafe conditions. We're working with  
16 - especially with Pantex -- we're working with high  
17 explosives in different configurations.

18 Right now, we -- you satisfy yourself  
19 that the operations are safe because you've got great  
20 trust in expert bodies, the NESS [Nuclear Explosive  
21 Safety Study] teams, for instance, the CEP  
22 [Containment Evaluation Panel] for underground tests,  
23 things like that.

24 But it seems to me that that reliance on  
25 those expert systems, which has served us so well,

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

1 demands exquisite care by somebody. And I think --  
2 you know, I question why it's not Headquarters. I  
3 question why there isn't someone at Headquarters that  
4 pulls a string on every issue that --

5           The NESS, for instance, essentially does  
6 a one-time analysis. This -- here's a NEOP, a  
7 nuclear explosive operation [procedure]. Is this  
8 okay, yes or no? If yes, you do it. If no, you fix  
9 it.

10           No one to my knowledge continually pulls  
11 the string and asks, well, you know, were we hasty on  
12 this? Did we -- is there later knowledge that needs,  
13 requires us to reexamine what we've decided before?

14           The -- I was concerned in conversations  
15 with lab people that they're in some cases actively  
16 discouraged from undertaking R&D [research and  
17 development] on things that they find in question,  
18 like the behavior of cracked HE [high explosives],  
19 unless someone at Pantex requests a judgment or an  
20 opinion on how the cracked HE behaves.

21           I would think that you would insist that  
22 people pull the string everywhere. Whenever they  
23 suspect a case, they go to their boss, and he not  
24 only -- he doesn't tell them, don't you do that  
25 unless you are asked by a customer. You know, he

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

(202) 234-4433

[www.nealrgross.com](http://www.nealrgross.com)

1 tells them, that's your job, I'll find a way to give  
2 time for you to look at that.

3 That's what I think would be -- would be  
4 an NNSA operation which would be closer to the Naval  
5 Reactor model. It takes a focused effect -- or  
6 focused effort by Headquarters, focused effort by  
7 Headquarters, to know enough to pull the string.

8 And, you know, that is -- it just hasn't  
9 been there. Maybe it was never there in NNSA, that  
10 someone in Headquarters was, you know, clever enough  
11 or experienced enough to know there was something  
12 behind what he was reading. And you know, I believe  
13 something like that is necessary.

14 Now it could be that you've set up  
15 exactly the right mechanism for this. By assigning  
16 the responsibility and accountability for operational  
17 safety to the Site, at least Headquarters is free of  
18 that responsibility to spend effort to find out  
19 what's going on, and what's behind occurrences, and  
20 what's behind non-standard behavior of these  
21 potentially dangerous things.

22 I -- we have a difficulty at NNSA similar  
23 to that of NASA, in that we've got to rely on the  
24 contractors for a good part of the knowledge. We are  
25 in much better shape than NASA in that we have a much

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

1 closer on-the-floor partnership between the --  
2 especially Pantex, for instance, the one I'm most  
3 concerned about -- where the contractor and the Site  
4 Office at least have a good record of identifying and  
5 addressing safety issues as they come up.

6 We found recently how delicate it is,  
7 that process is, and how easily it can get overturned  
8 by not having the right people involved.

9 In particular, it raised the issue, we  
10 all have raised the issue, why wasn't everybody in  
11 the high explosive community automatically called in  
12 on day one when there was a high explosive cracking  
13 incident? Why is there a principle, which I heard  
14 announced yesterday by a high functionary within your  
15 organization, that "it's just not done" to involve  
16 Los Alamos in an issue about weapons at Pantex?

17 You know, I'm concerned about that. That  
18 that doesn't allow you the best opportunity to pull  
19 the string and find out what's going on.

20 Finally, I think your notion of a Chief  
21 of Defense Nuclear Safety could well be an excellent  
22 mechanism for establishing this kind of direct  
23 detailed oversight. Thank you, Mr. Chairman.

24 CHAIRMAN CONWAY: Now we'll get to Dr.  
25 Matthews.



1 DR. MATTHEWS: Thank you, Mr. Chairman.  
2 First, let me commend you on a nice written  
3 testimony, and really hitting on some very important  
4 issues that in my view, if NNSA takes seriously and  
5 puts an action plan together, we'll --

6 GENERAL HAECKEL: I was delinquent when  
7 we started up, and I would not want to take credit  
8 for all of that with my distinguished guests behind  
9 me, within striking distance.

10 (Laughter.)

11 GENERAL HAECKEL: I wanted to make sure  
12 that I thanked Bob Degrasse, Xavier Ascanio, Ray  
13 Corey, Bob Brese, and Emil Morrow for all the help  
14 that they've given me over the last several months.

15 DR. MATTHEWS: Well, let me then commend  
16 you and your colleagues for an excellent piece of  
17 work, and talking about some real important issues  
18 that we've recognized, too.

19 I want to talk about one that you didn't  
20 talk about. And it's based on Integrated Safety  
21 Management guiding principles, which you  
22 appropriately talked about the importance of that for  
23 a strong safety culture.

24 And one principle is balance of  
25 priorities, also known as safety versus productivity,

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

1 which is, I think, some of the motivation behind the  
2 changes that we are seeing, both in NNSA and EM  
3 [Environmental Management].

4 Dr. Eggenberger mentioned three recent  
5 incidents which could get down to a decision against  
6 productivity versus safety, all three of which could  
7 result in a nuclear situation, nuclear accident or  
8 some sort of dispersal.

9 And so what I want to ask you is: do you  
10 think that NNSA, now and as they move into the re-  
11 engineering, does pay the right attention to  
12 balancing productivity versus safety? Do they have  
13 mechanisms to make those decisions and technical  
14 capability to make those decisions? And primarily,  
15 to assure that the likelihood of a nuclear event is  
16 reduced to the minimum.

17 GENERAL HAECKEL: There's one paragraph  
18 in the testimony that says the majority of our Board  
19 feels that NNSA has paid adequate attention to  
20 safety. And there's always the pressure to complete  
21 the schedule for the productivity at the detriment of  
22 safety, that we have to constantly watch over.

23 But the majority of our Board believed  
24 that NNSA's concern for that proper balance was  
25 there. We did have a minority opinion, that is going

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

1 to be published, that did not agree with that  
2 statement. And it's going to be part of our report,  
3 and we had no -- we squelched no minority opinion.

4 So just the fact that there was a  
5 minority opinion says that that's an ever-present  
6 thing that we have to watch. I personally believe  
7 that we have the right people in places of  
8 leadership, with adequate attention to those details,  
9 to make sure that that balance is proper.

10 DR. MATTHEWS: Okay. And as a follow-up,  
11 because you talk about some of the technical  
12 capabilities, do you think that NNSA, particularly at  
13 the Headquarters level, has the formality and  
14 approach and the technical depth to properly make  
15 that balanced decision, productivity versus safety?

16 GENERAL HAECKEL: I noted in the  
17 testimony several weak areas that needed attention.  
18 The number of people, their qualifications, their  
19 initial training, their recurring training. And  
20 we'll make specific recommendations about that, and  
21 the TQP program also, to bolster that.

22 So again, I think it's adequate, but as  
23 far as safety is concerned, we can always do better.  
24 And I think there's some very good ideas that are in  
25 our future that would strengthen that.

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

1                   And again, referring back to the  
2 testimony, our Site Offices have already looked at  
3 that mix and reevaluated that mix just recently. So  
4 that is a work in progress.

5                   DR. MATTHEWS: Good. Thank you.

6                   MR. FORTENBERRY: John?

7                   CHAIRMAN CONWAY: Let me finish first.  
8 General, on page 4, you point out that in the NASA  
9 report there was a healthy fear of failure, of  
10 operations must be proved safe, rather than the other  
11 way around.

12                  GENERAL HAECKEL: Right.

13                  CHAIRMAN CONWAY: I agree with that. And  
14 the three instances that Dr. Eggenberger cited and  
15 suggested that you look at, and when you do that,  
16 take a look and see: were the decisions made based on  
17 proving it's safe, rather than the other way around.  
18 There's the chance that they were doing it the other  
19 way around.

20                  Also, you make reference to -- in the  
21 report that -- the NASA -- problem -- there was a  
22 transfer of too much of authority for safety to the  
23 contractor. I would agree with that.

24                  And that's why I'm somewhat concerned  
25 with the recent contract, special contract

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

1 requirements that's been issued by your organization,  
2 particularly in entering into a new contract with one  
3 of the contractors, in which there's a movement back  
4 from NNSA oversight of safety and making that the  
5 responsibility of the contractor.

6 And in the contract itself, it refers to  
7 the fact you're going to watch for opportunities now  
8 to back off and give the contractor -- make the  
9 contractor have oversight on its own safety. And  
10 this is a contractor who in the years past has  
11 objected and has tried to have federal  
12 representatives, Site Representatives, not in their  
13 -- at their operations level.

14 So again, I hope the lessons we've  
15 learned from NASA of turning over too much authority  
16 to a contractor for safety, that we're not going down  
17 that road also. You also refer to a number of former  
18 studies that have been made of NNSA and defense  
19 operations. And these reports have been going on the  
20 shelf.

21 One of them, I would suggest, you might  
22 want to go back and reread. It's the Chiles Report.  
23 Admiral Chiles put a great deal of effort in the  
24 past, particularly on technical training. And I  
25 suggest there was a lot of -- there were a lot of

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

1 good recommendations in that report that I do not  
2 believe have been implemented.

3 So rather than have another -- your  
4 report going on top of these other reports, and  
5 they're all going on the shelf, we've got to go back  
6 and reexamine these reports. In particular, the  
7 Chiles Report, in my opinion, was an extremely  
8 excellent, an extremely good one.

9 Dr. Eggenberger?

10 VICE CHAIRMAN EGGENBERGER: No more  
11 questions.

12 CHAIRMAN CONWAY: Dr. Mansfield?

13 DR. MANSFIELD: Well, no more questions  
14 for you.

15 CHAIRMAN CONWAY: Bruce?

16 DR. MATTHEWS: No, I don't have any more  
17 questions.

18 CHAIRMAN CONWAY: Okay. Kent?

19 MR. FORTENBERRY: Yeah. A few things.

20 And since the Chairman raised this point about  
21 ensuring operations are proven safe before  
22 initiation. In your testimony, what you said was  
23 that the majority of the Board had concluded that  
24 adequate systems were in NNSA to ensure that that  
25 occurred, that operations were proven safe before

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

1 commencing. And I would interpret that to -- or I  
2 would assume from that we would probably not see any  
3 recommendations addressing that point.

4 Can you speak to that a little bit and  
5 maybe describe what made the Board reach the  
6 conclusion that there was adequate systems in place  
7 and what those systems were?

8 GENERAL HAECKEL: I think the experience  
9 of the people that participated in the Lessons  
10 Learned, the NNSA Lessons Learned Board, brought that  
11 out in our discussions.

12 And I would like to probably wait until  
13 the full report comes out before I can say exactly  
14 what we would recommend to enhance that or to make  
15 sure that NNSA continued to be in that vein, to prove  
16 that things were safe versus unsafe.

17 But I think we relied mostly on our  
18 experience with the projects that we were on and  
19 discussions with other individuals and other  
20 organizations within NNSA.

21 MR. FORTENBERRY: Or sort of a feeling  
22 based on experience? And just in observation, in  
23 terms of systems being in place, a casual observation  
24 from me would be that what I don't see are systems.  
25 For example, generic safety issue process and, I'll

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

1 say, dedicated safety R&D to address those generic  
2 issues as they are brought up, you know,  
3 specifically.

4 But I don't see those things, which I  
5 would consider, you know, systems. If you ask, do  
6 you generally feel that we proved things are safe  
7 before we commence, and if the answer is yes, that's  
8 one thing.

9 But to say, we believe there are systems  
10 in place to ensure that, that's -- I would certainly  
11 be interested in what those would be and what the  
12 Board has identified those to be.

13 And I think that the Chairman expressed  
14 particular interest in that, so, you know, that would  
15 be of great interest.

16 I want to also try to understand in your  
17 testimony and a lot of discussions, there's been the  
18 use of a few terms that seem to be interchanged --  
19 decentralized operations, responsibility for  
20 operational safety, and risk acceptance. Those seem  
21 to be interchangeable in your testimony, and I don't  
22 believe they are at all. I think there's a great  
23 deal of difference between those.

24 Can you maybe help me out a little bit  
25 there? When -- I know your testimony speaks

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701



1 specifically to decentralized operations and a  
2 reaffirmation that that is what NNSA should pursue.  
3 And it also mentions risk acceptance. Is that the  
4 same thing in the mind of the Board?

5 GENERAL HAECKEL: I think there are  
6 subtle issues, and we can take that one for the  
7 record and get you a good definition of what we meant  
8 for each one of those, and get that back to you.

9 MR. FORTENBERRY: I'll give you a couple  
10 of things that bother me about that, and it might  
11 help.

12 The testimony that you gave also seems to  
13 indicate a desire to or a positive attribute of  
14 having centralized, independent, safety and technical  
15 requirements capability.

16 And if you establish that at a level  
17 that is centralized, it is above the level of risk  
18 acceptance. And so it tends to lose meaning.

19 If you're establishing technical  
20 requirements and safety requirements, and then at a  
21 lower level, you are assigning risk acceptance,  
22 you've defeated the first action.

23 The same thing in terms of oversight.  
24 There seems to be some illusion that NNSA needs to  
25 look at its Headquarters oversight and, you know,

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

1 maybe make some changes there. I'm not sure. I'm  
2 sort of reading into what you're writing here.

3 But again, if you establish the risk  
4 acceptance at a level that's below the oversight,  
5 your oversight tends to lose meaning, if you  
6 understand what I'm saying, because the risk  
7 acceptance is down at the decentralized level.

8 GENERAL HAECKEL: But there would be an  
9 oversight process at the Site, and the Site Manager  
10 would be the risk acceptance official.

11 MR. FORTENBERRY: So you're not talking  
12 about a centralized oversight? You're talking about  
13 a Site level oversight?

14 GENERAL HAECKEL: But then there's -- but  
15 then the centralized part would be an independent  
16 look, getting into the redundancy and the  
17 independence of a safety review that is separate from  
18 the line production productivity pressure to complete  
19 the thing on schedule.

20 And that's why when I was discussing  
21 LO/CAS that we had recommended that NNSA look at  
22 reestablishing the Headquarters Site Assessment Teams  
23 until LO/CAS is fully implemented and all those  
24 things are defined and ready to go.

25 So I guess it's a multi-tiered type of an

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

(202) 234-4433

[www.nealrgross.com](http://www.nealrgross.com)

1 operation where you have risk acceptance at the Site  
2 Manager. You have his own oversight process that is  
3 coincident to that, but then you also have a  
4 centralized, separate process, whether it be the  
5 Chief of Nuclear Safety or the Site Team in  
6 anticipation of a fully implemented LO/CAS that would  
7 also take a look at that.

8 MR. FORTENBERRY: You can understand sort  
9 of my difficulty in this. Dr. Mansfield mentioned  
10 the Site Office being responsible for operational  
11 safety. That does not mean being the risk acceptor.  
12 That means he is responsible for operational safety.

13 GENERAL HAECKEL: But my organizational  
14 expert is Bob Degrasse, and with your permission, I'd  
15 like to see if he had any short comments to make on  
16 that.

17 CHAIRMAN CONWAY: Bob, do you want to add  
18 anything? Or do you want to think this through and  
19 then submit it for the record?

20 GENERAL HAECKEL: We can do that.

21 CHAIRMAN CONWAY: Yeah.

22 GENERAL HAECKEL: We can do that.

23 MR. FORTENBERRY: One other point, if you  
24 don't mind?

25 CHAIRMAN CONWAY: Okay.

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

1 MR. FORTENBERRY: I just want to ask  
2 about -- unless you want to speak to that?

3 DR. MANSFIELD: When you're finished, I'd  
4 like to --

5 MR. FORTENBERRY: I wanted to get a --  
6 make sure I saw the difference in high consequence  
7 activities and performance indicators. Again, I sort  
8 of get the sense that it's very important in terms of  
9 addressing high consequence activities and preventing  
10 high consequence events.

11 It's very important to establish baseline  
12 performance level, and then monitor the trends to see  
13 what's happening. And of course you can see the  
14 difficulty of that is that by its nature, you're not  
15 going to have trends in high consequence events.  
16 They're going to be, hopefully, random and  
17 catastrophic or high consequence.

18 And so, I want to make sure there's a --  
19 at least get the sense of -- an appreciation for  
20 that. And that there isn't an overemphasis on  
21 day-to-day events in terms of informing us of how  
22 comfortable we are that we've protected against the  
23 high consequence events.

24 It's a subtle difference, perhaps.  
25 Depending on how you look at it, could be a

1 significant difference. But --

2 GENERAL HAECKEL: There could also be  
3 processes to support high consequence events that  
4 would be able to be trended also.

5 MR. FORTENBERRY: Sure.

6 GENERAL HAECKEL: And you could do a  
7 defense in depth, where you stand back -- and this is  
8 just generally speaking -- but you stand back and  
9 look at those supporting processes. And if you see  
10 a problem with trending in those, then you -- at  
11 least I would be concerned because that feeds a  
12 potentially high consequence overall effort.

13 MR. FORTENBERRY: So I gather from that,  
14 there is an appreciation of that difference and the  
15 challenges in translating one trend to speak for  
16 another phenomena?

17 MR. AZZARO: Again, sorry, gentlemen.  
18 You're nodding your head. If the court reporter is to  
19 get that, is that a yes, or what did you mean by  
20 that?

21 GENERAL HAECKEL: I understand that it  
22 would be difficult to define a trend or spot a trend  
23 in high consequence events until it was too late.  
24 And that's the challenge, is to --

25 MR. FORTENBERRY: And that certainly

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

1 shapes your thinking when you're trying to address  
2 that event.

3 GENERAL HAECKEL: That's right.

4 MR. FORTENBERRY: That's my point. And  
5 it calls for something a little bit more  
6 sophisticated, perhaps, then tracking lock-out,  
7 tag-out, for example, which is very important. And  
8 it can tell you something about your operations, but  
9 it doesn't -- if it's being done correctly, it  
10 doesn't necessarily tell you that you're preventing  
11 high consequence events.

12 GENERAL HAECKEL: Okay.

13 CHAIRMAN CONWAY: Dr. Mansfield?

14 GENERAL HAECKEL: Okay.

15 DR. MANSFIELD: General Haeckel, my  
16 comments [about] having somebody pull the string from  
17 Headquarters on every odd occurrence or  
18 safety-related occurrence, doesn't mean that they  
19 have to -- when I say, pull on every occurrence, it  
20 doesn't mean you have to spend time on every  
21 occurrence.

22 I mean, I believe it's possible for you  
23 to have smart people that know when there's something  
24 that needs to be looked at in more detail. I just  
25 don't believe it's being done now. I believe if they

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

1 had had someone charged with that responsibility at  
2 NASA, they certainly would have asked questions about  
3 foam strikes.

4 We have a mechanism for raising these  
5 issues, but normally the issues are raised by  
6 contractors at the Site through the USQ [Unreviewed  
7 Safety Question] process. And they're -- it's either  
8 self-initiated by continuing examination of  
9 operations, or they're initiated by an event such as  
10 cracked HE.

11 I would think that if you were to finally  
12 establish a Headquarters Chief of Defense Nuclear  
13 Safety, that that would be a focus for being notified  
14 and reviewing every USQD, every Unresolved Safety  
15 Question Determination, or at least all positive  
16 ones.

17 Maybe all of them. Maybe all of them.  
18 Your screening negative ones, that is, ones that are  
19 judged not to be in error, is as important as  
20 reviewing ones that have -- reviewing negative ones  
21 - that have been determined not to be dangerous is as  
22 important as reviewing ones that are determined to be  
23 dangerous.

24 But I agree with you how difficult it is  
25 to do that when you've had the loss of so many people

1 at Headquarters, especially with all the nuclear  
2 safety team that have been carefully put together  
3 over the years, at numbers like 50 percent are what  
4 I have heard also.

5 I have a naive organizational question  
6 that probably won't be accepted well by anybody at  
7 DOE. Why don't you make Germantown part of the  
8 Safety Center -- or the Service Center -- so that  
9 people don't have to move to Albuquerque to deal with  
10 issues at Pantex or at the other labs? At any rate,  
11 that's -- I throw that up as a balloon.

12 But I'd like to ask you to describe, if  
13 you can, the significant finding investigation for  
14 weapon related issues. Could you describe that  
15 process in a simple fashion, the SFI [Significant  
16 Finding Investigation]?

17 GENERAL HAECKEL: The SFI process? I  
18 don't know that I can do it in sufficient detail to  
19 satisfy you, but my understanding is if we have an  
20 abnormal indication, we want to understand why that's  
21 abnormal configuration or indication, and resolve  
22 that as quickly as we can, and I guess more  
23 importantly is to understand as quickly we can.

24 DR. MANSFIELD: It has to do with the  
25 correct -- it has to do with the weapon correctly

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701



1 operating for the Services?

2 GENERAL HAECKEL: Yes.

3 DR. MANSFIELD: There isn't, as I  
4 understand it, there's no SFI-like process for odd,  
5 unexpected details during Pantex operation. It's an  
6 ad hoc process.

7 GENERAL HAECKEL: But in your first  
8 portion, I made a note of that, that that sounded  
9 very -- note to myself -- that sounded very similar  
10 to the SFI process and would that be translatable and  
11 useable in other circumstances.

12 DR. MANSFIELD: Okay. Good. That's --  
13 and you'll continue to look at that?

14 GENERAL HAECKEL: Yes, sir.

15 DR. MANSFIELD: That's all I have.

16 CHAIRMAN CONWAY: Dr. Matthews?

17 DR. MATTHEWS: Yes. I want to ask about  
18 your evaluation of the readiness of the Sites and the  
19 contractors to implement the line oversight  
20 contractor assurance systems. You refer to it by the  
21 adequacy they need to be verified.

22 And my question is, does NNSA have  
23 performance measures, indicators, requirements that  
24 would verify that the Sites and the contractors can  
25 implement LO/CAS?

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

1                   And a sort of follow-up question, has  
2 your team looked at the Davis-Besse lessons learned,  
3 in which one of the big lessons they learned is you  
4 can be fooled by performance indicators, and you've  
5 got to do them right before you're ready to go. I'm  
6 just curious what your comments would be on that.

7                   GENERAL HAECKEL: To my understanding,  
8 the LO/CAS process is still in development. And the  
9 contractor assurance or assessment system would be in  
10 place, and the line oversight would be monitoring  
11 that with its own requirements.

12                   And I'm not familiar with anything that  
13 has been finalized on those LO/CAS metrics. I'll do  
14 another pass at that, and if there are things that  
15 NNSA has decided upon as far as indicators go, I'll  
16 provide those for the record for you.

17                   DR. MATTHEWS: It would be useful.

18                   GENERAL HAECKEL: As far as Davis-Besse  
19 is concerned, we focused just on the NASA Accident  
20 Investigation Board Lessons Learned. In my  
21 testimony, I added in Davis-Besse as a possible  
22 outside occurrence that -- as an example of what NNSA  
23 should be looking at in the future. And -- but  
24 that's not -- those two examples, of the Columbia and  
25 the Davis Besse, were not all inclusive, obviously,

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

1 just examples. So I believe we should move towards  
2 more of that in the future.

3 DR. MATTHEWS: Good. I think that would  
4 be wise.

5 CHAIRMAN CONWAY: Dr. Eggenberger here?

6 VICE CHAIRMAN EGGENBERGER: The current  
7 organization that puts emphasis on improving the  
8 technical capabilities of the DOE staff at the Sites  
9 I think is a very positive thing. And I think that  
10 that should be continued.

11 I think a lot of the discussion here  
12 today was where else should that also be implemented.  
13 And so don't give up on the improving that  
14 capability.

15 Now this, everybody seemed to be a little  
16 itchy when the word "risk acceptance official" keeps  
17 coming up. And it's obvious to me who the risk  
18 acceptance official is, and that is the Secretary of  
19 Energy. And all you have to do is look at a scenario  
20 where you have an accident where you have some  
21 dispersal of material, and it bumps up the line, and  
22 it doesn't stop at the manager of the Site. It runs  
23 right on up, up to the Secretary of Energy.

24 So I know, if I were in the position of  
25 Ambassador Brooks, I certainly would not like to

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

1 accept that kind of responsibility without having my  
2 strong technical capability supporting me. So I  
3 think it's a term that causes a lot of confusion.

4 And I would like to say I liked your  
5 testimony very much. It was to the point, and it's  
6 a job well done.

7 GENERAL HAECKEL: Thank you, sir.

8 CHAIRMAN CONWAY: Okay. General, we  
9 thank you very much for coming here today. You're  
10 free to submit additional information. We will keep  
11 the record open until March 3rd. And we may have  
12 additional questions, which we would send to you.  
13 But you're free to submit any additional information  
14 that you may wish to put into the record.

15 GENERAL HAECKEL: Yes, sir. Thank you.

16 CHAIRMAN CONWAY: Now we'll turn it to  
17 the audience. Is there anyone in the audience that  
18 wishes to be heard this morning? I see no one rising.

19 So with that, then the -- we will recess  
20 until February 9th, at which time we will hear from  
21 the Assistant Secretary of ES&H, Ms. Cook. Thank  
22 you, General.

23 GENERAL HAECKEL: Thank you, sir.

24 (Whereupon, the above-entitled matter was  
25 concluded at 10:07 a.m.)