

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

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MEETING

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TUESDAY

OCTOBER 21, 2003

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DNFSB SAFETY BOARD

The Board met in the DNFSB Hearing Room at 625 Indiana Avenue, N.W., Suite 300, Washington, D.C., at 9:00 a.m., John T. Conway, Chairman, presiding.

PRESENT:

JOHN T. CONWAY	Chairman
A. J. EGGENBERGER	Vice Chairman
R. BRUCE MATTHEWS	Board member

STAFF PRESENT:

RICHARD A. AZZARO	General Counsel
J. KENT FORTENBERRY	Technical Director
JAMES J. McCONNELL	Deputy Technical Director
KENNETH M. PUSATERI	General Manager

ALSO PRESENT:

LINTON F. BROOKS	Administrator, National Nuclear Security Administration
BOB CARD	Under Secretary for Energy Science & Environment
KYLE MCCLARROW	Deputy Secretary of Energy
GLENN PODONSKY	Director, Office of Independent Oversight & Performance Assurance

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9:06 a.m.

CHAIRMAN CONWAY: My name is John Conway, I'm the Chairman of the Defense Nuclear Facilities Safety Board, and I will preside over the continuation of this meeting.

Today's meeting and hearing were publicly noticed in the Federal Register on September 26th of this year. The meeting and hearing are held open to the public in accordance with the provisions of the government in the Sunshine Act.

Today's meeting is an extension of the hearing held on September 10, and constitutes the second in a series in which the Board is examining the Department of Energy's [DOE] current and proposed models of safety oversight and management of the contracts and contractors it relies upon to safely accomplish the mission assigned to DOE under the Atomic Energy Act of 1954, as amended.

We will focus on DOE's new initiatives and what impact, if any, they may have upon assuring adequate protection of the health and safety of the public and workers at DOE's defense nuclear facilities.

I welcome today's presenters, members of

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1 the public, members of the press in our audience, and  
2 those viewing our proceedings electronically.

3 In accordance with the Board's practice,  
4 and as stated in the Federal Register notice, we will  
5 welcome comments from interested members of the public  
6 at the conclusion of the testimony.

7 And that concludes my opening remarks. I  
8 do want to give recognition that two of the Board's  
9 former Board members, Jack Crawford and Joe DiNunno  
10 are here with us in the audience, and we are glad to  
11 see you back, fellows.

12 And with that, I very much appreciate the  
13 fact that the Deputy Secretary, Mr. Kyle McSlarrow;  
14 Bob Card, the Under Secretary; and Linton Brooks, the  
15 Administrator of NNSA [National Nuclear Security  
16 Administration] are here, and we thank you very much  
17 for coming here and joining with us today.

18 Mr. Deputy -- one of our staff will say a  
19 few words before we begin.

20 MR. McCONNELL: Thank you, Mr. Chairman.  
21 My name is Jim McConnell, and I'm the Deputy Technical  
22 Director for the Defense Nuclear Facilities Safety  
23 Board.

24 At the beginning of the first session on  
25 oversight that the Board held in September, I provided

1 some remarks on behalf of the Board Staff, concerning  
2 the role of oversight, in the larger system, by which  
3 DOE directs its activities.

4 I'm pleased, this morning, to add to that  
5 discussion, focusing more specifically on DOE's  
6 current and planned oversight activities.

7 At the last public meeting, I described  
8 the system that DOE uses in its roles as customer,  
9 owner, and enforcer to communicate its expectations to  
10 its contractors, and the method by which DOE ensures  
11 that its expectations are fulfilled.

12 I discussed the role of oversight in this  
13 model and suggested a list of questions that would be  
14 useful to consider during this public meeting. I would  
15 like to restate those questions and provide just a few  
16 additional comments that might be useful to consider  
17 during today's discussions with DOE officials.

18 First, can DOE's management and oversight  
19 be streamlined without degrading its ability to ensure  
20 public health and safety? There is a school of  
21 thought that organizations involved in complex, high  
22 risk activities, such as DOE, can streamline their  
23 organizations without degrading their ability to  
24 accomplish their mission safely.

25 One of the key attributes of these so-

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1 called high performing organizations is an independent  
2 and technically competent engineering enterprise that  
3 centrally controls the technical safety specifications  
4 and expectations of the organization, including the  
5 technical waiver authority.

6 That, then, allows the freedom for the  
7 organization to decentralize control of operations.  
8 This point was emphasized in the Columbia accident  
9 investigation and also highlighted by the Naval  
10 Reactors programs representatives at the last meeting.

11  
12 It is also generally accepted that  
13 redundancy in systems, be they engineered systems or  
14 human organizational systems, if properly implemented  
15 can improve overall system reliability.

16 It is interesting to note that the  
17 Columbia Accident Investigation Board [CAIB]  
18 identified reductions in institutional redundancy at  
19 NASA [National Aeronautics and Space Administration]  
20 as one of the organizational contributors to the  
21 Columbia shuttle accident.

22 On the other hand, organizational  
23 redundancy can be expensive. DOE personnel have  
24 commented many times in the past that it is  
25 inefficient to have checkers checking checkers.

1           One of the objectives of DOE's current  
2 changes in its oversight structure appears to be to  
3 reduce redundancy in order to improve efficiency. It  
4 will be interesting to learn how DOE has balanced the  
5 apparently conflicting interests of institutional  
6 redundancy and efficiency.

7           A third point relevant to DOE's oversight  
8 policy decisions concerns contract models. One  
9 perspective of DOE's recent contract model changes is  
10 that incentives to complete work quickly implicitly  
11 provide an incentive for contractors to work safely.

12           The logic is that schedule delays, caused  
13 by safety problems, will prevent achieving performance  
14 goals and, therefore, contractors are motivated to  
15 work safely.

16           This logic holds, to an extent. Almost no  
17 one would take an action if he or she knew that it  
18 would result in someone getting hurt. Conversely,  
19 almost everyone would put in place an additional  
20 control if he or she knew that it would prevent an  
21 accident that would otherwise occur.

22           The more realistic scenario, however,  
23 involves what decisions a contractor will make under  
24 uncertainty. That is: how much risk is acceptable for  
25 how much benefit?

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1 DOE's recent policy changes regarding  
2 contract structure, for example, accelerated clean-up  
3 incentives, have clearly increased the benefits of  
4 successful risk taking. All else being equal, this  
5 would, predictably, lead to riskier decision-making.

6 It will be useful to hear, today, how  
7 DOE's safety oversight practices will ensure that  
8 appropriate decision-making criteria are maintained.

9 One final comment on this topic is a  
10 practical question. If the Department of Energy's  
11 system would rely heavily on contractors to develop  
12 the data that will be used as a basis for contractual  
13 and regulatory action, how will DOE ensure continued  
14 open, honest, and critical self-assessments on the  
15 part of its contractors?

16 The second area of questions from the last  
17 meeting was: what criteria should be used to judge the  
18 adequacy of federal and contractor oversight systems?

19 It is difficult to define acceptance  
20 criteria for these new oversight systems in advance.  
21 Clearly the best information on the adequacy of an  
22 oversight model is the long-term performance of DOE  
23 and its contractors.

24 However, DOE, particularly NNSA [National  
25 Nuclear Security Administration], is making changes to

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1 its organizational structure and staffing prior to and  
2 during this transition that could make it difficult to  
3 react to problems if they occur.

4 In addition, much of the discussion and  
5 planning for new oversight models that the Board staff  
6 has observed or studied focuses on the generation and  
7 presentation of data, with a strong emphasis on  
8 information technology.

9 It is not clear, yet, that the performance  
10 metrics in use and planned by DOE and its contractors  
11 will provide adequate leading indicators of safety  
12 problems. It will be interesting to learn more about  
13 how DOE has developed and validated its performance  
14 metrics and how DOE will monitor its new programs to  
15 detect problems and deviations from expectations soon  
16 enough to take action before other alternatives, such  
17 as Headquarters level technical safety assessments,  
18 are precluded.

19 The ability to highlight negative trends  
20 and safety problems should not be the only measure of  
21 the adequacy of a safety system. A complete and  
22 robust safety oversight system should also identify  
23 proper root causes, establish effective corrective  
24 action plans, verify that the plans are executed, and  
25 ensure that the fundamental problems are corrected.

1           It will be useful to learn more about how  
2 DOE and its contractors will judge the adequacy of  
3 this part of their system.

4           The last question I raised at the  
5 September meeting was: what are the minimum levels of  
6 federal and contractor oversight that should be  
7 maintained?

8           One of the potential problems of DOE's  
9 reorganization is that local field elements may not  
10 have an adequate number of appropriately skilled and  
11 educated personnel to perform the oversight  
12 responsibilities that will be assigned to them.

13           Finally, it appears that DOE Headquarters-  
14 level line management oversight is being reduced, if  
15 not outright eliminated in some cases. The concern  
16 here is that senior DOE line managers may not have a  
17 separate source of data on safety issues to help them  
18 form conclusions.

19           Independent information is necessary to  
20 allow senior managers to hold their subordinates  
21 accountable for their decisions. Over-reliance on a  
22 common data source, that is in this case field level  
23 assessments, could possibly lead to a common mode  
24 failure at the organizational level.

25           It will be useful to hear today how DOE's

1 planned oversight model will address this issue. That  
2 concludes my remarks this morning subject to any  
3 questions from the Board.

4 I look forward to hearing from the  
5 representatives of the Department.

6 CHAIRMAN CONWAY: Mr. McSlarrow, welcome.

7 MR. McSLARROW: Thank you, Mr. Chairman.  
8 Mr. Chairman, Members of the Board, I appreciate  
9 having the opportunity to address you today. In my  
10 role, as the Deputy Secretary of Energy, I serve as  
11 the Department's Chief Operating Officer, and I have  
12 responsibility for providing direction to all DOE  
13 organizations, including NNSA.

14 The subject of today's event, safety  
15 oversight, is a critical component of the Department's  
16 management system. The Secretary and I take our  
17 responsibility to ensure the Department's missions are  
18 performed safely very seriously. And the Secretary  
19 has made this clear from his first year in office.

20 Just to give you one example, the  
21 Secretary's stated remarks at the 2001 Executive  
22 Safety Conference, and I quote: "I want to speak  
23 about safety, because nothing is more important. If  
24 we do this well, everything else will fall into place.  
25 If we fail, nothing else we can do can make up for

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