

EDO Principal Correspondence Control

FROM: DUE: 03/14/03

EDO CONTROL: G20030104
DOC DT: 03/03/03
FINAL REPLY:

Senator Thomas Carper
Senator George Voinovich

TO:

Chairman Meserve

FOR SIGNATURE OF :

** GRN **

CRC NO: 03-0115

DESC:

Post Hearing Questions from the February 13, 2003
Hearing on Nuclear Safety

ROUTING:

Travers
Paperiello
Kane
Norry
Craig
Burns/Cyr
Rathbun, OCA
Anderson, OEDO

DATE: 03/06/03

ASSIGNED TO:

CONTACT:

| | |
|------|-----------|
| NRR | Collins |
| RES | Thadani |
| NMSS | Virgilio |
| NSIR | Zimmerman |
| CFO | Funches |
| EDO | Norry |
| RI | Miller |
| HR | Bird |
| CIO | Reiter |
| OE | Congel |

SPECIAL INSTRUCTIONS OR REMARKS:

Use Q&A format attached. Provide hard copy and
diskette to Patty Anderson, OEDO by March 14, 2003.

Template: SECY-017

E-RIDS: SECY-01

JAMES M. INHOFE, OKLAHOMA, CHAIRMAN

JOHN W. WARNER, VIRGINIA
CHRISTOPHER S. BOND, MISSOURI
GEORGE V. VOINOVICH, OHIO
MICHAEL D. CRAPO, IDAHO
LINCOLN CHAFFEE, RHODE ISLAND
JOHN CORNYN, TEXAS
LISA MURKOWSKI, ALASKA
CRAIG THOMAS, WYOMING
WAYNE ALLARD, COLORADO

JAMES M. JEFFORDS, VERMONT
MAX BAUCUS, MONTANA
HARRY REID, NEVADA
BOB GRAHAM, FLORIDA
JOSEPH L. LIEBERMAN, CONNECTICUT
BARBARA BOXER, CALIFORNIA
RON WYDEN, OREGON
THOMAS R. CARPER, DELAWARE
HILLARY RODHAM CLINTON, NEW YORK

ANDREW WHEELER, MAJORITY STAFF DIRECTOR
KEN CONNOLLY, MINORITY STAFF DIRECTOR

United States Senate

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

WASHINGTON, DC 20510-6175

March 3, 2003

Dr. Richard A. Meserve
Chairman
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Chairman Meserve:

Thank you for appearing before the Subcommittee on Clean Air, Climate Change and Nuclear Safety on Thursday, February 13, 2003. We appreciate your testimony in our effort to conduct general oversight of the United States Nuclear Regulatory Commission. Your testimony was helpful and we know that your input will prove valuable as the Subcommittee continues its work on this important topic.

Enclosed are questions that have been submitted by Senators Inhofe, Jeffords, Carper, and Lieberman for the hearing record. Please submit your answers to these questions by COB Friday, March 21, 2003 to the attention of Jim Qualters, Senate Committee on Environment and Public Works, 415 Hart Senate Office Building, Washington, D.C. 20510. In addition, please provide the Committee with a copy of your answers via electronic mail to James_Qualters@epw.senate.gov or on a 3.5 inch disk in WordPerfect or Microsoft Word format. To facilitate the publication of the record, please reproduce the questions with your responses.

Again, thank you for your assistance. Please contact Michael Whatley at (202) 224-6176 or James Reilly at (202) 224-2441 with any questions you may have. We look forward to reviewing your answers.

Sincerely,



Thomas Carper
Ranking Member



George Voinovich
Chairman

Senator Jim Inhofe
Questions for NRC
NRC Oversight Hearing - February 13, 2003

1. *NRR* What commitment has the NRC made to new reactor licensing? What are the challenges faced by the NRC, and what is being done to address those challenges in order to ensure a successful program?
2. *RES/NMSS* Could you tell us what has been done in the past year, and what is planned for the future, with regard to cask testing? There was recently a tunnel fire in Baltimore - and that has raised some concerns with the durability of spent fuel casks. What would have been the impact of the Baltimore tunnel fire on a cask?
3. *NRR* I know much is being done to ensure that a Davis-Besse type of situation doesn't occur again - ie. reactor heads. But what is the NRC doing to address other "passive" areas in order to avoid, not necessarily a repeat of Davis-Besse, but a similar, unacceptable situation from occurring? What sort of changes in oversight is the NRC considering with regard to those "passive" areas?
4. *NSIR* Chairman Meserve noted that the NRC has been working on the Design Basis Threat in consultation with the Department of Homeland Security, the Central Intelligence Agency and other Federal entities. Could you please describe what is involved in that consultation and what role these agencies are playing in the review of the Design Basis Threat?
5. *OCFO* The President's Budget for FY 2004 includes a proposal to extend the NRC user fee at 90% of the NRC's overall budget. As you may know, this committee considered and passed the initial legislation that has led to a gradual reduction of the user fee from 100% to 90%. At the time that legislation was being considered,

the NRC used data to show that approximately licensees directly benefited from 90% of the NRC's budget which was the basis for that legislation.

- CCFD
- a. Has the NRC conducted a similar analysis this year to determine the cost of "indirect" services that the NRC provides? Can the NRC provide such information to the committee?
 - b. Does the NRC believe that additional security-related costs should be added to the fee base?

QUESTIONS FROM SENATOR JEFFORDS
TO THE NUCLEAR REGULATORY COMMISSION
AS FOLLOW UP TO THE HEARING OF FEBRUARY 13, 2003
March 3, 2003

Commissioner Merrifield testified that the Commission has a design basis threat out for interagency review, and that the Commission is currently receiving comments and expects to have "completed that work by the end of March."

- NSIR
- 1) Does this mean the Commission expects to have comments back by the end of March, or that the revision of the design basis threat will be completed by the end of March?
 - 2) What is the nature of the document NRC has out for agency review? Is it an advanced notice of proposed rulemaking? Is it a draft proposed rule?
 - 3) Please identify all agencies and persons to whom the Commission has provided this document that is currently out for agency review.
 - 4) Does the NRC intend to revise its design basis threat regulations, and if so, when does it anticipate completing that revision?

Commissioner Diaz testified as follows: "In reality, we do have a de facto new design basis threat that we established a year ago. So although it was a DBT, the security requirements are for a much larger DBT than the older one. So a de facto DBT has existed for almost a year."

- 5) Please explain the nature of this new design basis threat. Is it consistent with the Commission's existing design basis threat regulations? If not, please explain what the "new design basis threat" is. Please also explain how its implementation is consistent with NRC rules and the requirements of the Administrative Procedures Act.

Chairman Meserve testified that the NRC has a task force that is developing guidance on how to decide whether material should be withheld from public disclosure.

- DEDM
- 6) Please provide information as to any guidelines or criteria this task force has developed.

- DEDM
- 7) Will these general criteria or guidance be made available to the public? If so, will NRC issue a regulation? If not a regulation, what other form will this public release take? If this general guidance will not be provided to the public, please explain why not.

Commissioner Merrifield testified that for the first time, the NRC is getting a large number of people within the nuclear power industry with secret level security clearances so as to ensure industry input into NRC decision-making, such as for changes to the design basis threat.

8) Is the NRC also ensuring that potentially affected private citizens, or non-governmental groups whose mission it is to address safety or security issues at commercial nuclear power plants, will, if they obtain appropriate clearances, have input into NRC decision-making, including changes to the design basis threat? If so, how is NRC accomplishing this? If not, why is NRC not doing this?

NSIR

Senator Thomas R. Carper

Questions for the Record

February 13, 2003.

Oversight of the Nuclear Regulatory Commission

Panel One

Questions for NRC Commissioners:

Question about Salem, NJ radioactive water leak:

Chairman Meserve: At today's hearing, you were kind enough to provide some background on the events related to release of small amounts of tritium at the Salem 1 reactor. While I appreciated your response and that of the other commissioners regarding the effect of tritium, I remain concerned about the timeline regarding the notification of the public in cases such as this.

RI 1.

Specifically, I would like to know on what date the NRC on-site inspector was aware of the situation at Salem 1?

What date was the situation reported to the NRC by the plant owner, PSEG? And finally, on what date was a public notice of this event issued by the NRC?

RI 2.

Also, I would like to know specifically what is the responsibility of the plant's owner, PSEG in cases like this?

Question about new technologies related to nuclear power:

As I mentioned, I am a Senator who is interested in learning more about nuclear power. In particular, could you elaborate on what new nuclear power technologies are expected to be deployed in the coming decade?

NRR 3.

You mentioned that three companies are planning to submit pre-license applications to the Commission. If those were to be approved, what would the likely schedule then be with regard to possible construction of a new reactor at one of those sites?

NRR 4.

Question about lack of qualified nuclear personnel:

Mr. Chairman, in your written testimony, you made the following comment: *"Moreover, the number of individuals with the technical skills critical to the achievement of the Commission's safety mission is rapidly declining in the nation, and the educational system is not replacing them. The maintenance*

of technically competent staff will continue to challenge governmental, academic, and industry entities associated with nuclear technology for some time to come." I have heard similar assessments from other agencies, but not from any more critical to public safety than the NRC. My question is what should we, the Congress, do to reverse this trend. And second, what will happen if we do not?

5.
HR

Question about transportation of nuclear waste:

Mr. Chairman, during debate last year over the Senate approval of Yucca Mountain, one of the key issues was that full scale testing of the containers that would be used to transport the waste has not been conducted. In your testimony you mentioned something about the Package Performance Study to study rail and truck casks at full scale. What is involved in these tests, what schedule do you have for them, and what is the system for double-checking test results?

RES/NMSS
6.

Has there been progress in selecting or designating transportation routes for the high level waste? What is the schedule for those designations and who is involved?

7.
NSIR

Question about the Inspector General's report on Challenges facing the NRC:

The NRC submitted a report last November entitled 'Inspector General's Assessment of the Most Serious Management Challenges Facing the NRC'. The report identifies nine important management challenges, ranging from —

- A > Protection of nuclear material and facilities used for civilian purposes,
- B > Proper administration of all aspects of financial management; to
- C > Protection of databases and other important NRC information.

8. What has the Commission done to address the concerns raised in that report? Do you believe the IG has accurately characterized the challenges facing the NRC?

A. NSIR

B. OCFD

C. OCID

February 20, 2003

**FOLLOW-QUESTIONS FROM SENATOR JOSEPH LIEBERMAN
SENATE CLEAN AIR, CLIMATE CHANGE, AND NUCLEAR SAFETY
SUBCOMMITTEE
FEBRUARY 13, 2003 NUCLEAR REGULATORY COMMISSION OVERSIGHT
HEARING**

Millstone-Control of Special Nuclear Material

Background. In November 2000, the NRC license holder for Millstone Nuclear Power Station Unit 1 discovered that they could not find two spent fuel rods, which were last accounted for in 1978. The NRC Office of Inspector General issued a report on this incident in 2002. As summarized in the February 13, 2003, statement for the record of Hubert T. Bell, Inspector General, the event inquiry found:

[T]he missing fuel rods were last accounted for during a 1978 Nuclear Material Control and Accountability (MC&A) inspection at Millstone Unit 1 conducted by the NRC. In a 1982 MC&A inspection conducted by the NRC, the fuel rods were no longer present on the inventory. The OIG determined that the NRC inspector did not identify the loss of these fuel rods in the 1982 inspection because he relied on an inaccurate current inventory amount instead of beginning the inspection with the ending inventory amount reflected on the 1978 inspection. The OIG also determined that the last MC&A inspection conducted at Millstone was 1982, and that the NRC ended this inspection program for all nuclear power plants in 1985.

Question 1. What concrete steps has the NRC taken to ensure better accounting of special nuclear materials and to achieve a higher level of confidence in its regulation of special nuclear material? Has the NRC considered resuming periodic Material Control and Accounting inspections at nuclear power reactors?

Question 2. Because previous NRC inspections at Millstone did not report the fuel rods missing and the NRC no longer performs routine Material Control and Accounting inspections at nuclear power reactors, how confident can the agency be that this problem is not more widespread?

Millstone-Fuel Pool Risks

Question 3. I understand that on March 19, 1999, Dominion Nuclear Connecticut filed an application for a license amendment to increase the storage capacity of its Unit 3 spent fuel pool from 756 assemblies to 1860 assemblies. The pool currently has 21 high-density fuel racks; the license amendment would allow an additional 15. What is the status of NRC action on this application? Has it been approved?

Question 4. In reviewing this application, what alternatives for storage of nuclear waste did/will the NRC consider?

NSIR
NMSS
NRR

NRR

NRR



NRR
Question 5. In reviewing an application to increase the capacity of a spent fuel pool, does the NRC take into account the extent to which this action may increase security risks to the plant and possible consequences of pool failure in the event of an accident or security breach at the plant? Were these considerations taken into account in the review of the Millstone Unit 3 expansion request?

NRR
Question 6. Please describe the current NRC procedures to prevent loss of water from spent rod pools from various causes, including acts of malice. Please describe current NRC procedures to avoid a fire in the fuel pool resulting from a loss of water and to extinguish a fire in the fuel pool should one occur.

NRR
Question 7. What steps has the NRC taken to make spent rod pools more secure at plants like Millstone since the events of September 2001? What additional steps/studies does the NRC plan to undertake? If additional study of this subject is planned, what is the time frame for NRC completion of the work (please indicate month and year)? Is the NRC evaluating alternatives for hardening these and other types of nuclear waste storage facilities?

Indian Point—Steam Generator Tube Rupture at Unit 2

Background. On February 15, 2000, Indian Point Unit 2 Power Plant experienced a steam generator tube rupture in one of its four steam generators. As described in the February 13, 2003, statement for the record of Hubert T. Bell, Inspector General, the Office of the Inspector General in 2002 investigated the adequacy of NRC's handling of issues associated with the rupture as well as NRC's handling of shortcomings identified in the plant's Emergency Preparedness Plan.

NRR
Question 8. What concrete steps has the NRC taken to ensure that NRC staff with appropriate technical expertise evaluate inspection reports like the 1997 inspection report on Unit 2?

NRR
Question 9. What concrete steps has the NRC taken to ensure that NRC staff conduct an adequate review of license amendment requests such as the 1999 request to amend the license to extend the steam generator inspection interval? In particular, has the NRC instituted adequate controls to demonstrate that all steps of its process for responding to license amendment requests are completed and supported by sufficient documentation?

NRR
Question 10. What steps has the NRC taken to improve communications between off-site emergency preparedness officials and the NRC to improve emergency preparedness response during the incidents such as the February 15, 2000 incident at Unit 2?

Indian Point—Emergency Preparedness Plan

Background. On January 10, 2003, James Lee Witt Associates, Inc., released a draft report concerning the emergency preparedness of the Indian Point and Millstone Power Plants. The review assessed whether the existing plans and capabilities of the jurisdictions involved were sufficient to ensure public safety in the event of incident at one of the plants and how existing plans and capabilities might be improved.

NRR

Question 11. Do the NRC and/or FEMA plan to take any interim measures to address the significant concerns identified in the draft Witt report?

NRR

Question 12. Please describe the types of actions available to the NRC and/or FEMA to assess the adequacy of an approved emergency response plan if there is an allegation that the plan is insufficient to protect the public health and safety of citizens living within the emergency planning zones for the nuclear power facilities included in the submission by providing reasonable assurance that State and local governments can and intend to effect appropriate protective measures offsite in the event of a radiological emergency. Please describe the range of actions available to the NRC and/or FEMA if they find that an emergency response plan is no longer adequate. Has the NRC and/or FEMA made such a finding in the past? If so, please describe the specific NRC and/or FEMA response in each instance. Has the NRC and/or FEMA action included suspension of the plant's license or temporary shut down of the plant?

NRR

Question 13. I understand that the State of New York and several of the counties surrounding the Indian Point Plant have declined to provide annual certification of the continued adequacy of the emergency preparedness plan for fiscal year 2003. Is this accurate? Please describe the annual State and local government certification requirement. What is the effect of the failure of a State and/or local government to provide the annual certification?

Security Audits

NSIR/
OCIO

Question 14. What concrete steps does the NRC plan in response to the findings of the FY 2002 Evaluation of the NRC's Information Security Program that (1) the NRC security program is not well integrated and not consistently implemented across the agency; and (2) NRC officials have not clearly defined the responsibility and accountability for all aspects of the information security program within its organizational structure?

NSIR/
OCIO

Question 15. How does the NRC plan to respond to recent Office of Inspector General findings (detailed in the written statement for this hearing) that (1) NRC program guidance does not adequately protect "Official Use Only" documents from inadvertent public disclosure; (2) training on handling, marking, and protecting sensitive unclassified information is not provided to all NRC employees and contractors on a regular basis; and (3) NRC employees are not consistently implementing the requirement to report incidents of inadequate release of sensitive unclassified information to the Office of the Executive Director for Operations?

NRC Security Planning Post September 11, 2001

Question 16. In the *Performance and Accountability Report for 2002*, the NRC indicates that it has been conducting a comprehensive review of its programs and security of the nuclear facilities and activities it regulates, and has made significant changes to its regulatory programs and has enhanced the already robust security of sensitive facilities and activities, including a new homeland security threat advisory system. Please describe the additional concrete steps the NRC has taken to improve security at all nuclear power plants and at the Indian Point and Millstone Nuclear Power Plants, in particular.

NSIR

Question 17. In the *Performance and Accountability Report for 2002*, the NRC indicates that it is studying the potential vulnerability of nuclear power plants, fuel cycle facilities, and nuclear fuel and materials storage and transportation containers, including deliberate aircraft crashes on power reactor facilities and storage and transportation casks. When does the NRC anticipate this study to be completed (please indicate month and year)?

NSIR

Question 18. As part of these reviews, is the NRC considering whether it requires/would benefit from changes to its existing legal authority?

NSIR

Question 19. Has the NRC consulted with interested stakeholders (federal, state, and local government; interest groups; and the public) in conducting these reviews?

Question 20. The NRC completed a new round of tabletop exercises using the expanded threat scenarios for power reactor facilities and selected fuel cycle facilities in November 2002. Does the NRC plan to a report on these exercises? If so, when will the report be released (please indicate month and year)? Does the NRC plan to make the report available to the public?

Question 21. In FY 2003, the NRC plans to complete its review and revision of the design basis threat that provides the foundation for the security programs of nuclear power plant and category I fuel facility licensees. Please indicate the month in which this review will be completed. What criteria has the NRC established for this review? Will it account for security threats due to terrorist activities?

Question 22. In the *Performance and Accountability Report for 2002*, the NRC described plans to conduct full security performance reviews, including force-on-force exercises at each nuclear power plants on a 3-year cycle instead of the 8-year cycle that has been used prior to September 11. Does the NRC plan to begin the first force-on-force exercises in FY 2003? How many such reviews will be conducted in FY 2003? How does the NRC plan to prioritize the review of plants? Please confirm my understanding that Chairman Meserve committed to a force-on-force exercise at the Indian Point plant during this calendar year.

Question 23. Does the NRC plan to review the adequacy of the existing 10-mile emergency planning zone around nuclear power plants? How does the NRC protect public health and safety of citizens living 20-, 50-, 100-miles downwind of nuclear power plants?

NRR

Question 24. I understand that on December 18, 2002, in five separate licensing proceedings for power plants, the NRC issued orders rejecting NEPA claims related to security risks because security risks are incalculable due to the undetermined probability of an attack. Please explain

NSIR

these NRC rulings in detail. How does/will the NRC address these security vulnerabilities in its licensing procedures for specific plants? Does the NRC's commitment to "probabilistic risk-informed management" prevent the agency from addressing security vulnerabilities?

Question 25. The citizens of Connecticut and across the United States are increasingly concerned about the safety and security of nuclear power plants near their homes, particularly during our heightened state of terrorism alert. What steps has the NRC taken to provide regular updates to the public about its ongoing work to address security concerns? What steps has the NRC taken to provide regular information to residents of areas surrounding individual plants about specific measures at those plants?

Nuclear Waste Transportation

Background. I understand that NRC Atomic Safety Licensing Boards are currently adjudicating the "Private Fuel Storage" proposal, which would involve transporting 44,000 tons of high-level nuclear waste from reactors across the country to Utah. In the future, the NRC is also expected to consider a DOE license application for shipping 77,000 tons of waste to Yucca Mountain. Leaked results of an explosive test on a German CASTOR nuclear waste cask demonstrated its vulnerability to attack. Apparently, no explosive tests on currently licensed US transport casks have been performed. I also understand that the NRC has contracted with Sandia National Laboratories to perform limited physical tests on nuclear waste transportation casks (the Package Performance Study), but this study will not include explosive tests.

Question 26. Does the NRC plan to include explosive tests in the Package Performance Study test protocol, given the current security context?

Question 27. What is the NRC currently doing to evaluate and address security vulnerabilities of nuclear waste shipments?

NSIR

NMSS

RES/NMSS

NSIR/
NMSS

Employee Survey—NRC Safety Climate

Background. I understand that the *2002 Survey of NRC's Safety Culture and Climate*, a survey conducted by an independent contractor on behalf of the NRC Office of Inspector General, found that:

- Only 53% of NRC employees feel that it is "safe to speak up in the NRC" to raise safety concerns;
- Only 43% of NRC employees feel that all employees across the NRC are held to the same standards of ethical behavior;
- Only 43% of NRC employees feel that the NRC is highly regarded by the public.

Responding to the question "I believe NRC's commitment to public safety is apparent in what we do on a day-to-day basis," only two thirds of employees responded favorably – down 5 percentage points from the equivalent 1998 survey.

DEDM **Question 28.** What concrete steps is the NRC taking to improve the safety culture within the agency and clearly demonstrate to its staff and the public a commitment effective regulation and protecting health and safety?

Recent Events at Davis-Besse:

Background. The NRC's Office of the Inspector General (OIG) released an event inquiry report in December of 2002, entitled "NRC's Regulation of Davis-Besse Regarding Damage to the Reactor Vessel Head." As summarized in the February 13, 2003, statement for the record of Hubert T. Bell, Inspector General, the event inquiry found:

NRC's decision to allow [the Davis-Besse plant] to continue operating beyond December 31, 2001, without performing vessel head penetration nozzle inspections was driven in large part by a desire to lessen the financial impact on the licensee that would result from an early shutdown. In addition, the OIG found that NRC staff was reluctant to take regulatory action against a licensee absent absolute proof of a violation, despite strong indications to that [the plant] was not in compliance with NRC regulation and plant technical specifications and may have operated with reduced safety margins.

Additionally, the NRC's Inspector General is now investigating to determine if NRC's inspector at Davis-Besse was given a 5-page "condition report" and photographs of acid and rust on the reactor vessel head by a FirstEnergy employee in April of 2000, during a routine shutdown. If such a report and photos were submitted to NRC at that time, this would mean that NRC had substantial evidence to justify a shutdown nearly two years before Davis-Besse was shutdown for investigative inspections.

OE **Question 29.** What enforcement action will NRC take in response to the Davis-Besse incident?

NRR.

Question 30. To what extent is the emphasis on production over safety, reported on at Davis-Besse, characteristic of operations at FirstEnergy's other nuclear power plants and reactors across the country?

NRR

Question 31. Why did the NRC take such a weak approach to regulation at Davis-Besse, giving undue consideration to the financial outcomes of decisions critical to public health and safety?

NRR

Question 32. What steps is the NRC taking to prevent similar incidents at other nuclear facilities?

FORMAT FOR CONGRESSIONAL Q&As

QUESTION 6. Congressional questions are assigned to various offices for preparation of the answers.

(A) What is the typing format for responding to Congressional questions?

ANSWER.

Q&As are to be typed on word processing equipment (WordPerfect) and provided to the EDO both by hard copy and a 3.5 inch diskette (as directed on Green Control Ticket under Special Instructions or Remarks). Type each Q&A as a separate job (including multiple parts, [A, B, C, etc.]) to aid in later revisions and transmission of Q&As to Congressional Affairs. Use 11 pitch, Arial type style, initial caps only, and double spacing. Use four spaces between each paragraph. Side margins are 1-inch for both left and right; and 1-inch for the top and bottom margins. Do not use a required return after each typed line.

At the bottom right margin on each page in the footer text, indicate Committee, originating Office (not Division or Branch). Current date should appear directly below the Committee/Office. Subsequent revisions should reflect the revised date.

Inhofe/NRR
08/06/98

QUESTION 6.(A).

2

If succeeding pages are required in answering the question, the question number and page number should be typed in the header margin text area, so that it appears at the top of each succeeding page (as shown above).

If enclosures are to be included with a response, indicate on Q&A (as shown below) and type question number and part (A, B, C, etc., as appropriate) on each enclosure. Three copies of each enclosure are required. Also, provide an electronic copy of the enclosure, if possible.

Enclosure:

Sample Q&A Format

Inhofe/NRR
08/06/98