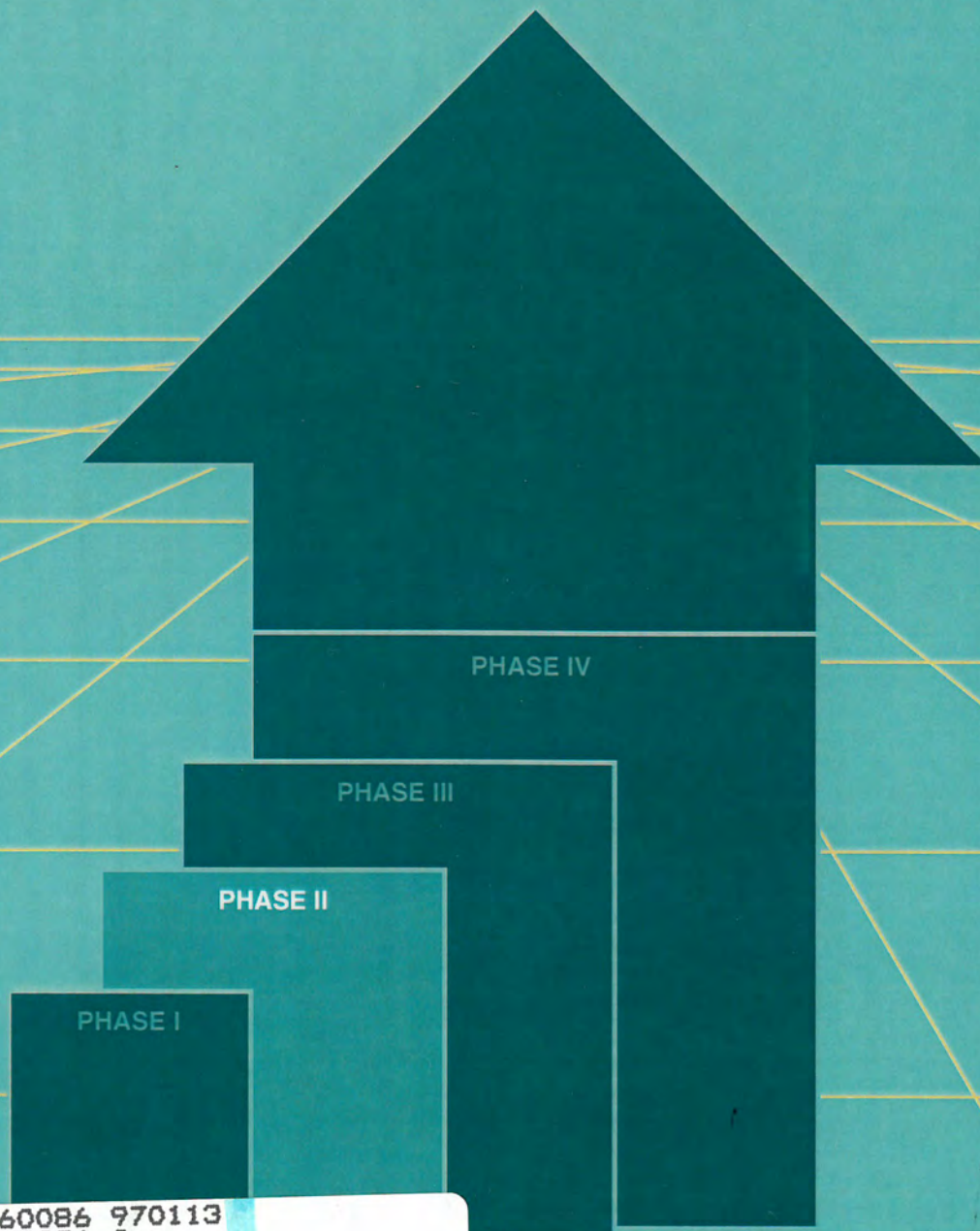


STRATEGIC ASSESSMENT AND REBASELINING



9701160086 970113
PDR NRC SA I
GEN PDR

Volume I Phase II: Stakeholder Interaction Report

U.S. Nuclear
Regulatory Commission

December 1996

TABLE OF CONTENTS

1.0	Executive Summary	1-1
2.0	Introduction	2-1
2.1	Purpose	2-1
2.2	Stakeholder Activities	2-1
2.3	Organization of Phase II Stakeholder Interaction Report	2-2
3.0	Summary Analysis of Comments	3-1
3.1	Oversight of the Department of Energy (DSI 2)	3-1
3.2	NRC's Relationship with Agreement States (DSI 4)	3-11
3.3	Low-Level Waste (DSI 5)	3-25
3.4	High-Level Waste (DSI 6)	3-35
3.5	Materials/Medical Oversight (DSI 7)	3-47
3.6	Decommissioning - Non Reactor Facilities (DSI 9)	3-57
3.7	Reactor Licensing for Future Applicants (DSI 10)	3-69
3.8	Operating Reactor Program Oversight (DSI 11)	3-77
3.9	Risk-Informed, Performance-Based Regulation (DSI 12)	3-85
3.10	Role of Industry (DSI 13)	3-95
3.11	Public Communication Initiatives (DSI 14)	3-103
3.12	International Activities (DSI 20)	3-113
3.13	Fees (DSI 21)	3-123
3.14	Research (DSI 22)	3-131
3.15	Enhancing Regulatory Excellence (DSI 23)	3-137
3.16	Power Reactor Decommissioning (DSI 24)	3-143
3.17	General Comments	3-153
Appendices		
A	Glossary	A-1
B	Written Comments Table	B-1

This page was intentionally left blank.

1.0 EXECUTIVE SUMMARY

In August 1995, the Nuclear Regulatory Commission (NRC) initiated a Strategic Assessment and Rebaselining initiative. This four phase initiative included the publication of issue papers that identified broad direction setting issues that would influence the direction and activities to be conducted by the NRC for the next several years. This report discusses the activities conducted in Phase II of this initiative.

1.1 BACKGROUND

The environment in which the NRC conducts its activities is rapidly changing as a result of many influences. These include resource constraints, changes in the industry that the NRC regulates, and the potential for new and revised mission requirements. In response to this changing environment, the NRC initiated a Strategic Assessment and Rebaselining Initiative in August 1995. One of the initial steps in this initiative was the formation of the Strategic Assessment and Rebaselining Steering Committee (Steering Committee). Members of this committee were selected from senior agency managers. The Steering Committee assessed where the NRC is today and developed options for the Commission to consider in determining the agency's future path. This effort is being completed in four broad phases.

As discussed below, Phase I examined the agency's present activities and included the identification of broad direction-setting issues. Phase II included the preparation of issue papers for the direction-setting issues, and stakeholder comment on these issue papers. Phase III will include development of a Strategic Plan. Phase IV will include implementation of the Strategic Plan. This report describes Phase II interactions with stakeholders, summarizes stakeholder comments which were received, and contains copies of stakeholder comments.

Phase I: Strategic Assessment

The first phase, the Strategic Assessment phase, began in August 1995 and was completed in April 1996. The Steering Committee began its assessment of where the agency is today by examining current NRC functions and activities. This assessment included approximately 4,500 activities that the Steering Committee reviewed to gain a thorough understanding of what the agency is doing, why the agency is doing it, and what factors need the most consideration in providing options for change. This information was the basis for defining strategic and direction-setting issues (DSIs) whose resolution would influence the future direction of the agency.

Phase II: Rebaselining and Issue Papers

The second phase built on the strategic issues and the DSIs defined in Phase I. Issue papers were prepared to discuss a broad range of potential options that the Commission would consider for each DSI. Following initial Commission review, preliminary Commission views were identified. The issue papers, including the Commission's preliminary views, were published to allow NRC staff (internal stakeholders) and members of the public (external stakeholders) to review the information and to comment on the issues before the Commission made any final decisions. The issue papers were intended to obtain broad direction from the Commission which would be the basis for the

NRC's Strategic Plan. The issue papers contain descriptions of the background of the issue, and the external and internal factors that the Commission may wish to be aware of when considering options for resolving the issue. The issue papers also provide the Commission with policy options for the issue. It should be noted that the staff was encouraged to develop an innovative range of options unconstrained by existing practices or organizational structure. Some of these options were extreme or unlikely to be selected, however, they were retained in the issue papers to illustrate the breadth of options that were considered.

Phase III: Development of a Strategic Plan

In Phase III, the Strategic Plan will be developed from the agency's mission statement, its strategic vision, general goals, and the Commission's decisions on the issue papers. The development of the Strategic Plan is guided by the requirements in the Government Performance and Results Act of 1993. The Strategic Plan will be the agency's tool for setting priorities and allocating resources consistent with the vision and goals of the agency.

Phase IV: Implementation

Phase IV, the implementation phase, will begin with the final Commission decisions on the issue papers. The implementation phase includes staff activities to implement the Commission's decisions. The implementation phase will also include developing a framework to update the Strategic Plan and to integrate the Strategic Plan into the budget and performance monitoring process.

2.0 INTRODUCTION

2.1 PURPOSE

The purpose of this report is to provide a summary of stakeholder comments for each of the DSI's to the NRC Commission to consider as part of making final decisions on the DSI's.

2.2 STAKEHOLDER ACTIVITIES

The first step in the process of getting comments on the DSI issue papers was to provide these issue papers to stakeholders. In order to reach as many stakeholders as possible, the staff used a variety of communication mechanisms to disseminate information on the strategic planning process and the issue papers. In September 1996, the first of a series of press releases was issued on Phase II of the NRC's Strategic Assessment and Rebaselining activities and a notice was published in the *Federal Register*.

Also in September, the Strategic Assessment Framework Document, the Stakeholder Involvement Process Paper, and the issue papers were entered on the NRC's Home Page on the World Wide Web (Internet) and on the electronic Federal World Bulletin Board Service, and copies were made available through the NRC's Public Document Room. These documents described the initiative, explained how copies of the issue papers could be accessed and obtained, and solicited comments from stakeholders. Also an agency announcement was issued to all NRC employees regarding the Strategic Assessment and Rebaselining initiative, the availability of the issue papers, and the methods for submitting comments on the issue papers.

The next step was to conduct meeting with stakeholders to explain the initiative and discuss the DSI's. Meetings were held with internal and external stakeholders. NRC employees had the opportunity to discuss the strategic planning process and the issue papers. As a part of this process, the Steering Committee held a meeting with senior managers to describe the issue papers and the importance of stakeholder comments. NRC managers were encouraged to meet with employees to discuss the issue papers and obtain feedback. Additionally, meetings were conducted in each of the four regional offices to discuss the strategic planning process and the issue papers. Also, the NRC has a number of oversight committees that review NRC activities. Three of these committees, the Advisory Committee on Reactor Safety, the Advisory Committee on Nuclear Waste, and the Advisory Committee on Medical Uses of Isotopes were briefed on the process and the issue papers. These meetings were attended by members of the public.

Meetings were also held with external stakeholders. To give the public an opportunity to meet agency representatives and comment orally on the 16 issue papers, the NRC conducted three stakeholder conferences. Each conference was held over a period of two days. The meeting sessions included a summary of the direction-setting issue, followed by a discussion of the issue paper. The value of these meetings was twofold. First, the meetings gave NRC an opportunity to hear stakeholder positions and ideas on various aspects of the issues and the preliminary views. Second, these exchanges gave stakeholders with different or competing interests an opportunity to discuss different

perspectives or views related to the DSI issue paper. External stakeholder meetings also included discussions during the NRC's Annual Agreement State Regulators' Conference and during the annual State Liaison officers meeting.

In order to inform stakeholders about the three stakeholder conference dates and locations, and the topics to be discussed, approximately 1,600 announcements were mailed to stakeholders such as environmental groups, professional societies, citizen groups, and government associations. The announcement of the stakeholder conferences was added to the NRC's recorded telephone message system that identifies scheduled meetings. A press release was issued by NRC's Region I and II Offices discussing the upcoming public stakeholder conference in Washington, D.C., and the methods for submitting comments on the issue papers. These press releases were sent to the media in these regions, and to the public affairs officers at each reactor plant in these regions. Similar press releases were issued from Regions III and IV discussing the upcoming public stakeholder conferences at Chicago, Illinois, and Colorado Springs, Colorado, respectively. A *Federal Register* Notice was also issued announcing the schedule for the three stakeholder conferences.

Three stakeholder conferences were conducted in October and November 1996. A total of approximately 175 stakeholders representing a broad range of interests attended these meetings. Transcripts from these conferences are contained in Volume II of this report. Transcripts from these conferences were posted on the NRC's Home Page on the World Wide Web and on the Federal World Bulletin Board Service, and were made available through the NRC's Public Document Room. A *Federal Register* Notice and a press release were issued to inform stakeholders that these transcripts were available for review. Copies of comments received on the issue papers were made available through the NRC's Public Document Room.

Additionally, as a result of the comment period which began in September with publication of the issue papers, approximately 165 comment letters were received from stakeholders utilizing the Internet and the postal service.

Although the comment period was initially scheduled to close on November 15, 1996, it was extended until December 2, 1996, in response to stakeholder requests. During the third public meeting in Chicago on November 8, attendees were notified that the period for public comment on the issue papers had been extended to December 2, 1996. Stakeholders who attended the previous two public meetings were notified of the extension through mailings. Also, the extension of the comment period was announced by issuing a press release, a *Federal Register* Notice, and updating information on the NRC's Home Page on the World Wide Web and on the Federal World Bulletin Board Service.

Following the end of the comment period, NRC staff reviewed and collated all of the comments that had been received as of December 10, 1996, including the comments received as part of the three stakeholder conferences.

2.3 ORGANIZATION OF PHASE II STAKEHOLDER INTERACTION REPORT

This report consists of three volumes. The content of each volume is briefly described below.

Volume I - Summary Analysis

This volume contains the general description of the NRC's Strategic Assessment and Rebaselining initiative. A summary analysis of comments received from stakeholders is contained in Section 3.0.

Volume II - Written Comments

This volume consists of two notebooks. This volume reproduces the written comments that were submitted by individuals and organizations. These comments were considered by the Steering Committee in preparing the summary analysis in Volume I.

Volume III - Transcripts

This volume consists of three notebooks, one for each of the three conference transcripts. The transcripts were not edited. Additionally, these transcripts were made available to stakeholders via the NRC's Home Page on the Internet, FedWorld, and the NRC's public document room.

This page was intentionally left blank.

3.0 SUMMARY ANALYSIS OF COMMENTS

This section describes the staff's analysis comments for each direction-setting issue (DSI) paper as well as general remarks. Each DSI analysis contains the following: (1) statement of the direction-setting issue, (2) Commission's preliminary views, (3) summary of comments which includes (a) significant/important comments that could directly affect the preliminary view, (b) comments on other options, (c) comments on important omissions, (d) comments on internal/external factors, (e) comments related to questions included in the staff requirements memorandum, if applicable, and (4) a chronological list of commenters.

3.1 OVERSIGHT OF THE DEPARTMENT OF ENERGY (DSI 2)

3.1.1 The Direction Setting Issue and the Options

Should the NRC seek to expand its regulatory authority and responsibilities to include DOE facilities?

- Option 1: Support Broad Responsibility for NRC Regulation of DOE
 - 1A Support the Adoption of the Advisory Committee Recommendations
 - 1B Use the Division of Responsibility that Applies to Commercial Facilities
 - 1C Minimize Jurisdictional Conflicts Between NRC and Other Agencies
- Option 2: Support Broad Responsibility for Regulating Certain Types of DOE Facilities
 - 2A Regulate Only Non-Defense DOE Facilities
 - 2B Regulate Only DOE Facilities that are Similar to Those Presently Regulated by NRC
 - 2C Regulate All DOE Sites and Facilities Except for Environmental Restoration Facilities
- Option 3: Oppose Broad NRC Responsibility for Regulating DOE Facilities
 - 3A Confine NRC Jurisdiction to Existing DOE Facilities
 - 3B Accept Jurisdiction for DOE Facilities on an Incremental Basis Only
- Option 4: Take No Position on Broad NRC Responsibility for DOE Facilities

3.1.2 Commission's Preliminary Views

The Commission preliminarily favors Option 4. This view would be consistent with the position the Commission has taken on this issue in the past; that is, the NRC has not actively pursued the added responsibilities that would result from regulating DOE activities but, given adequate resources and a reasonable time schedule to develop and initiate a regulatory program, the NRC could provide adequate regulatory oversight of DOE, if asked.

If NRC were to be given added regulatory oversight of DOE facilities, the Commission would prefer that the regulatory responsibilities be placed on the NRC on an incremental basis and that some type of prioritization methodology

be used to determine the types of DOE facilities that, if subject to NRC oversight, would provide the greatest potential benefit to public health and safety.

Since the Commission is tentatively accepting the option that the NRC will not take a position on accepting broad responsibility for DOE facilities (Option 4), it would neither encourage nor oppose new legislation giving it broader authority over DOE nuclear facilities.

3.1.3 Summary of Comments

A. Significant/Important Comments Directly Affecting the Preliminary Views or the Direction-Setting Issue

Most commenters did not support the Commission's preliminary view of adopting Option 4, and several commenters strongly encouraged the Commission to aggressively pursue external regulation of DOE under Option 1B. For example, the Conference of Radiation Control Program Directors (CRCPD) and the Organization of Agreement States (OAS) were of the opinion that NRC has the **experience and resources necessary to regulate DOE. Furthermore, the OAS was concerned that the option of taking no position on the external regulation of DOE would only exacerbate the problem and that proactive and careful planning** for NRC external oversight was necessary. The OAS went on to state that although it may be politically expedient to take no position on accepting the broad responsibility for regulating DOE, the NRC should be prepared to express its intent to provide adequate regulatory authority over DOE if asked to do so by Congress.

In addition, the OAS stated that although Option 4 may be an acceptable position at this time, the NRC should be prepared to go forward with Options 1A or 1B, as the opportunity arises. This view also held by the State of Oregon Health Division, the State of Maryland, and other States. Similar views were also expressed by a representative of the United States Enrichment Corporation (USEC) who believed that it was untenable for the Commission to take no position on this issue and by a member of the public (Crites) who stated that the NRC has the capability to regulate DOE and should pursue it actively. Another commenter (the State of Washington) opposed Options 2 through 4 and observed that as a result of declining licensing work "a phase-in of DOE oversight over a number of years could be an important factor in NRC maintaining a viable work force for overall radiation protection in this country."

One commenter (Mendelsohn) believed that Option 4 was appropriate but that the Commission should also offer its views on what options it would best be suited to implement if the NRC were given external oversight authority. Another commenter strongly agreed that the NRC should not actively solicit a role in the external oversight of DOE, particularly in the area of nuclear weapons. One industry association (National Mining Association [NMA]) argued that it was appropriate for the Commission not to actively seek oversight of DOE facilities, but if the NRC should become the external regulator, Option 1B should be followed. The association went on to state that there should be external oversight of DOE and that NRC's expertise places it in the strongest position of any existing agency to assume these responsibilities. One local government (Clark County, Nevada) thought Option 4 was appropriate because it is important for the NRC to perform its current regulatory responsibility well

and that the agency should not attempt to reduce its effectiveness by attempting to perform too many activities. A member of an NRC advisory committee (Advisory Committee on Reactor Safeguards [ACRS]) noted that perhaps not the least of the reasons to reject NRC oversight of DOE is the Commission's historic lack of enthusiasm for such a role. This commenter also stated that it is arguable whether DOE self-regulation has in fact been harmful. A environmental organization (Environmental Coalition on Nuclear Power) noted that although Option 4 did not bode well for bringing DOE under effective regulatory control, that Option 4 was an appropriate choice because the organization was not convinced that NRC is willing to exert, or capable of exercising, the rigorous form of regulation which DOE needs.

B. Comments on Other Options

As noted above, a number of commenters strongly encouraged the Commission to aggressively pursue external regulation of DOE under Option 1B. For example, the CRCPD and the OAS were of the opinion that NRC has the experience and resources necessary to regulate DOE. The OAS stated that of the NRC and the Defense Nuclear Facilities Safety Board (DNFSB), only the NRC has the experience necessary to enable a smooth transfer and implementation of regulatory responsibility to an outside organization. Another commenter (State of Ohio, Emergency Planning) noted the beneficial change resulting from NRC's assumption of authority in relation to the gaseous diffusion plants and that a similar benefit could be achieved if the NRC exercised a broader regulatory authority over DOE. However, this commenter cautioned that it might be better if the NRC adopted Option 2A and did not assume authority over DOE defense facilities. The State of Ohio Department of Health supported Option 1, arguing that all sources of radioactivity should be regulated in the same way and under the same set of regulatory restrictions. The commenter noted that NRC already has a framework in place and a mechanism for working with other Federal agencies and the States. A public commenter (No Name) stated that pursuing Option 1 would provide the NRC with the opportunity to grow, would energize the NRC and its employees, and would sharpen their skills. The State of Oregon Office of Energy also supported Option 1 but was concerned that it might result in significant delays in the cleanup efforts underway in the DOE nuclear complex. Therefore, it recommended that the new regulatory responsibilities be added on an incremental basis. The NRC staff commenters from Region IV also endorsed Option 1.

In relation to Option 1, the CRCPD and the OAS also recommended that the external oversight of DOE be shared between the NRC and State government. The OAS said that the States already have substantial experience regulating various aspects of DOE facilities. The CRCPD recommended that the States be given the authority to regulate the DOE facilities that correspond to those that they are now permitted to regulate under Section 274 of the Atomic Energy Act, as well as facilities with which the States have experience, such as accelerator facilities. The CRCPD noted that it has a committee on the external oversight of DOE (E-20) and urged the Commission to work actively with this committee in planning for the external oversight of DOE. The OAS also recommended that the NRC establish a working group that includes Agreement State representatives to evaluate the options and develop a regulatory strategy for the external oversight of DOE. Another commenter (State of New Mexico) indicated that this sharing of authority with the States should be on a voluntary basis because some States do not have the staff or

the money to regulate DOE facilities. An industry association (NMA) believed that there may be questionable benefits and probably significant problems with authorizing Agreement State regulation of DOE facilities.

The CRCPD, the Texas Department of Health, and other State agencies recommended that any external oversight legislation include provisions for NRC funding similar to that provided for the NRC oversight of USEC or the provision for the NRC to assess fees against DOE for its regulatory expenses. In a similar vein, the OAS stated that the NRC needs to ensure that the costs associated with the regulation of DOE are not treated as overhead and distributed among the NRC licensees. The OAS recommended that the Omnibus Budget Reconciliation Act be amended to reduce the amount recovered from fees by the amount necessary for DOE activities and that DOE should pay for its program directly.

In relation to Option 1, one commenter (State of Ohio, Emergency Planning) believed that DOE should retain responsibility for safeguards and security at its facilities. A different commenter (Davidson) supported NRC's assumption of safety and safeguards responsibility, noting that the NRC safeguards program *has often been more progressive than DOE's and to split these responsibilities with DOE would be troublesome. With respect to Option 1C, the OAS and the State of Washington recommended that the NRC seek jurisdiction over naturally occurring and accelerator-produced radioactive material (NARM) for purposes of external oversight of DOE.* The CRCPD indicated that an NRC role in the external regulation of DOE would lead to a more consistent national approach to the NARM issue. The OAS agreed with the position in Option 1C that the NRC and the U.S. Environmental Protection Agency (EPA) should resolve their overlapping responsibility for regulating mixed waste by determining the largest contributor to the waste's hazard and giving the lead to the agency that regulates that hazard. An industry association (NMA) also supported this position. A local government (Clark County, Nevada) believed that adopting Option 1A (the Advisory Committee's recommendations) would "Balkanize" the national structure of nuclear responsibility. The CRCPD and the Texas Department of Health stated that the exclusion of "nuclear explosives safety" from the external regulator's jurisdiction should be narrowly and carefully implemented to ensure that a full review of the safety aspects of a facility could be conducted. One commenter (Oregon Office of Energy) disagreed with the Advisory Committee's recommendation that the Occupational Safety and Health Administration (OSHA) should assume a major regulatory presence at DOE facilities. This commenter believes that NRC has a fine record of ensuring worker safety in nuclear operations and that bringing OSHA in would be costly and redundant. A citizens organization (League of Women Voters of Rockford) believed that OSHA should regulate DOE worker safety. This commenter generally agreed with the DOE Advisory Committee recommendations in Option 1A, particularly the provision for citizen suits.

In terms of Option 2, the OAS and the CRCPD emphasized that external oversight should include DOE weapons assembly and disassembly facilities (Options 2A and 2B) would exclude these types of facilities). Relative to Option 2C, the CRCPD and the OAS stated that decontamination should not be excluded from the external regulator's purview. Another commenter (Dragoun) noted that NRC oversight results in more thorough and timely remediation of contaminated sites, which would support Option 1A. In regard to Option 2C (exclude environmental restoration facilities), another commenter (Mendelsohn) stated that there is no conflict between DOE's mission and the protection of public health and safety in this case, and consequently, there is less need for an

external regulator for environmental restoration. An NRC staff member noted that the jurisdictional changes cited in Option 1C in regard to OSHA and the EPA had merit outside the context of the external regulation of DOE and should be pursued for application to the Commission's existing regulatory program. Examples cited included giving NRC jurisdiction over NARM; giving EPA full responsibility for decommissioning; giving EPA responsibility for establishing and implementing "environmental standards" for NRC facilities; and giving mixed-waste regulation to the agency responsible for the constituent the forms the largest hazard. Relative to Option 1B, two commenters (States of Washington and New Mexico) indicated that OSHA should not be involved in radiation safety issues and further suggested that the Commission consider looking at combining the benefits of parts of several options. A member of an NRC advisory committee (ACRS) stated that it might be profitable to examine DOE as a collection of unique sites and thus regard DOE as 35 potential licensees rather than as a single potential client or as 8 licensable activities. A non-Agreement State (New Jersey) suggested the option of giving NRC a limited role for providing technical assistance to DOE on issues related to site cleanup, where "most of the expensive blunders" are occurring according to this commenter. In the view of this commenter, the NRC could provide a quality assurance check to ensure that the technology selected for site cleanup is technically feasible and defensible. The commenter further noted that this role fits with the NRC's values of "integrity, excellence, and service to the public." Finally the commenter said, "By assessing whether DOE has based their conclusions on sound science and weeding out expensive solutions that won't work, NRC could reduce the cost burden for the taxpayers."

One commenter (State of New Mexico) supported Option 3B, NRC acceptance of DOE facilities on an incremental basis only under either Section 202 of the Energy Reorganization Act or DOE privatization initiatives. This commenter stated that this option would involve a lesser chance of a "pick and choose" mentality on the part of NRC, under which NRC would only regulate what it found appealing and let other regulatory entities deal with whatever was left.

C. Comments on Important Omissions

The OAS, the CRCPD, and several States noted that no discussion was provided on the resource implications of the NRC's delegating external oversight authority to State governments. One commenter (State of New Mexico) asked whether it wouldn't be a wiser decision to encourage Agreement State authority at increased levels rather than having all external regulation performed by the NRC. One commenter (Dragoun) stated that the direction-setting issue (DSI) does not fully address the economics of the various proposals and does not incorporate evidence suggesting that the NRC's costs of regulation may be less than the costs of DOE's self-regulation.

The OAS and the State of Washington also noted that the description of "DOE facilities" in the DSI needs to be refined. For example, transuranic waste must be included; the distinction should be made between operational and retired low-level waste facilities. Another commenter (Mendelsohn) stated that if NRC were to regulate DOE, conflict-of-interest concerns would arise because of the NRC's use of DOE laboratories for regulatory support. These conflict-of-interest concerns could have a significant impact on how the NRC obtains technical assistance and research support. This same commenter said

that there needs to be more discussion on what NRC external oversight could actually accomplish over and above DOE's shift to regulating its facilities under the Administrative Procedure Act.

One commenter (Moeller) recommended that the range of NRC's regulatory devices for external oversight of DOE include the application of an "open market trading rule" to the cleanup of DOE facilities. Another commenter (Johnson) believed that the NRC should not allow DOE to use civilian reactors to produce tritium. Another commenter (State of Washington) stated that any congressional action in this area should specifically address the Comprehensive Environmental Response, Compensation, and Liability Act's (CERCLA) preemption of licensing under other laws, contending that the preemption does not benefit worker or public safety due to radiation exposure, and in some cases conflicts with other Federal laws. An industry commenter (ABB-CE) noted several omissions in the DSI, for example, the evaluation of alternatives for NRC in addition to those discussed by the Advisory Committee. The commenter suggested alternatives such as the NRC's fulfilling an advisory role similar to the DNFSB or an exchange of NRC and DOE personnel. A member of an NRC advisory committee (ACRS) noted other features of the DOE's approach to safety that would be at odds with the NRC's safety approach, such as the fact that DOE's Order and Rule system does not make systematic use of industrial standards; that there is no DOE equivalent to the Standard Review Plan; that regulatory guides are either nonexistent or less explicit; and that there is no consistent safety approach between different sites or even between different activities at the same site. An industry association (Nuclear Energy Institute) [NEI] noted that the DSI does not discuss the transition mechanisms that would be needed and the methods to facilitate the transition.

D. Comments on Internal/External Factors

One commenter (Fairobent) stated that the hazards from DOE facilities are largely similar to those from commercial nuclear facilities and there is no reason for DOE not to be regulated by NRC. Furthermore, this commenter believed that the split between DOE self-regulation and NRC external regulation has negative implications from the standpoint of public credibility. A member of the public (Lewis) reiterated this theme, noting that exemption of DOE from regulation destroys public trust. The CRCPD also noted that NRC's high standards should not be cited as a problem in terms of DOE oversight but rather as a positive factor. Several commenters were concerned that NRC might employ a different set of regulatory standards for DOE than it employs for regulation of commercial facilities. However, two commenters (USEC and Detroit Edison) cautioned that it may be difficult to treat some DOE facilities the same as NRC facilities from a regulatory perspective because there is no design basis for these facilities.

In terms of resource implications, another public commenter (Crites) stated that the number of DOE facilities is only a fraction of what the NRC presently regulates on the commercial side and that the resource requirements could be eased by the transfer of DNFSB personnel to the NRC. Representatives of the NEI stated concerns about the source of increased funding for the NRC's regulation of DOE and about the effect such responsibilities might have on the civilian reactor program. The OAS noted that many DOE sites operate in the "fish bowl" of public interaction and several have citizens' advisory boards that are very active in site operations. Therefore, the OAS believes it is not correct to state that DOE may not be accustomed to the "open" NRC process. An industry association (NEI) stated that the openness of NRC licensing

activities to the public was a key factor in ensuring public credibility and that this openness will be constrained in the oversight of DOE because of defense security requirements. Another commenter (State of Washington) stated that the EPA already regulates DOE and that the NRC should not face overwhelming problems in regulating another Federal agency.

E. Comments on Staff Requirements Memorandum Questions

In its preliminary views, the Commission did not pose any additional questions for public comment.

3.1.4 List of Commenters

WRITTEN COMMENTS

1. October 21, 1996, Organization of Agreement States (Robert Quillin)
2. October 23, 1996, Agreement States/NRC Regulators' Meeting Summary
3. October 24, 1996, United States Enrichment Corporation (Lisa Jarriel)
4. October 28, 1996, State of Washington, Department of Health (Terry Frazee)
5. October 29, 1996, Richard Barkley, U.S. NRC
6. November 3, 1996, Marvin Lewis
7. November 4, 1996, State of New Hampshire (Dianne Tefft)
8. November 5, 1996, State of New Mexico (Bill Floyd)
9. November 2, 1996, Environmental Coalition on Nuclear Power (Judith Johnsrud)
10. November 7, 1996, State of Mississippi, Department of Health (Robert Goff)
11. November 12, 1996, State of Kansas, Department of Health and Environment (Ronald Fraass)
12. November 13, 1996, State of Oregon, Office of Energy (David Stewart-Smith)
13. November 14, 1996, League of Women Voters, Rockford (Betty Johnson)
14. November 14, 1996, State of Oregon, Department of Human Resources (Ray Paris)
15. November 14, 1996, South Carolina Department of Health and Environmental Control (M.K. Batavia)
16. November 21, 1996, Barry Mendelsohn, U.S. NRC

17. November 21, 1996, State of Louisiana Department of Environmental Quality (Ronald Wascom)
18. November 21, 1996, Georgia Department of Natural Resources (Thomas Hill)
19. November 21, 1996, Utah Department of Environmental Quality (William J. Sinclair)
20. November 22, 1996, South Carolina Electric and Gas Company (Gary J. Taylor)
21. November 27, 1996, ACRS (John T. Larkins)
22. November 27, 1996, NEI (Thomas D. Ryan)
23. November 27, 1996, State of Texas, Department of Health (Richard Ratliff)
24. November 27, 1996, CRCPD (William P. Dornsife)
25. November 27, 1996, U.S. NRC (Dyle Acker)
26. December 2, 1996, U.S. NRC (Thomas Dragoun)
27. December 2, 1996, State of Ohio, Department of Health (Robert E. Owen)
28. December 2, 1996, State of New Jersey (Jill Lipoti)
29. December 2, 1996, State of Maryland, Department of the Environment (Roland G. Fletcher)
30. December 2, 1996, ABB-CE (Charles B. Brinkman)
31. December 2, 1996, Dennis Bechtel
32. December 2, 1996, National Mining Association (Richard L. Lawson)
33. December 2, 1996, Illinois Department of Nuclear Safety (Thomas Ortciger)
34. December 3, 1996, No Name
35. December 3, 1996, The League of Women Voters of Rockford (Betty Johnson)
36. December 4, 1996, U.S. NRC (John Davidson)

ORAL COMMENTS

Washington, D.C. (October 24 – 25, 1996) pages 15 – 38

1. Ruth McBurney, CRCPD
2. Bob Crite, Gaithersburg, MD
3. Richard Ratliffe, OAS

4. Judith Johnsrud, ENCP
5. Edward Regnier, U.S. DOE
6. Lynn Fairbent, ALT. Inc.
7. Lisa Jerrill, USEC
8. Rob McDougall, SAIC

Colorado Springs, CO (October 31 - November 1, 1996) pages 147 - 154

1. Pedro Salas, Tennessee Valley Authority
2. Bill Sinclair, OAS
3. Bill Floyd, New Mexico Environmental Improvement Department
4. John Trotter, Polestar Applied Technology
5. Steve Floyd, NEI
6. Ken Weaver, CRCPD

Chicago, IL (November 7-8, 1996) pages 140 - 157

1. Steve Collins, OAS
2. Kristen Erickson, Michigan State University
3. Jim Williams, State of Ohio
4. Roger Huston, NEI
5. Ron Fraass, State of Kansas, Department of Health and Environment
6. Gordon Appel, Illinois Department of Nuclear Safety
7. Ron Wittschen, Detroit Edison

This page was intentionally left blank.

3.2 NRC'S RELATIONSHIP WITH AGREEMENT STATES (DSI 4)

3.2.1 The Direction-Setting Issue and the Options

What should be NRC's strategy regarding States becoming and remaining Agreement States?

- Option 1: Turn the Agreement States Program Over to the Environmental Protection Agency
- Option 2: Strongly Encourage States To Become Agreement States
- Option 3: Continue the Current Agreement States Program, Including Adopting Current Initiatives
- Option 4: Treat Agreement States as Co-regulators
- Option 5: Devolve Regulation of Atomic Energy Act Section 274 Materials to the States

3.2.2 Commission's Preliminary Views

The Commission preliminarily favors Option 3 (Continue the Current Agreement States Program, including Adopting Current Initiatives). At the same time, the Commission is preliminarily in favor of encouraging more States to become Agreement States. However, the Commission believes this should be accomplished primarily through intangible incentives to States as opposed to tangible incentives. While tangible incentives (i.e., funding) would be an effective mechanism for encouraging more States to become Agreement States, the Commission is concerned that the funding constraints imposed by the Omnibus Budget Reconciliation Act of 1990 (OBRA-90) would have an inequitable impact on NRC licensees in States that decide not to become Agreement States. However, the Commission believes that the staff should explore the feasibility and desirability of providing "seed money" and/or financial grants, within the funding constraints of OBRA-90, to encourage States to apply for Agreement State status.

While the Commission has not made a final decision on this matter, a majority of the Commission is preliminarily in favor of a compromise position in which the NRC would provide training to Agreement States without charge on a "space available" basis. Funding for travel and technical assistance would be borne by the Agreement States.

The NRC particularly solicits comments on whether NRC should fund Agreement State training, travel, and technical assistance. Comments are especially sought from Agreement States, non-Agreement States, fee-paying NRC licensees, and Agreement State licensees.

3.2.3 Summary of Comments

- A. Significant/Important Comments Directly Affecting the Preliminary Views or the Direction-Setting Issue

Both written and verbal comments received at stakeholders' meetings generally supported the Commission's selection of Option 3, Continue the Current Agreement States Program, Including Adopting Current Initiatives, with some modifications. Option 3 was supported by States and State organizations (Organization of Agreement States [OAS], Conference of Radiation Control Program Directors [CRCPD], Washington, Illinois, Massachusetts, South Carolina, Georgia, Ohio, Texas, Utah, Florida, New Hampshire, Kansas, Mississippi, Maryland and Oregon), members of the public (Mel Silberberg & Associates), and members of the regulated community (Wyoming Mining Association [WMA], Kennecott Energy [KE], ABB Combustion Engineering Nuclear Systems [ABB-CE], National Mining Association [NMA], Entergy, Westinghouse and Mallinckrodt). However, several commenters (OAS, CRCPD, Washington, Illinois, Massachusetts, South Carolina, Georgia, Ohio, Texas, Utah, Florida, New Hampshire, Kansas, Mississippi, Maryland and Oregon), and some members of the regulated community (ABB-CE and Mallinckrodt) supported this option provided that it be modified to include continued funding of Agreement State training, travel, and technical assistance for further discussion, see 3.2.3.E below. Many commenters (OAS, CRCPD, New Hampshire, South Carolina, Texas, Massachusetts, Illinois, Ohio, Mississippi, Maryland, Georgia, Washington and Utah) favored continuation of the development of programs in partnership with the Commission and cited the development of the Integrated Materials Performance Evaluation Program (IMPEP) and the "Policy Statement on Adequacy and Compatibility of Agreement State Programs" as successful collaborations with the NRC. A large number of commenters (OAS, CRCPD, New Hampshire, South Carolina, Texas, Massachusetts, Illinois, Ohio, Mississippi, Maryland, Georgia, Washington and Utah) also indicated that they wanted the collaboration between the NRC and Agreement States to be expanded.

Commenters from the regulated community and the public also offered comments in support of Option 3. NMA stated that it generally supports Option 3, but objects to NRC licensees funding Agreement State oversight and training. NMA believed that Option 3 strikes a balance between maintaining a coherent national program and allowing States some flexibility to "accommodate individual State preferences, State legislative direction, and local needs and conditions." ABB-CE stated that Option 3 appears to offer a favorable balance of cost, preservation of regulatory experience, and centralized regulatory authority. A commenter from the public (Mel Silberberg & Associates) supported Option 3 with enhanced guidance, technical assistance and IMPEP reviews of the Agreement States. WMA and KE supported this option and believed that it would allow States to become Agreement States without undue pressure and would allow States to remain non-Agreement States if they chose.

In addition, many commenters (OAS, CRCPD, New Hampshire, South Carolina, Texas, Massachusetts, Illinois, Ohio, Mississippi, Florida, Maryland, Georgia, Washington, Louisiana, and Utah) were concerned that the preliminary views of the Commission did not include the recognition of the Agreement States as co-regulators, as addressed in Option 4. The commenters from the State organizations (OAS, CRCPD, New Hampshire, South Carolina, Texas, Massachusetts, Illinois, Ohio, Mississippi, Maryland, Georgia, Florida and Utah) along with some commenters from the regulated community (National Energy Institute [NEI], Westinghouse, South Carolina Electric & Gas Company [SCE&G], Mallinckrodt, and the Council on Radionuclides and Radiopharmaceuticals [CORAR]), and William Beaumont Hospital), provided support for Option 4 along with other options. This issue is discussed further under 3.2.3.B below.

Two commenters (Entergy and Westinghouse) concurred with the Commission's preliminary views as presented. Entergy commented that only Option 2, Strongly Encourage States To Become Agreement States and Option 3, Continue the Current Agreement States Program, Including Adopting Current Initiatives would facilitate a consistent implementation of regulations. Westinghouse endorsed the preliminary views expressed by the Commission regarding Option 3 and endorsed the Commission's compromise position regarding free training to be provided to the Agreement States with States bearing costs of travel and technical assistance.

In both the written comments and those provided at the stakeholder meetings, concern was raised regarding the absence of any discussion of the many benefits the States provide the NRC and its licensees without reimbursement. Several commenters (OAS, CRCPD, New Hampshire, South Carolina, Texas, Massachusetts, Illinois, Ohio, Mississippi, Maryland, Georgia, Washington and Utah, Louisiana, and Arizona) cited a number of examples of how the Agreement States support NRC's mission to ensure adequate protection of the public health and safety: Agreement States license, or are in the process of licensing, all low-level radioactive waste (LLW) disposal sites; Agreement States respond to incidents involving transportation of NRC licensed material and NRC licensed devices at facilities within their jurisdictions; States monitor the environs of nuclear power plants and other nuclear fuel facilities licensed by the NRC with only partial compensation; Agreement States provide staff to participate in the NRC Integrated Materials Performance Evaluation Program (IMPEP) reviews of Agreement States and NRC Regional Offices; Agreement States develop model regulations (i.e., well-logging and industrial radiography rules); Agreement State staff participate on NRC working groups and lecture at NRC sponsored training courses; and Agreement States assist the NRC in the development of regulations and guidance documents. Several commenters (OAS, CRCPD, New Hampshire, South Carolina, Texas, Massachusetts, Illinois, Ohio, Mississippi, Maryland, Georgia, Washington and Utah) indicated that without the inclusion of the contributions of the Agreement States, DSI 4 was not properly balanced with cost versus benefit and did not present an accurate picture of the Agreement State Program. The CRCPD, OAS, and several States (Louisiana, New Hampshire, Georgia, South Carolina, Texas, Massachusetts, Illinois, Ohio, Mississippi, Maryland, Georgia, Washington and Utah) commented that DSI 4 makes Agreement States appear to be dependent upon the NRC; whereas these commenters believed that the States are fully funding their programs and the Agreement State Program is one of mutual benefit to the NRC and the States.

B. Comments on Other Options

Many commenters (OAS, CRCPD, New Hampshire, South Carolina, Texas, Massachusetts, Illinois, Ohio, Mississippi, Maryland, Georgia, Washington and Utah, NEI, Westinghouse, SCE&G, Mallinckrodt, and CORAR) supported a combination of options rather than one single option. These commenters endorsed a combination of Options 2, 3, and some aspects of 4. The commenters representing State organizations (OAS, CRCPD, New Hampshire, South Carolina, Texas, Massachusetts, Illinois, Ohio, Mississippi, Maryland, Georgia, Washington and Utah) supported continuation of programs developed under Option 3; funding of training and technical assistance; using intangible incentives to encourage more Agreement States; and recognition of Agreement States as "partners." Mallinckrodt also commented that NRC should provide appropriate funding for the Agreement State Program and should treat the Agreement States as co-regulators. NEI, Westinghouse and SCE&G also supported a combination of

the options. NEI, Westinghouse and SCE&G commented that small material licensees (i.e., those not required to have emergency plans) should be regulated by the Agreement States. NEI, Westinghouse and SCE&G also supported encouraging States to become Agreement States, treating Agreement States as co-regulators, and assuring consistency in the standards imposed by the Agreement States. The State of Florida supported a modified Option 3 and Option 4 combination until actions could be completed for complete transfer of authority to Agreement States under Option 5.

During stakeholders' meetings and in written comments, there was strong opposition to Option 1, Turn the Agreement States Program Over to the Environmental Protection Agency (EPA). Many commenters (NEI, Westinghouse, SCE&G, OAS, CRCPD, Utah, Mallinckrodt, CORAR, ABB-CE, NMA, New Hampshire, South Carolina, Texas, Massachusetts, Illinois, Ohio, Mississippi, Maryland, Georgia, Washington, Utah, and Organization Resources Counselors [ORC]) cited disadvantages to this option. The CRCPD, OAS, and several States (New Hampshire, South Carolina, Texas, Massachusetts, Illinois, Ohio, Mississippi, Maryland, Georgia, Washington and Utah) believed that the NRC had greater expertise in the area of radioactive materials regulation and protection of public health and safety and felt that it would be more appropriate for EPA to turn over its environmental radiation regulatory program to the NRC. The NMA was unequivocally opposed to Option 1 because it would destroy decades of continuity in NRC/Agreement State regulatory oversight of uranium recovery facilities and other facilities licensed under the Atomic Energy Act (AEA). NMA, KE and WMA thought that EPA does not have the technical expertise on materials issues. ABB-CE commented that to involve EPA in a new area of responsibility could create inefficiencies and revise regulatory precedent. Mallinckrodt and CORAR stated that Option 1 is totally unacceptable.

In addition, some stakeholders questioned the cost-effectiveness of transferring the Agreement State Program to EPA. One commenter from the medical community (William Beaumont Hospital) stated that this option would not be cost-effective or beneficial to the current Agreement States or any licensee. The ORC commented that it would not be desirable to introduce a new agency into the process of regulating radioactive material. Many commenters (OAS, CRCPD, New Hampshire, South Carolina, Texas, Massachusetts, Illinois, Ohio, Mississippi, Maryland, Georgia, Washington and Utah) questioned why the EPA would want to accept an unfunded Federal mandate from the NRC when transferring this program from the NRC to EPA would increase costs to the Federal government and would probably not be supported by Congress.

Two commenters from Agreement States (Texas and Louisiana) commented that it would be more feasible to consider turning the Agreement State Program over to the Food and Drug Administration (FDA), which is already responsible for regulating some other uses of radiation (e.g., x-rays).

During the stakeholders' meetings and in written comments, there were diverging views on Option 2, Strongly Encourage States To Become Agreement States. Some commenters supported it as presented; some commenters supported it in concept but not as presented; and some commenters disagreed with it entirely. Two commenters (Ohio & William Beaumont Hospital) fully supported Option 2. The commenter from Ohio (Williams at Chicago stakeholders' meeting) commented that its licensees are paying dual fees (NRC and Ohio) for a period of 3 years to provide the State with the resources to develop its Agreement State Program. The commenter further commented that providing seed money or some type of incentive to the State would be beneficial, and the State would

not have to appropriate monies or double-fee their licensees. However, another commenter from Ohio (Owens) indicated that monetary incentives for becoming an Agreement State may be counter productive if States have inadequate programs and only seek Agreement State status for the monetary incentive.

Several commenters (OAS, CRCPD, Maryland, Washington, New Hampshire, South Carolina, Texas, Massachusetts, Illinois, Ohio, Mississippi, Georgia, and Utah) supported Option 2 in concept but were opposed to it as presented. These commenters supported the concept of all States becoming Agreement States, but questioned the feasibility and desirability of providing seed money and/or financial grants to encourage States to apply for Agreement State status. These commenters thought that there is no evidence that "tangible incentives" or seed money without continued support from the NRC would result in any new Agreement States. There was general agreement among these commenters that funds would be better spent on training, travel, and technical assistance to existing Agreement States. One commenter (Washington) stated that funding of Agreement State training and technical assistance would be more important for assuring a consistent national program; whereas seed money may simply prop up an initially weak program which could fail to protect the public when the seed money is no longer available.

One commenter (Maryland) thought that Option 2 may be going too far and that under this option, the number of Agreement States would increase, as would the demand for training, travel, and technical assistance. With limits on NRC's resources, the State believed that providing seed money and grants to interested States might be extravagant. Moreover, because of NRC's inability to support the training, travel, and technical assistance of the current Agreement States Programs, the State of Maryland believed that a healthy mixture of both Agreement and non-Agreement States would best allow the NRC to maintain a viable materials program.

In addition, one commenter (Washington) felt that Option 2 was not practical because not all States would seek to become Agreement States. Several other commenters (OAS, CRCPD, New Hampshire, South Carolina, Texas, Massachusetts, Illinois, Ohio, Mississippi, Georgia, and Utah), also felt that this option was not viable because it would not receive adequate funding in light of the Federal government downsizing initiatives.

Several other commenters (NMA, WMA, and KE) also opposed Option 2. NMA questioned whether it was appropriate or wise for the NRC to "strongly" encourage states to become Agreement States. As a basis for their opposition to Option 2, all three commenters stated that it would be difficult for the NRC to maintain a critical mass of technical expertise to oversee a national regulatory program and that failure to maintain this expertise would be inconsistent with the goal, envisaged under the AEA, of creating a unified, centralized, national program for radioactive materials regulation. In addition, these commenters along with the Environmental Coalition on Nuclear Power (ECNP) questioned the ability of States to develop the levels of regulatory expertise currently found within the NRC in complex areas such as decommissioning, mill tailings management, and low-level waste. In addition, several commenters (NEI, Westinghouse, SCE&G, ABB-CE, KE, and WMA) cited increased costs to NRC's licensees as a reason to oppose Option 2. KE and WMA were also concerned that under Option 2 some States might be driven into Agreement State status and then discover that Agreement State status was undesirable and return their programs to the NRC. ECNP commented that grants

should be used to bolster existing State radiation control programs, not to encourage States to become Agreement States.

Both the written comments and those made orally at the stakeholder meetings provided various views on Option 4, Treat Agreement States as Co-regulators. Several commenters (OAS, CRCPD, New Hampshire, South Carolina, Texas, Massachusetts, Illinois, Ohio, Mississippi, Georgia, and Utah) stated that Option 4 was the only option that recognized the experience that lies within the Agreement States. These commenters thought that the NRC should recognize this experience regardless of the option chosen for DSI 4.

Several commenters (CRCPD, OAS, New Hampshire, South Carolina, Texas, Massachusetts, Illinois, Ohio, Mississippi, Georgia, and Utah) expressed concern regarding the exclusion of training, travel, and technical support from Option 4. One commenter (Maryland) stated that this option does not need to include full cost recovery from the Agreement States. Some commenters (OAS, CRCPD, New Hampshire, South Carolina, Texas, Massachusetts, Illinois, Ohio, Mississippi, Georgia, and Utah) interpreted Option 4 as an attempt by the NRC to say that the Agreement States could only be recognized as "co-regulators" if they paid for this recognition. These commenters believed that this option suggests that by paying the NRC for travel, training, and technical assistance and requiring minimal support from the NRC, the Agreement States would be paying for the title of "co-regulators." OAS, CRCPD, and several States (New Hampshire, South Carolina, Texas, Massachusetts, Illinois, Ohio, Mississippi, Georgia, and Utah) also raised the issue of seeking reimbursement for services provided to the NRC by Agreement States. The OAS, CRCPD, and several States (Louisiana, New Hampshire, South Carolina, Texas, Massachusetts, Illinois, Ohio, Mississippi, Georgia, and Utah) identified a number of functions that the Agreement States perform (see 3.2.3.A above).

In addition, States and State organizations (OAS, CRCPD, New Hampshire, South Carolina, Texas, Massachusetts, Illinois, Ohio, Mississippi, Georgia, and Utah) commented that the term "co-regulators" in Option 4 appears inconsistent with many States' views of the present NRC/Agreement State relationship. These commenters believed that the Agreement States are already co-regulators because of their responsibilities for regulating the uses of radioactive materials. However, they also recognized that under the AEA, the NRC has an oversight role that is not provided to the Agreement States. These commenters (OAS, CRCPD, New Hampshire, South Carolina, Texas, Massachusetts, Illinois, Ohio, Mississippi, Georgia, and Utah) proposed that the NRC revise its traditional view of the NRC/Agreement State relationship; they felt that the relationship should now be thought of as "strategic partnering." These commenters (OAS, CRCPD, New Hampshire, South Carolina, Texas, Massachusetts, Illinois, Ohio, Mississippi, Georgia, and Utah) indicated that strategic partnering was taken directly from the last paragraph on page 13 of DSI 20, International Activities, and stated that if the NRC is willing to foster such healthy relationships overseas, it should also foster equally healthy relationships with agencies in the United States. One commenter (Ohio) felt that treating the Agreement States as co-regulators is beneficial to both the Agreement States and the NRC. The State of Utah commented that a different view of co-regulator might be that Agreement States and NRC have the same health and safety goals.

Two commenters (NMA and ABB-CE) opposed Option 4. NMA opposed Option 4 on the basis of the need for a national regulatory program. The NMA believed that a national regulatory program is necessary under the AEA, as amended, and that,

while NRC may discontinue direct regulatory control over Agreement State licensees, Agreement States exercising their sovereign authority may do so only within the bounds of NRC's defined national regulatory policies. Another commenter (ABB-CE) stated that Option 4 elevates the States to the status of co-regulators and that the involvement of multiple agencies having generally equal standing could complicate the regulatory process.

There were diverging views on Option 5, Devolve regulation of Atomic Energy Act Section 274 Materials to the States. Many commenters (OAS, CRCPD, New Hampshire, South Carolina, Texas, Massachusetts, Illinois, Ohio, Mississippi, Georgia, and Utah, Maryland, New York, Florida, and one commenter from the medical community [William Beaumont Hospital]) commented that Option 5 should be selected as a long-term goal of the NRC. These commenters stated that the implementation of Option 5 could be preceded by the administration of Option 2. Another commenter (New York Department of Labor [NYDOL]) stated that Agreement States currently regulate 70 percent of all AEA materials and they will soon regulate 80 percent of these materials. This commenter further stated that the NRC should reduce its program and take actions to implement Option 5, which could be preceded by Option 2. Other commenters (OAS, CRCPD, New Hampshire, South Carolina, Texas, Massachusetts, Illinois, Ohio, Mississippi, Georgia, Utah, and Maryland) stated that the NRC and the States through the CRCPD should begin working to implement Option 5 within the next 10 to 15 years.

On the other hand, several commenters (Washington, ABB-CE, NEI, Westinghouse, SCE&G, WMA and KE) strongly opposed Option 5 based upon the need for a consistent national regulatory program. The State of Washington stated that this option would weaken any semblance of a national program and could eventually lead to non-uniformity and potential conflicts between the various State radiation programs. ABB-CE stated that Option 5 might result in difficulties arising from multiple, inconsistent sets of regulations. NMA, CORAR, and Mallinckrodt commented that this option would create great inconsistencies between State regulatory programs and those inconsistencies could make it more difficult for their industry to conduct interstate commerce. The WMA and KE stated that Option 5 would create regulatory chaos and is inconsistent with the principles of the AEA and that the lack of a nationally consistent program would mean more stringent regulation in some States than in others and might force some licensees to terminate their operations. WMA and KE commented that this approach would be inconsistent with the philosophy of the AEA, which presupposes a national regulatory program for radioactive materials. NEI, Westinghouse and SCE&G also opposed Option 5. NEI, Westinghouse and SCE&G commented that there needs to be one Federal agency to regulate AEA materials and that agency should continue to be the NRC.

One commenter from the public (Thompson) felt that the best option was omitted from the paper: taking back Agreement State Programs and giving NRC sole authority over AEA materials.

C. Comments on Important Omissions

A number of comments were received regarding the absence of discussions on how DSI 4 relates to other DSI's or to the development of other Commission initiatives. One commenter (NYDOL) indicated that SECY-95-154, "Report on Parts Two and Three of the National Performance Review Phase II Study Plan-NRC Functions and Efficacy Review," should have been included verbatim or

summarized as part of the issue paper. This commenter (NYDOL) also stated that a discussion of the National Academy of Science's Institute of Medicine report on the NRC medical regulatory program was missing from the DSI 4 issue paper. The commenter further indicated that this discussion was to be considered as a part of the rebaselining initiative and was relevant to this DSI since this report recommended that NRC turn its regulation of the medical use of radioactive material over to the States. (The Committee notes that such as a discussion was indicated as part of DSI 7.)

State and State organizations (OAS, CRCPD, New Hampshire, South Carolina, Texas, Massachusetts, Illinois, Ohio, Mississippi, Maryland, Georgia, and Utah) commented that an evaluation of the health and safety impacts for each option should be included in the paper. Several commenters from the regulated community (Mallinckrodt, ABB-CE, Amersham, and CORAR) were concerned that DSI 4 failed to describe its parallel relationship with the efforts underway with regard to the implementing procedures for the "Policy Statement on Adequacy and Compatibility of Agreement State Programs." Mallinckrodt and CORAR commented that a major consideration to which little attention was paid in the issue paper is the need for compatibility between Agreement States and the NRC and among the Agreement States themselves. NEI, Westinghouse, Entergy, SCE&G and ABB-CE were concerned that the paper did not discuss the potential difficulties arising from multiple, inconsistent sets of regulations as it relates to reciprocity, interstate commerce and effective protection of public health and safety. In addition, Entergy was also concerned that the paper did not discuss avoidance of dual regulatory oversight, avoidance of unnecessary regulation, consistency in the implementation of regulations and public opinion of NRC.

As noted earlier in 3.2.2.A several commenters raised concerns regarding the omission of any discussion in DSI 4 on the contributions of Agreement States to the overall national program for the regulation of AEA materials. In addition, a commenter from a non-Agreement State (New Jersey) was concerned that the DSI did not discuss the benefits of centralized training of both State and Federal government radiation control personnel.

D. Comments on Internal/External Factors

Stakeholders presented various comments on the internal and external factors affecting a decision on DSI 4. One commenter (Louisiana) indicated that a decision to discontinue funding of Agreement State personnel training does not take into consideration the difficulty Agreement States have in retaining qualified staff. The commenter stated that the resources of States vary and States frequently lose staff to industry, other Agreement States, or Federal agencies, which offer higher salaries and greater benefits.

Several stakeholders (OAS, CRCPD, Washington, New Hampshire, South Carolina, Texas, Massachusetts, Illinois, Ohio, Mississippi, Georgia, and Utah) commented on the statement in the issue paper that NRC's development of regulations is a benefit to all Agreement States although it is paid solely by NRC licensees. These commenters stated that NRC will always have a need for its own rulemaking function and should fund this function. Many commenters (OAS, CRCPD, New Hampshire, South Carolina, Texas, Massachusetts, Illinois, Ohio, Mississippi, Georgia, and Utah) and Washington) believed that the cost for development of regulations should not be borne by NRC licensees; rather,

they believed that the NRC should seek an appropriation from Congress to fund this function as a part of the "national program" for the regulation of materials.

NEI, Westinghouse and SCE&G commented that it is inappropriate for many reasons to fund the Agreement State Programs by fees imposed on NRC licensees. NEI, Westinghouse and SCE&G further commented that expansion of the Agreement States program would only exacerbate inequities inherent in such fee recovery schemes and that as new Agreement States are added, fees for the remaining NRC licensees would increase. NEI, Westinghouse and SCE&G stated that equity can only be achieved if the Agreement States program is funded by the States or Congress.

E. Comments on Staff Requirements Memorandum Questions

In its preliminary view, the Commission requested specific comments on whether NRC should fund Agreement State training, travel, and technical assistance. Comments on this issue, in addition to those in 3.2.3.A "Significant/important comments affecting PV or DSI," are presented below.

There was general consensus in the comments made at the stakeholders' meetings and received in writing that the NRC should continue to fund Agreement State training, travel, and technical assistance; however, concerns were raised regarding the source of this funding. Continued funding was supported in comments from members of Congress from New Mexico, the OAS, the CRCPD, several Agreement States (Louisiana, Washington, Florida, New Hampshire, South Carolina, Texas, Massachusetts, Illinois, Ohio, Mississippi, Georgia, and Utah, and Oregon) and in comments from members of the regulated community (William Beaumont Hospital, Michigan State University, ABB-CE, Mallinckrodt, and NMA). However, many commenters (OAS, CRCPD, New Hampshire, South Carolina, Texas, Massachusetts, Illinois, Ohio, Mississippi, Georgia, NMA, and ABB-CE) believed that this funding should not come from fees imposed on NRC licensees. The OAS, CRCPD, and several States (New Hampshire, South Carolina, Texas, Massachusetts, Illinois, Ohio, Mississippi, Georgia, and Utah) stated that the NRC should seek appropriations from Congress for the functions involving Agreement States. NMA, NEI, Westinghouse, SCE&G and ABB-CE support changes to the OBRA that would either fund Agreement State activities from appropriated funds or permit NRC to charge Agreement States for such activities. NMA further stated that reduced charges to the Agreement States could be justified on the basis of preserving a consistent national regulatory program.

In letters from four Congressmen from New Mexico (The Honorable Joe Skeen, The Honorable Steven Schiff, The Honorable Bill Richardson, and The Honorable Jeff Bingaman) concerns were raised regarding the cessation of the NRC funding of training, including travel and per diem costs. Congressman Joe Skeen stated that the Agreement States implement certain radiation control programs in lieu of the NRC and that the only support offered by the NRC has traditionally been in the form of training. Without this support, the Congressman believed that States in which all Radiation Protection Program costs are funded through the State's General Fund would suffer a severe financial hardship. Additionally, Congressman Skeen encouraged the Commission to reconsider the discontinuation of funding of Agreement States training and requested that the Commission consider innovative methods for continuing this valuable asset to the States in their implementation of NRC-mandated programs.

The OAS, the CRCPD, and several Agreement States (Louisiana, Illinois, Texas, Washington, Florida, Oregon, Maryland, New Hampshire, Kansas, Ohio and Mississippi) and members of the regulated community (Mallinckrodt) provided comments regarding the national benefit of the NRC-sponsored training of Agreement State personnel. These commenters stated that continued NRC funding enhances consistency and compatibility in the regulation of Agreement materials by providing uniformity in training of Agreement State and NRC personnel. States and State organizations (OAS, CRCPD, New Hampshire, South Carolina, Texas, Massachusetts, Illinois, Ohio, Mississippi, Maryland, Georgia, Washington and Utah) commented that NRC-sponsored training established a national training program for materials, whereby all the regulators of materials in the country received the same training and the same instruction from the same people and in the same environment. These States and State organizations believed that this continuity of training was one way of assuring that the same level of protection is provided across the country for Agreement materials. One commenter (Ohio) stated that NRC-sponsored training is a critical component of a national radiation protection program and ensures that all State and Federal staff receive the same training so similar situations are treated the same way across the nation. In addition, these States and State organizations (OAS, CRCPD, Louisiana, New Hampshire, South Carolina, Texas, Massachusetts, Illinois, Ohio, Mississippi, Maryland, Georgia, Washington and Utah) asserted that uniformity of training or national training program ensures that Agreement State personnel adequately respond to incidents which sometimes involve NRC-regulated materials. These commenters also stated that NRC-sponsored training has the advantage of giving a single viewpoint, rather than diverging views which may come from industry-sponsored training. In addition, Louisiana commented that NRC-sponsored training would be more cost-effective in maintaining compatibility between NRC and Agreement State programs. Furthermore, Mallinckrodt stated that NRC should provide appropriate funding for the Agreement State training, travel, and technical assistance in order to assure compatibility, uniformity, and adequacy of the Agreement State programs.

In addition, the OAS, the CRCPD, and several States (New Hampshire, South Carolina, Texas, Massachusetts, Illinois, Ohio, Mississippi, Maryland, New Mexico, Georgia, Louisiana, Washington and Utah) believed that the lack of NRC-sponsored training could lead to problems and inconsistencies in the regulation of materials. One potential problem noted by New Mexico, Louisiana and Texas was the inability of States to retain their Agreement State status. One commenter (Louisiana) stated that without NRC-sponsored training, Agreement States may have difficulty retaining Agreement State status because of a lack of adequately trained staff. Another commenter from an Agreement State (Texas) also alluded to this concern by citing NRC NUREG-1311, "Funding the NRC Training Program for States." The commenter stated that this report referred to a 1988 General Accounting Office report which stated that the NRC training program was consistently identified as the key in enabling States to prepare for Agreements and to maintain Agreement State programs that are adequate to protect public health and safety and compatible with NRC's regulatory program.

In addition, States and State organizations (OAS, CRCPD, New Hampshire, South Carolina, Texas, Massachusetts, Illinois, Ohio, Mississippi, Maryland, Georgia, Washington and Utah) indicated that it may be extremely difficult to adequately train staff when the Agreement States must pay both travel and

training costs. They also stated that some State personnel currently have difficulty getting out-of-state travel approved to attend NRC training courses and meetings.

There were diverging views on this issue from the regulated community. Two commenters from the regulated community (William Beaumont Hospital and Michigan State University) supported continued NRC funding of training of Agreement State staff. However, one NRC licensee (ABB-CE) and one industry organization (NEI) wanted the Agreement States to be funded only for activities which benefit NRC licensees. NEI commented that Agreement State training and oversight was not an issue as long as the services rendered are being charged to the recipient of the services. NEI further commented that if they are sending material to a LLW site and an agency has overall responsibility for surveying that site, then they should pay their fair share for that survey. However, NEI also stated if the training of Agreement States is in an area where they do not use the service, such as radiographers or dentists, then they should not be charged for that service. NEI concluded by stating that this approach was a simplistic view and suggested that it may be difficult to implement. ABB-CE concurred with these views.

3.2.4 List of Commenters

WRITTEN COMMENTS

1. September 6, 1996, State of Louisiana (William H. Spell)
2. September 12, 1996, State of Illinois Department of Nuclear Safety (Thomas W. Ortziger)
3. September 27, 1996, Representative Joe Skeen, U.S. House of Representatives
4. October 4, 1996, Thomas K. Thompson, U.S. NRC
5. October 9, 1996, Representative Steven H. Schiff, U.S. House of Representatives
6. October 17, 1996, Senator Jeff Bingaman, U.S. Senate
7. October 23, 1996, State of New York, Department of Labor (Rita Aldrich)
8. October 23, 1996, Agreement State/NRC Regulators' Meeting Summary
9. October 24, 1996, Organization of Agreement States (OAS) (Steve C. Collins)
10. October 24, 1996, Texas, Department of Health (Richard Ratliff)
11. October 24, 1996, Conference of Radiation Control Program Directors (CRCPD) (Ruth E. McBurney)
12. October 28, 1996, State of Washington, Department of Health (Terry Frazee)

13. October 30, 1996, Representative Bill Richardson, U.S. House of Representatives
14. October 31, 1996, State of Florida, Department of Health (William A. Passetti)
15. November 3, 1996, Marvin I. Lewis
16. November 4, 1996, State of New Hampshire (Diane E. Tefft)
17. November 6, 1996, Environmental Coalition on Nuclear Power (Judith H. Johnsrud)
18. November 7, 1996, State of Mississippi, Department of Health (Robert W. Goff)
19. November 7, 1996, OAS amended comments (Robert M. Quillin)
20. November 12, 1996, William Beaumont Hospital (Cheryl C. Schultz)
21. November 12, 1996, State of Kansas (Ronald G. Fraass)
22. November 13, 1996, State of Oregon, Office of Energy (David Stewart-Smith)
23. November 14, 1996, State of Oregon, Department of Human Resources (Ray D. Paris)
24. November 14, 1996, South Carolina Department of Health & Environmental Control (M.K. Batavia)
25. November 21, 1996, State of Louisiana Department of Environmental Quality (Ronald Wascom)
26. November 21, 1996, State of Georgia Department of Natural Resources (Thomas E. Hill)
27. November 21, 1996, Utah Department of Environmental Quality (William J. Sinclair)
28. November 22, 1996, South Carolina Electric & Gas Company (Gary J. Taylor)
29. November 25, 1996, Westinghouse (N.J. Liparulo)
30. November 26, 1996, Kennecott Uranium Company (Oscar Paulson)
31. November 27, 1996, NEI (Thomas D. Ryan)
32. November 27, 1996, Texas Department of Health (Richard Ratliff)
33. November 27, 1996, CRCPD (William F. Dornsife)
34. November 27, 1996, CORAR (Roy W. Brown)

35. December 2, 1996, Organization Resources Counselors, Inc. (ORC) (Chris Roman & Frank White)
36. December 2, 1996, Envirocare of Utah (Charles A. Judd)
37. December 2, 1996, Mel Silberberg & Associates (Mel Silberberg)
38. December 2, 1996, Ohio Department of Health (Robert E. Owen)
39. December 2, 1996, Wyoming Mining Association (WMA) (Marion Loomis)
40. December 2, 1996, State of New Jersey Department of Environmental Protection (Jill Lipoti)
41. December 2, 1996, Maryland Department of the Environment (Roland G. Fletcher)
42. December 2, 1996, Entergy (Michael J. Meisner)
43. December 2, 1996, Mallinckrodt Medical, Inc. (Ashok Dhar)
44. December 2, 1996, ABB Combustion Engineering Nuclear Systems (ABB-CE) (Charles B. Brinkman)
45. December 2, 1996, National Mining Association (NMA) (Richard L. Lawson)
46. December 2, 1996, State of Illinois Department of Nuclear Safety (Thomas W. Ortciger)
47. December 2, 1996, The Commonwealth of Massachusetts (Robert M. Hallisey)
48. December 3, 1996, No Name

ORAL COMMENTS

Washington, D.C. (October 24 - 25, 1996) pages 38 - 77

1. Steve C. Collins, OAS
2. Ruth McBurney, CRCPD
3. Richard A. Ratliff, OAS
4. Judith Johnsrud, Environmental Coalition on Nuclear Power
5. Roy Brown, Council on Radionuclides and Radiopharmaceuticals (CORAR)
6. Tony Thompson, National Mining Association (NMA) meeting
7. Rob McDougal, SAIC

Colorado Springs, CO (October 31 - November 1, 1996) pages 154 - 179

1. Charles Brinkman, ABB Combustion Engineering Nuclear Systems (ABB-CE)

2. Ashok Dhar, Mallinckrodt Medical, Inc.
3. William Sinclair, OAS
4. Thomas Tipton (NEI)
5. Kenneth Weaver, CRCPD

Chicago, IL (November 7 – 8, 1996) pages 157 – 189

1. Gordon Appel, Illinois Dept. of Nuclear Safety
2. Steve Collins, OAS
3. Mark Doruff, Amersham Corporation
4. Kristin Erickson, Michigan State University
5. Ronald Fraass, Kansas Dept. of Health
6. Cheryl Schultz, William Beaumont Hospital
7. James Williams, Ohio Emergency Management Agency

3.3 LOW-LEVEL WASTE (DSI 5)

3.3.1 The Direction-Setting Issue and the Options

What should be the role and scope of the NRC's low-level radioactive waste program?

Option 1: Assume a Greater Leadership Role

Option 2: Assume a Strong Regulatory Role in the National LLW Program

Option 3: Retain Current Program

Option 4: Recognize Progress and Reduce Program

Option 5: Transfer LLW Program to EPA

Option 6: Accept Assured Long-Term Storage

3.3.2 Commission's Preliminary Views

The Commission's preliminary view on this issue is that the preferred option is Option 2 (Assume a Strong Regulatory Role in the National Program). This option would encompass all of the activities that were performed before the recent reductions in the low-level waste program.

In addition, the Commission seeks public comment on whether NRC should involve itself to a greater degree in implementing this option in such a way as to encourage an integrated approach to the regulation of LLW handling, processing, recycle, and disposal. For example, should NRC actively participate in the development of new technologies for waste compaction and better waste forms for on-site storage for licensees, to maximize safety and efficiency across the entire waste management and disposal process? Further, how should NRC address unauthorized disposal? Adopting such an approach would, of course, require that the NRC have a strong presence in the National low-level waste program and maintain an appropriate set of core capabilities.

3.3.3 Summary of Comments

A. Significant/Important Comments Directly Affecting the Preliminary Views or the Direction-Setting Issue

In reviewing the written comments and those provided at public stakeholder meetings, the Committee did not identify a clear consensus regarding the Commission's preliminary views on this DSI. In broad terms, commenters appeared to fall into two groups. The first group, composed of LLW generators, (including nuclear utilities; the Nuclear Energy Institute (NEI), the Council on Radiopharmaceuticals & Radionuclides (CORAR), and several other individual licensees) and, to a lesser extent, Agreement and Non-Agreement States, favored the Commission's choice. It should be noted that three of these States (Connecticut, Michigan, and New Jersey) are non-Agreement States that have plans for new LLW disposal facilities which would be licensed by NRC. Thus, their interests may be different from other States.

The second group of commenters consisted of a number of Agreement States (including the Organization of Agreement States [OAS] and the Conference of Radiation Control Program Directors [CRCPD]) who disagreed with the Commission's preliminary view favoring Option 2, in some cases strongly, and favored an option between Options 3 and 4, or Option 4. These State organizations believed that the States are adequately regulating new and existing facilities and view as especially undesirable those aspects of the preferred Option 2 that would involve more NRC oversight and review of Agreement State programs. Although they did not disagree with NRC's responsibility to review their programs, they emphasized the importance of a partnership between NRC and the Agreement States and of the NRC's facilitating implementation of their programs. One commenter (Utah), felt that the solution to the national LLW disposal program is political and that a strong NRC program would not influence this factor.

One commenter, (OAS) stated: "All States [that provided an input to OAS] were opposed to NRC's assuming a strong regulatory role [Option 2] that encompassed all LLW activities. Most commenting states felt that states involved in low-level waste management programs, including those with existing sites, were *doing an adequate job in protecting the environment and the public.*" States endorsing the OAS comments on the preliminary view included New Hampshire, Mississippi, South Carolina, Ohio, Colorado, Illinois, and Utah.

One commenter, the Advisory Committee on Nuclear Waste, stated that "Our advice (in a July 24, 1996, letter to Chairman Jackson) is consistent with the Commission's preliminary preferred option in Direction-Setting Issue Paper 5. Agreement State programs and the progress of compacts and individual States in developing new disposal facilities remain an issue with ACNW."

Although many comments were made on which activities to include in the implementation of Option 2 (which are not addressed here), the principal one that affects the preliminary view is how to distinguish between those activities that could be interpreted to fall within either Option 1, "Assume a Greater Leadership Role," or Option 2. For example, many commenters, in addressing Option 1, favored NRC's being more of an advocate of its own expertise in LLW disposal matters, particularly with respect to Ward Valley and the Department of Interior's concerns with radiological health and safety issues in connection with the transfer of the land from the Federal Government to the State of California. Others advocated greater NRC outreach to the public and other groups with concerns about LLW so that they can better understand NRC regulations and the protective measures that are in place to ensure public health and safety. NEI specifically recommended that "disposal policy aspects of Option 1 should be incorporated into the regulatory aspects of Option 2." The State of New Jersey and NEI also suggested that NRC could include for Option 6 ("Accept Assured Long-Term Storage") as one of the activities within Option 2.

B. Comments on Other Options

Although commenters did not overwhelmingly favor any one of the remaining options over another, some trends are apparent in the comments. First, all but one commenter who took a position were strongly opposed to transferring the NRC LLW program to EPA, citing inefficiency and EPA's lack of expertise in disposal licensing as primary reasons. An anonymous commenter recommended that NRC "get out of the LLW program and let the States, EPA deal with it."

A commenter (the League of Women Voters), although not recommending transfer of the program to EPA, believed that EPA's involvement in the program is helpful because it balances the views of the nuclear industry and because it is a strong force for reducing the production of wastes.

With the exception of substantial support for NRC's becoming more involved in the Ward Valley facility decision making as discussed above, there was limited support for the broader actions included in the scope of Option 1, such as NRC facilitating the use of Department of Energy (DOE) facilities for commercial LLW, or privatization of new LLW facility development. Two commenters, (Michigan [MI], ATL International) favored these broader actions. Another commenter (NE) favored NRC's keeping the same program that it now has but, also advocated a single facility for both High-Level Waste (HLW) and Low-Level Waste (LLW). This commenter noted that there are problems with LLW disposal under the Low-Level Radioactive Waste Policy Amendments Act (LLRWPA). However, he did not believe NRC had a role in addressing these broader issues of the effectiveness of the LLRWPA. The State of Tennessee wanted NRC to assume a leadership role as a strong advocate for disposal capacity and recommended that NRC could take a strong regulatory stand against LLW storage by putting a moratorium on new licenses without new disposal capacity, or by requiring significant financial assurance funds.

A number of commenters specifically objected to the aspects of Option 1 in which NRC would promote new disposal capacity. Although the premise of the option was that NRC has a legitimate health and safety interest in promoting disposal, commenters, (NJ, UT and one NRC staff member) did not see this advocacy role as appropriate for the agency.

As noted in the first section, many Agreement States prefer an option like Option 3 or 4, or in between. OAS preferred an option between Options 3 and 4, and CRCPD preferred Option 4.

A wide variety of comments was received on Option 6, "Accept Assured Long-Term Storage." One of the authors of the assured storage concept, David Leroy, took exception to the characterization of assured storage in the LLW options paper and provided what he believes to be a more straightforward description of the option as an attachment to his letter. In summary, he stated that the assured storage concept does not fall within NRC's policy of discouraging LLW storage; that assured storage is an "alternative" to disposal for places in which States cannot develop a disposal facility; that the paper misrepresents the nature of the support for the assured storage concept and that there is "strong support" for the concept from State officials, industry representatives, and "knowledgeable observers"; that assured storage may, in fact, fulfill obligations of the LLRWPA and that the description of the concept in the paper is too superficial. His revised option for assured storage is for "the Commission...to formally recognize assured storage, in concept, as a viable waste management option, recognizing that specific issues...would have to be addressed as part of a licensing action."

Another commenter (CT) addressed the description of assured storage in the DSI. The author noted that while it is "not necessary that the NRC accept assured storage as an option to disposal at this point in time (after all, the studies needed to make a determination about whether it is a viable option are just beginning), the NRC should adopt a more objective view of the concept."

The commenter recommended that NRC's role for assured storage be one of monitoring and, if requested, participating in various studies that are underway.

Other commenters (CO, MI, NJ) also expressed support for at least exploring the concept further. One commenter representing a CRCPD working group on regulations, stated that in a recent meeting, 15 Agreement State regulators wanted the concept explored further. However, in CRCPD's written comments, CRCPD stated that "acceptance of long-term storage, as described in Option 6, would do nothing for the current long-term storage versus disposal debate, except to delay the inevitable use of disposal for LLW." NEI stated that "Option 6 could be included under Option 1 or 2 and worked in parallel with disposal site development. However, recognize that this concept does not avoid many of the public perception issues which have slowed disposal site development."

Other commenters were opposed to option 6, if not the concept, in varying degrees. The OAS, for example, in its written comments, stated that of the six States that had provided input to OAS, four were "strongly opposed" to the concept and that "one state is very critical and suspect of this option." OAS concluded that a majority of the commenting Agreement States believe that assured storage is not the answer in helping to resolve the LLW problem. A State of Illinois official stated that this is an effort to try to solve the problem of LLW disposal by calling it something other than disposal. An NRC staff member had a similar comment, stating that accepting long-term storage may be acceptable under 10 CFR Part 61 now that the scope of Part 61 includes above-ground disposal. He stated if long-term storage is not distinguishable from above-ground disposal, Option 6 is not really separable from other options.

Another commenter (NMA) stated that "Option 6 (assured long-term storage) is a somewhat confusing concept. It raises questions of perpetual licensing that conflict with traditional assumptions regarding appropriate reliance on institutional/active controls. It could also cloud the issue of whether on-site disposal is a viable option and it appears to conflict directly with the assumptions underlying NRC's final regulations governing the timeliness of decommissioning. Finally, it raises the obvious question that if assured storage is somehow different than long-term storage, how then is it different from disposal?"

C. Comments on Important Omissions

One commenter (NEI) had a number of comments on what it believed to be omissions from the discussion. First, it believed that an important consideration not fully developed is the dynamic, tenuous status of LLW treatment and disposal. It also believed that the paper did not identify the potential that a simple, unilateral decision by one of the major players in the national program can completely redirect waste management practices nationwide. It termed the description of the national situation for LLW disposal in the DSI paper a "snapshot." It considered that the staff's forecast of future possibilities in the national program, contained in Attachment 2 to SECY-95-201, "Alternatives to Terminating the Nuclear Regulatory Commission Low-Level Radioactive Waste Program," provides a better assessment of the dynamic nature of the LLW issue.

Second, NEI inferred that the paper assumed that disposal capacity at any cost is acceptable. It stated that over \$512 million has been spent to date without development of new disposal capacity. CORAR and Siemens also noted that the paper did not consider cost impact. CORAR also noted that costs have caused a significant curtailment of the use of radionuclides in the research community, especially biomedical research, and that society at large has lost an important benefit. Both NEI and CORAR provided a copy of the report entitled "Lessons Learned from the Barnwell Closure to 31 States" that mentioned cuts in services by licensees, cost impacts, and generators' views that the loss of disposal capacity is a major problem for the Nation. Third, NEI noted that current and future disposal capacity may not be adequate to handle future generation rates and volumes. It pointed out that decommissioning waste volumes from one or two facilities can approach the annual LLW volume disposed of in the country today and that lack of disposal capacity in the future could virtually stop decommissioning activities. Other factors contributing to uncertainties about future waste volumes are deminimis levels of radioactivity, the criteria to be contained in the final cleanup standards, and the extent of recycling of LLW in the future. Fourth, NEI asked that NRC play an active role in ensuring that manifesting and reporting requirements for waste shipments be implemented uniformly by Agreement States and NRC.

Other commenters also identified what they believed to be omissions. These included deminimis levels of radioactivity, recycling, mixed waste, and the failure to address the uranium mill tailings program.

D. Comments on Internal/External Factors

Several commenters, (CORAR, Entergy, a private consultant, and NEI) took issue with the statement in the DSI paper that the need for new disposal capacity is less than that of 10 years ago. The staff had noted in the DSI paper that "interim storage appears to have presented few problems." NEI pointed out that this statement ignores the costs associated with interim storage ("tens of millions of dollars") and the future impact of utility deregulation on cost pressures.

E. Comments on Staff Requirements Memorandum Questions

The Commission, in its preliminary view, requested specific comments on two issues, as noted below:

Should NRC encourage an integrated approach to the regulation of LLW handling, processing, recycle, and disposal?

In the Colorado meeting, a representative of the CRCPD working group on LLW regulations reported that the group had recently discussed revising CRCPD model LLW regulations to include LLW management, including storage, treatment, processing, and handling, along with waste volume reduction and waste minimization. Thus, he concluded, his group favors an integrated approach to regulation of LLW.

An NRC staff member pointed out that further clarification of what is meant by the Commission's being actively involved in the "development" of new technologies is needed. He noted that the Energy Reorganization Act of 1974

that created NRC prohibits the agency from process development and other activities and that this prohibition would need to be examined in the context of the question.

As noted in the previous section, several commenters noted that the paper did not address de minimis levels of radioactivity, recycling, or mixed waste. Although their comments were not offered in response to this specific question, they provide some support for an integrated approach to waste management.

How should the NRC address unauthorized disposal?

No comments suggested that unauthorized disposal is a problem in the U.S. However, the State of Utah expressed a major concern about brokers who arrange for disposal services for generators but lack sufficient funds for cleanup if they go out of business, and a similar concern if an unauthorized disposal were to occur. The commenter pointed out that funds, if available, would enable the State or the Federal Government to hire a third-party contractor. The commenter also noted that NRC could establish a cleanup fund similar to EPA's Comprehensive Environmental Response, Compensation and Liability Act fund for such situations.

3.3.4 List of Commenters

WRITTEN COMMENTS

1. July 24, 1996, Advisory Committee on Radioactive Waste (Paul Pomeroy)
2. October 21, 1996, Organization of Agreement States (Robert Quillin)
3. October 24, 1996, State of Pennsylvania, Department of Environmental Protection (Rich Janati)
4. October 25, 1996, John Randall, U.S. NRC
5. October 28, 1996, State of Washington (Terry Frazee)
6. October 29, 1996, Richard Barkley, U.S. NRC
7. November 1, 1996, David Leroy, Attorney at law
8. November 3, 1996, Marvin Lewis
9. November 4, 1996, State of New Hampshire (Diane Tefft)
10. November 5, 1996, State of Michigan (Flint Watt)
11. November 6, 1996, Environmental Coalition on Nuclear Power (Judith H. Johnsrud)
12. November 7, 1996, State of Mississippi (Robert Goff)
13. November 8, 1996, State of Tennessee (Michael Mobley)
14. November 12, 1996, State of California (Carl Lischeske)

15. November 13, 1996, State of Oregon (David Stewart-Smith)
16. November 14, 1996, League of Women Voters of Rockford, IL (Betty Johnson)
17. November 14, 1996, November 14, 1996, State of Oregon (Ray Paris)
18. November 14, 1996, State of New Jersey, LLW Siting Board (Paul Wyszowski)
19. November 14, 1996, State of South Carolina (M.K. Batavia)
20. November 15, 1996, State of Nebraska (Steven J. Moeller)
21. November 15, 1996, League of Women Voters of Rockford, IL (Betty Johnson)
22. November 18, 1996, Siemens (L.J. Maas)
23. November 20, 1996, State of Massachusetts (Joe Ring)
24. November 21, 1996, State of Louisiana (Ronald Wascom)
25. November 21, 1996, State of Georgia (Thomas E. Hill)
26. November 21, 1996, State of Utah (William J. Sinclair)
27. November 22, 1996, South Carolina Electric and Gas Co. (Gary J. Taylor)
28. November 25, 1996, Westinghouse (N.J. Liparulo)
29. November 27, 1996, Nuclear Energy Institute (Thomas D. Ryan)
30. November 27, 1996, State of Texas (Richard Ratliff)
31. November 27, 1996, Conference of Radiation Control Program Directors (William P. Dornsife)
32. November 27, 1996, Council on Radionuclides and Radiopharmaceuticals (Roy W. Brown)
33. November 27, 1996, Detroit Edison (Douglas R. Gipson)
34. December 2, 1996, ASME International (Stacy Jarboe)
35. December 2, 1996, Phillip R. Reed, U.S. NRC
36. December 2, 1996, Florida Power Corporation (Steven Garry)
37. December 2, 1996, Envirocare of Utah (Charles Judd)
38. December 2, 1996, Mel Silberberg & Associates (Mel Silberberg)
39. December 2, 1996, State of Ohio (Robert Owen)
40. December 2, 1996, State of New Jersey (Jill Lipoti)

41. December 2, 1996, Yankee Atomic Electric (Jane Grant)
42. December 2, 1996, State of Maryland (Roland G. Fletcher)
43. December 2, 1996, Entergy (Michael J. Meisner)
44. December 2, 1996, State of Connecticut (Ron Gingerich)
45. December 2, 1996, Mallinckrodt Medical, Inc. (Ashok Dhar)
46. December 2, 1996, ABB Combustion Engineering Nuclear Systems (Charles B. Brinkman)
47. December 2, 1996, National Mining Association (Richard L. Lawson)
48. December 2, 1996, State of Illinois (Thomas W. Ortciger)
49. December 3, 1996, No Name

ORAL COMMENTS

Washington, D.C. (October 24-25, 1996) pages 5 - 59

1. Lynette Hendricks, NEI
2. Paul Genoa, NEI
3. Tony Thompson, Shaw Pittman
4. Ruth McBurney, CRCPD
5. Steve Collins, OAS
6. Lynn Fairbent, ATL International Inc.
7. Ray Daniels, Defense Nuclear Facilities Safety Board
8. Ed Regnier, DOE
9. Tom Hill, CRCPD
10. Jim Riccio, Public Citizens' Critical Mass Energy Project
11. Jane Fleming, NNSN D.N.A.C.

Colorado Springs, CO (October 31 - November 1, 1996) pages 370 -397

1. Marti Mitchell, Roy F. Weston
2. William Sinclair, OAS
3. Ken Weaver, State of Colorado and CRCPD

Chicago, IL (November 7-8, 1996) pages 4 - 37

1. Gordon Appel, State of Illinois

2. Thor Strong, State of Michigan
3. Kristin Erickson, Michigan State University
4. Mark Doruff, CORAR
5. Betty Johnson, LWV of Rockford

This page was intentionally left blank.

3.4 HIGH-LEVEL WASTE AND SPENT FUEL (DSI 6)

3.4.1 The Direction-Setting Issue and the Options

In recognition of current uncertainties, how should NRC approach the present high-level waste (HLW) situation?

Option 1: Approach Congress and the Administration to Refocus the National Program

Option 2: Reduce Uncertainty by Modifying NRC's Programs

Option 3: Maintain NRC's Existing High-Level Waste (HLW) Repository Program

Option 4: Take a Minimal Approach to NRC's High-Level Waste (HLW) Repository Program

Option 5: Take a Position on the Storage of Spent Fuel

3.4.2 Commission's Preliminary Views

The Commission's preliminary view is to proceed with Option 3 (Maintain NRC's existing HLW Program). This approach would enable NRC to continue to support the national HLW program at whatever level is appropriate to keep pace with the national program. However, the Commission intends to revisit this issue if, and when, the Congress provides further legislation on this issue.

In addition, the Commission would like to explore taking a more active role in resolving issues in the national HLW program, consistent with NRC's mission. The Commission particularly seeks public comment on what additional activities the NRC might reasonably undertake.

3.4.3 Summary of Comments

A. Significant/Important Comments Directly Affecting the Preliminary Views or the Direction-Setting Issue

Support for the Commission's preliminary view as stated was limited, with most commenters calling for some modification of the preliminary view. Overall, the commenters were divided in their support of the various options. Participants in the HLW program external to NRC tended to support the preliminary view in some manner (U.S. Department of Energy Office of Civilian Radioactive Waste Management [DOE/OCRWM], State of Nevada, Nevada Nuclear Waste Task Force, Clark County).

One commenter (DOE/OCRWM) stated that although some aspects of the various options that merit further consideration, it supports the Commission's preliminary view of maintaining the NRC's existing program until a national policy decision is made. This commenter further stated that certain aspects of the other options, such as revising regulations and licensing procedures, could be accomplished within the existing NRC program. This commenter stated that the preliminary view was the most compatible with the current DOE program strategy as described in DOE's revised program plan. This commenter also stated that in the existing program, NRC could continue to streamline its

organizational structure and clarify and streamline the technical requirements in 10 CFR Part 60, as well as develop requirements specific to Yucca Mountain as mandated by the Energy Policy Act of 1992. In addition, the commenter encouraged NRC to evaluate other existing licensing procedures to streamline the hearing process.

One commenter (Agency for Nuclear Projects, Nuclear Waste Project Office, Nevada) agreed with the Commission's preliminary view, given the uncertainty in the near future regarding potential legislative changes, but said that NRC should be prepared to revisit the issue if future legislation requires such reconsideration. The commenter stated that preclicensing interactions between NRC and DOE should constitute only "informal conferences," not binding resolution of any licensing issues, in order to maintain NRC's independence and objectivity.

Another commenter (Nevada Nuclear Waste Task Force Inc.) agreed with the preliminary view, provided that additional steps are taken to expand and enhance public input and involvement. This commenter stated that when options are considered by NRC that would expedite the process by reducing uncertainties, the assumption is that the result will be fewer and less effective opportunities for input and involvement, and that safety will not be assured.

Another commenter (Clark County) agreed with the preliminary view, and wrote that consideration should be given to applying certain aspects of Option 2 to create greater program efficiencies and reduce uncertainties associated with repository licensing. This commenter also said that, along with the preliminary view, the NRC should be a stronger advocate for options that are proven and available, such as at-reactor dry cask storage. This commenter stated that with onsite storage, more time can be provided for resolving other contentious issues, such as transportation, while sustaining pressure for the characterization and completion of a permanent repository.

The members of the Organization of Agreement States (OAS) were divided on which options they preferred, but some members supported the Commission's preliminary view to maintain NRC's existing HLW repository program. Three commenters (LA, GA, and UT) stated that they endorsed the comments of OAS.

One commenter (Michigan) supported Options 1 and 2, endorsing several of the examples presented in the paper as providing for progress in the national program, as well as centralized interim storage presented under Option 5. This commenter stated that Option 3, the preliminary view, was ineffective in comparison. However, this state preferred Option 3 over Option 4.

One commenter (Nuclear Energy Institute [NEI]) stated that the "wait-and-see approach" of the Commission's preliminary view was "wholly inadequate" and recommended adoption of elements of Options 1, 2, 3 (preliminary view), and 5. This commenter also said that the NRC should focus on the development and implementation of methods to meet the goals of the national program without compromising its independent regulatory mission, and should not focus on broad policy changes. Three other commenters (Yankee Atomic Electric Company [YAEC], ABB-Combustion Engineering [ABB-CE] and South Carolina Electric and Gas [SCEG]) endorsed these comments with varying emphasis on particular aspects of the comments.

One commenter (Entergy) concurred with the preliminary view, while also suggesting that it would be appropriate for the Commission to take a more active role in resolving issues in the national HLW program, consistent with NRC's mission. This commenter added that it would welcome NRC support in assuring the timely availability of appropriate safe-storage facilities for spent nuclear fuel under the existing program. Other commenters (NEI, YAEC) also said that NRC needed to do what it could to expedite the approval of dry storage and transportation systems under the existing program.

One commenter (SAIC) stated that the views of DOE/OCRWM and U.S. Department of Energy, Environmental Management (DOE/EM) need to be considered before NRC makes a final decision on this DSI.

One commenter (Erickson) agreed that the NRC should continue with its existing program, but proposed that NRC could possibly strengthen the program by approaching Congress for more funding and authority to enable greater involvement.

One commenter (Randall) had problems with Option 3, stating that repeated redirection of the DOE HLW program, with the latter undergoing major redirection every two to four years, has impaired NRC's ability to manage its program. This commenter noted that for Option 3 to be viable, NRC may have to approach Congress and the Administration to suggest ways to stabilize the national HLW program.

Another commenter (McCartin) said that the current structure of NRC's program was working well, and that expanding Option 3 to take an aggressive look at issue resolution would be appropriate. This commenter pointed out that there are a number of uncertainties that have significant potential to adversely affect the licensing of a repository (i.e., excessive delays and boundless speculation), particularly in a licensing hearing. This commenter suggested that resolving issues, before the licensing hearing, was of tantamount importance for having a meaningful, focused licensing hearing.

One commenter (Barkley) agreed with the preliminary view to retain NRC's existing program, but wanted it be done with limited resources. This commenter said that only one site will be reviewed and that the ultimate decision on using the site will be based more on political considerations than on technical matters, since almost any site can be made suitably safe for HLW disposal through additional engineered barriers.

Another commenter (McDuffie) also agreed with the preliminary view. This commenter said that the Commission should exercise restraint in trying to influence the overall direction of the repository program, and that the overall policy direction should be left to Congress and DOE. In this commenter's view, NRC should focus on regulating whatever facilities the Congress and DOE decide to construct.

Another commenter (Reed) thought that the Commission should approve Option 1 in conjunction with the preliminary view, Option 3. This commenter said that the agency should play a larger role in the national policy issues on HLW disposal by virtue of its position as a leader on worldwide nuclear safety issues.

One commenter (Environmental Coalition on Nuclear Power [ECNP]) felt that the nation's program for the management of radioactive waste is an "abysmal failure" and needs a completely independent review (non-NRC, non-DOE, and non-nuclear industry). ECNP urged NRC to eliminate use of the term "disposal" and adopt a waste management approach based on the concepts of "waste isolation and guardianship."

B. Comments on Other Options

The support for other options was divided. Opinions varied on the appropriateness of NRC pursuing an aggressive role in the national program. Several commenters noted that the options were not mutually exclusive and, as did many who endorsed the preliminary view, recommended some combination of the options. None of the commenters endorsed Option 4.

Two commenters (State of New Jersey [NJ], Conference of Radiation Control Program Directors [CRCPD]) suggested that it would be inappropriate for the Commission to pursue Option 1. These commenters said it was appropriate for the NRC to resolve technical issues and be proactive in informing the public on nuclear waste issues, but that it was inappropriate for the agency to become an advocate for the HLW program and that such advocacy would lead to public mistrust. However, these commenters noted that NRC intercession on budgetary constraints placed on the HLW program could help put risks and costs into perspective. These commenters stated that examining the costs of the HLW program and the radiation risks from spent fuel, and comparing these risks and costs to other regulatory programs would help to frame the issue for the general public and Congress. Two commenters (LA,GA) stated that they endorsed the comments of CRCPD).

Another commenter (OH) stated that it was inappropriate for the Commission to pursue Option 1, stating that enhancement of the national HLW program is not a regulatory function. This commenter said it would be better to expend funds in support of the regulatory effort only as prescribed by Congress. This commenter also thought that it would be inappropriate for NRC to lobby Congress, and said that DOE should be the party submitting the plans for the HLW program to Congress. With respect to the specific examples provided under Option 1, this commenter had the following reactions:

- Unless NRC is aware of an overall approach that is not licensable, the decision on whether to pursue geologic disposal integrated with interim storage is a decision to be made by DOE.
- The acceptability of the Yucca Mountain site should not be prescribed in law unless it is based on public health and safety criteria based on NRC rules and supporting policy.
- The proposal that certification be pursued in lieu of licensure in the interest of lessening the burden in the process gives the appearance of "backing down" from a full regulatory role. If the licensing process is unduly burdensome, then it should be changed without sacrificing public health and safety.

One commenter (Lewis) said that the example provided in the issue paper under Option 1 in which the NRC would propose that Congress determine the acceptability of Yucca Mountain by law was inappropriate because a political decision would be made rather than a scientific one.

With respect to Options 1 and 5, one commenter (DOE/OCRWM) stated that the current policy for management of HLW and spent fuel, including the role of interim storage and geologic disposal, will be reconsidered in the coming years. This commenter wrote that those who are intimately involved with these issues have an obligation to help inform the policymakers and the public so that "an astute and enlightened decision can be made." Therefore, DOE/OCRWM encouraged the Commission to adopt an approach that includes knowledgeable and effective participation in the policy debate.

One commenter (Randall) recommended adoption of Options 1 and 5 with the HLW program being restructured in one of two ways: indefinite storage with no repository program or centralized storage with a well-planned, politically and managerially stable repository program. Either way, this commenter also recommended that nuclear utilities manage the HLW program through a public corporation.

With respect to Option 2, one commenter (DOE/OCRWM) commended the effort to identify methods for streamlining activities to reduce uncertainty associated with the licensing process. This commenter stated that it would welcome the opportunity to explore further with staff the potential for streamlining the currently applicable licensing process by incorporating "more informal procedures."

Another commenter (OH) wanted NRC to direct its efforts towards Option 2. However, this commenter thought it was unclear how the example suggested under this option to elevate NRC's HLW program to an "office" status would enhance the program. This commenter, along with some others (NEI, YAEC, NRC staff) opposed the idea presented under Option 2 of designating DOE employees as NRC representatives for certifying that the regulations are met in the licensing of a repository or interim storage facility. Some of these commenters suggested that implementing this idea would be tantamount to allowing self-regulation by DOE.

Under Option 2, one commenter (NEI) endorsed the idea of establishing an issue resolution process for the repository, as well as revising Part 72 to extend the license term for independent spent fuel storage installations (ISFSIs) to 100 years. This commenter also made several recommendations that would be consistent with Option 2. This commenter suggested that NRC should modify its regulations on the basis of experience and should impose a risk-informed discipline, as well as completely review its regulations and programs in an effort to streamline activities. This commenter also stated that NRC should update its generic environmental impact statement for transportation (NUREG-0170). Further, this commenter thought that NRC should advise the Environmental Protection Agency (EPA) on an appropriate, implementable repository performance standard. Three other commenters (YAEC, SCE&G, ABB-CE) endorsed these comments and placed varying emphasis on particular aspects of the comments.

Some members of the Organization of Agreement States (OAS) supported Option 2, stating that NRC should proceed on the assumption that because of the recent court decision regarding DOE's obligation to take the spent fuel by 1998, DOE will dedicate its resources accordingly. They also stated that NRC should assume that the national program will involve a repository, centralized interim storage, and onsite dry cask storage. Simplification of the hearing process, pursuing binding resolution, and early negotiation of issues were all considered worthwhile.

With respect to Option 4, one commenter (DOE/OCRWM) suggested that it would be inappropriate for NRC to reduce its program to a bare minimum. This commenter said that this approach would run counter to the need to address disposal in a comprehensive and timely manner as mandated by Congressional legislation, and would run counter to OCRWM's Program Plan, in which DOE and NRC will be increasingly engaged over the next few years. Other commenters (Ohio [OH], NEI) also suggested that this approach was not acceptable.

Some members of the OAS supported Option 5, stating that interim storage provides a near-term solution. These members said that if Yucca Mountain is found to be unsuitable, a fallback position, such as dry-cask storage, should already be in place. These members thought the NRC should encourage Congress to move towards dry storage, using DOE sites. These OAS members also stated that since DOE owes the utilities, it should be part of the interim solution.

One commenter (Clark County) stated that contrary to statements made in the issue paper, public opposition to storage at reactor sites does not appear to be very significant. One commenter (OH) noted that with respect to Option 5, a "de facto" national approach to dry-cask storage already existed in the form of present storage at nuclear power plants. This commenter said that at-reactor storage would be the preferred option. Another commenter (Michigan [MI]) cautioned NRC against advocating one particular storage option over another. This commenter suggested that such NRC advocacy would appear to be an endorsement of one option as being safer than the other. Even if this were not NRC's intent, this commenter feared that the public may perceive it in this manner.

Two commenters (CRCPD, New Jersey) found it contradictory that assured storage, as a concept for managing Low-level Waste (LLW), is not fully explored, but that spent fuel can be stored in ISFSIs. These commenters said that if the Commission chose to pursue Option 5, and advocated at-reactor storage, it would need to explain the apparent contradiction with the LLW program. Two commenters (LA,GA) stated that they endorsed the comments of CRCPD.

One commenter (Public Citizen) supported Option 5, stating that the waste is going to have to be watched in perpetuity, and that disposal will always meet public opposition. Another commenter (Fleming) simply stated that she was in favor of NRC getting involved and finding a solution, although she did not favor spent fuel being stored throughout the country at reactor sites.

One commenter (McDuffie) found it appropriate for the Commission to pursue Option 5, supporting spent fuel storage at a centralized facility. This commenter stated that, recognizing the impact on operating reactors as spent fuel pools reach capacity, it would be appropriate for the Commission to be more proactive in addressing the need for dry spent fuel storage. This commenter suggested that if a centralized facility were available, the reactor licensees could concentrate on their primary concern, safe reactor operation, rather than on the need to maintain an onsite spent fuel storage facility. This commenter also said that the Commission should not become involved in the issue of regional equity (i.e., one site versus several sites), since this is a public policy issue and not a health and safety issue.

One commenter (W) supported strong involvement by NRC to help achieve progress and thought that a combination of Options 1, 2, and 5 would be appropriate. This commenter supported having Congress and the Administration establish an

integrated spent fuel storage and disposal system with proposed schedule and budgets, as outlined in Option 1, in parallel with NRC taking steps to reduce uncertainty in its programs, as described in Option 2. In addition, this commenter suggested that NRC should also pursue development of regulatory acceptance criteria, allowing for the public debate to be more focused on compliance issues. With respect to Option 5, this commenter said that with the current national HLW program in a state of debate, a realistic interim approach involving spent fuel storage would be appropriate.

With respect to possible options that were not discussed in the issue paper, one commenter (League of Women Voters) suggested that if feasible, it may be better to entomb fuel rods, possibly in the reactor, and/or other long-lived HLW on site rather than transporting it to a special site for disposition. Another commenter (Prairie Island Indian Community) noted that ceasing production of HLW materials should be considered as an option.

An anonymous commenter wrote that the responsibility of dealing with the final disposal of HLW and spent fuel is DOE's, and, therefore, NRC should only deal with temporary storage of the waste and nothing more.

Several commenters (CRCPD, OR, MI, IL, PGE, YAEC, Detroit Edison) said that the "greater than Class C" (GTCC) waste needed to be considered with respect to storage at ISFSIs and/or ultimate disposal in a HLW repository, and that appropriate regulations needed to be in place. One of these commenters (CRCPD) noted that there is some naturally occurring and accelerator-produced radioactive material (NARM) that is in the same source strength range as GTCC and that these sources should be tracked and be taken care of in the same way and at the same time as the GTCC. Two commenters (LA,GA) stated that they endorsed the comments of CRCPD.

C. Comments on Important Omissions

One commenter (Agency for Nuclear Projects, Nuclear Waste Project Office, Nevada) stated that this DSI should address both safety and safeguards aspects of HLW and spent fuel transportation. Although agreeing with the DSI's acknowledgement that there is public concern over spent fuel shipments the commenter was disappointed that the DSI did not examine the sources of public concern, nor did it recommend actions to address specific safety issues raised by stakeholders and the general public. The commenter urged that "Careful consideration of stakeholder concerns, in our opinion, means that at a minimum, NRC should reevaluate its position on three critical issues: full scale physical testing of shipping casks; the use of probabilistic risk assessment in transportation risk analyses; and the vulnerability of spent fuel and HLW shipments to sabotage and/or terrorist attack." The commenter concluded that "If the Commission, as it has said, is interested in taking a more active role in resolving national HLW issues, it could begin to address the issue of public confidence by reviewing and responding to regulatory issues that continue to be raised by Nevada and others about the storage and transportation of HLW."

Another commenter (Clark County) also said that NRC should have paid more attention to transportation in the issue paper. This commenter said that the NRC needs to be proactive in determining significant transportation issues and the potential need to modify its current regulatory authority. This commenter stated that NRC involvement in transportation will become more important if DOE's current objective to privatize waste transportation is implemented.

This commenter also said that the Licensing Support System (LSS) should have been addressed, noting the importance of the system in enhancing the stakeholder's role in licensing as well as offering the potential for making the licensing review more efficient. Finally, this commenter suggested that terrorism should have been addressed, stating that NRC, as a nuclear expert, needs to be more proactive in considering potential nuclear threats and ways by preventing such danger to the public.

One commenter (NEI) wrote that the impacts of the outcome of the U.S. Court of Appeals ruling that DOE must accept spent fuel from commercial nuclear power reactors by January 31, 1998, should have been discussed along with the impact on NRC to review more applications for at-reactor storage if DOE does not meet this deadline. This commenter noted that public mistrust was mentioned in the paper, but the DSI did not examine whether NRC has contributed to that mistrust. The commenter suggested that a comparison of the EPA approach to chemically hazardous wastes with NRC's program for HLW could show why the hazardous waste program was relatively more successful. Finally, this commenter indicated that the discussion on transportation issues was incomplete, in particular, noting the impact of the cancellation of DOE's multi-purpose canister (MPC) system on utilities. Three other commenters (YAEC, SCE&G, ABB-CE) endorsed these comments, placing varying emphasis on particular aspects of the comments.

One commenter (ATL International, Inc.) was perplexed that the defense HLW program was not discussed, noting its significance with respect to its volume and curie content.

One commenter (Creed) felt that the role of private industry was missing from the paper and suggested that a private, for-profit organization could be drawn into the process to help solve the problem of dealing with the nation's high-level waste.

D. Comments on Internal/External Factors

Several commenters (Clark County, Nevada Nuclear Waste Task Force, Utah, League of Women Voters, NRC staff) noted spent fuel transport as a significant factor for the HLW repository and spent fuel storage programs.

One commenter (Nevada Nuclear Waste Task Force) said that the issue paper gave unwarranted safety assurance to future transportation programs and dry cask storage. This commenter said that there are unresolved issues in these areas and that giving assurances is premature and raises doubts in the public's mind about whether adequate testing will be done, or if existing and future problems will be satisfactorily resolved.

One commenter (League of Women Voters) stated that before any plans are finalized, the possibility of leakage from transportation casks needs to be resolved, along with environmental issues concerning any proposed site.

One commenter (NRC staff) pointed out that public concerns about spent fuel transport associated with centralized storage could be allayed through an education campaign by DOE or the reactor licensees, but not by NRC. Such a campaign could focus on cask construction and cask performance in accident scenarios.

Some commenters (UT, Farron, Sweden/Swedish Nuclear Power Inspectorate [Sweden/SKI]), noted the politics of the HLW issue. One of these commenters (Sweden/SKI) said that international convergence on safety requirements and what is meant by "reasonable assurance" of long-term safety of waste repositories will be crucial for public acceptance.

An anonymous commenter wrote that the NRC needed to clarify the roles and responsibilities of the Office of Nuclear Reactor Regulation (NRR) and the Office of Nuclear Material Safety and Safeguards (NMSS) in the dry-cask storage program, stating that activities related to reactors, including dry cask storage, should be handled by NRR.

One commenter (Patriot) stated that contrary to one of the key factors in the paper, there is a significant consensus in the industry, the scientific community, and among the various parties interested in the HLW program.

E. Comments on Staff Requirements Memorandum Questions

In its preliminary view, the Commission stated that it would like to explore taking a more active role in resolving issues in the national HLW program, consistent with NRC's mission, and requested comments on what additional activities the NRC might reasonably undertake. Although commenters did not speak to this question, some made suggestions as noted below.

One commenter (UT) endorsed the idea NRC taking a more active role consistent with its mission, suggesting that a process needs to be established to work through the politics of the program. This commenter noted that the public perception of spent fuel shipments is a significant issue and that more information on transportation safety needs to be disseminated, suggesting outreach materials be developed by NRC.

Another commenter (NEI) wanted NRC to take a much stronger role in advising Congress and the general public about the safety of the spent transport, storage, and disposal of nuclear fuel. This commenter said that NRC should also recommend changes to legislatively imposed processes that would enhance the Nation's ability to manage HLW and spent fuel. One commenter (SCE&G) stated that they endorsed the comments of NEI.

Three commenters (Paul Farron, ECNP, NRC staff) felt that more involvement by NRC may not be appropriate. In order to have credibility as a regulator, the commenters felt it was important for the NRC to be neutral.

Two commenters (Holmes, NRC staff) suggested that given the NRC's role to protect public health and safety, it may be appropriate for the NRC to advocate safety when there is a clear safety benefit to pursuing one direction versus another, whether it be regarding a particular approach to dealing with HLW or any other subject.

One commenter (Erickson) stated that holding public meetings like the Strategic Assessment meetings could be one way for the NRC to be more involved yet remain neutral. The commenter found this type of meeting very beneficial and said that it would increase public and licensee awareness, and improve public communication.

3.4.4 List of Commenters

WRITTEN COMMENTS

1. October 21, 1996, Organization of Agreement States (Robert Quillin)
2. October 17, 1996, John D. Randall, U.S. NRC
3. October 28, 1996, State of Washington, Department of Health (Terry Frazee)
4. October 28, 1996, Richard S. Barkley, U.S. NRC
5. November 3, 1996, Marvin I. Lewis
6. November 4, 1996, State of New Hampshire, Department of Health and Human Services (Diane E. Tefft)
7. November 5, 1996, M. Rose Byrne, U.S. NRC
8. November 5, 1996, Nevada Nuclear Waste Task Force, Inc. (Judy Treichel)
9. November 5, 1996, State of Michigan, Department of Environmental Quality (Flint C. Watt)
10. November 6, 1996, Environmental Coalition on Nuclear Power (ECNR) (Judith H. Johnsrud)
11. November 7, 1996, State of Mississippi, Department of Health (Robert W. Goff)
12. November 8, 1996, Timothy J. McCartin, U.S. NRC
13. November 13, 1996, State of Oregon, Office of Energy (David Stewart-Smith)
14. November 14, 1996, State of Nevada, Nuclear Waste Project Office (Robert R. Loux)
15. November 14, 1996, League of Women Voters, Rockford, Illinois (Betty Johnson)
16. November 14, 1996, State of Oregon Department of Human Resources (Ray D. Paris)
17. November 14, 1996, South Carolina Department of Health and Environmental Control (Max K. Batavia)
18. November 20, 1996, U.S. Department Of Energy (Daniel A. Dreyfus)
19. November 21, 1996, State of Louisiana, Department of Environmental Quality (Ronald Wascom)
20. November 21, 1996, State of Georgia, Department of Natural Resources (Thomas E. Hill)

21. November 21, 1996, State of Utah, Department of Environmental Quality (William J. Sinclair)
22. November 22, 1996, South Carolina Electric and Gas Company (Gary J. Taylor)
23. November 22, 1996, Steve McDuffie, U.S. NRC
24. November 25, 1996, Westinghouse Electric (N.J. Liparulo)
25. November 27, 1996, Nuclear Energy Institute (Thomas D. Ryan)
26. November 27, 1996, Conference of Radiation Control Program Directors (William P. Dornsife)
27. November 27, 1996, Portland General Electric (Stephen M. Quennoz)
28. November 27, 1996, Detroit Edison (Douglas Gipson)
29. December 2, 1996, Swedish Nuclear Power Inspectorate (Lars Hogberg)
30. December 2, 1996, Phillip R. Reed, U.S. NRC
31. December 2, 1996, Barry Mendelsohn, U.S. NRC
32. December 2, 1996, Mel Silberberg & Associates (Mel Silberberg)
33. December 2, 1996, State of Ohio Department of Health (Robert E. Owen)
34. December 2, 1996, State of New Jersey (Jill Lipoti)
35. December 2, 1996, Yankee Atomic Electric Company (Jane M. Grant)
36. December 2, 1996, Entergy (Michael J. Meisner)
37. December 2, 1996, ABB-Combustion Engineering (Charles B. Brinkman)
38. December 2, 1996, Clark County Nevada, Nuclear Waste Division (Dennis Bechtel)
39. December 2, 1996, State of Illinois, Department of Safety (Thomas W. Ortziger)
40. December 3, 1996, No Name
41. December 6, 1996, James Creed, U.S. NRC

ORAL COMMENTS

Washington, D.C. (October 24 - 25, 1996) pages 59 - 90

1. Jim Riccio, Public Citizen's Critical Mass Energy Project
2. Jane Fleming, NNSN D.N.A.C.
3. Dennis Bechtel, Clark County Nevada

4. Greg Gurican, Patriot, GPU Nuclear, Inc.
5. Steve Collins, OAS
6. Sid Crawford, SAIC
7. Chris Einberg, DOE/OCRWM
8. Lynne Fairbent, ATL International, Inc.

Colorado Springs, CO (October 31 – November 1, 1996) pages 397 –413

1. Bill Sinclair, State of Utah
2. Ken Weaver, CO Department of Public Health & Environment
3. Mr. Holmes, CRCPD

Chicago, IL (November 7 – 8, 1996) pages 161 – 182

1. Heather Westra, Prairie Island Indian Community
2. Kristin Erickson, Michigan State University
3. Paul Farron, Wisconsin Electric Power Company
4. Thor Strong, State of Michigan

3.5 MATERIALS/MEDICAL OVERSIGHT (DSI-7)

3.5.1 The Direction-Setting Issue and the Options

What should be the future role and scope of the NRC's Nuclear Materials Program, and in particular, NRC's regulation of the medical use of nuclear material.

- Option 1: Increase Regulatory Responsibility With Addition of X-Ray, Accelerators, and Naturally Occurring and Accelerator-Produced Radioactive Materials
- Option 2: Continue Ongoing Program (With Improvements)
- Option 3: Decrease Oversight of Low-Risk Activities with Continued Emphasis of High-Risk Activities
- Option 4: Discontinue Regulation of All Medical Activities Except NRC Oversight of Devices and Manufacturers (National Academy of Sciences Recommendation)
- Option 5: Discontinue Materials Program

3.5.2 Commission's Preliminary Views

The Commission preliminarily favors a combination of Option 2 (Continue the Ongoing Program [with Improvements]) and Option 3 (Decrease Oversight of Low-Risk Activities with Continued Emphasis of High-Risk Activities). In implementing Option 3, the NRC would utilize the risk-informed performance-based approach, as discussed in DSI 12, to determine which activities in the materials area, and specifically in the medical area, are low-risk activities. The general approach described in Option 3 of this DSI appears to be a reasonable starting point for identifying the types of activities that can be affected by this process.

In implementing these options with regard to the NRC's medical program, the NRC would consult with its Advisory Committee on the Medical Uses of Radioisotopes (ACMUI) for guidance on low-risk medical activities, revisions to 10 CFR 35, and possible implementation methods. The NRC would also evaluate the feasibility of using professional medical organizations and societies as a potential source for developing professional standards and guidance that would be adhered to by NRC medical licensees and could be adopted by the NRC as regulatory requirements.

In the public comments on this issue, the NRC particularly solicits the views of other affected organizations such as the Organization of Agreement States and the CRCPD on applying a risk-informed performance based approach to NRC's oversight of medical activities. The NRC also solicits the public's views on the feasibility and desirability of NRC's striving to have the remaining non-Agreement States acquire Agreement State authority for medical-use only. In addition, the Commission solicits the public's views on whether a single agency should regulate radiation safety. Finally, the NRC specifically seeks comments on the Attachment to this issue paper titled "Regulation of Radiation in Medicine - IOM Issues."

3.5.3 Summary of Comments

A. Significant/Important Comments Directly Affecting the Preliminary Views or the Direction-Setting Issue

In both the written comments and comments made at the stakeholder meetings, there was broad support for the options identified in the Commission's preliminary view and for taking serious steps to reduce the burden and intrusiveness of regulations in areas where the risk does not justify it. The Organization of Agreement States (OAS), individual Agreement and non-Agreement States, the Conference of Radiation Control Program Directors (CRCPD) and members of the regulated community (American College of Nuclear Physicians/Society for Nuclear Medicine [ACNP/SNM], American College of Cardiology [ACC], Council on Radionuclides and Radiopharmaceuticals [CORAR], American College of Radiology (ACR), Mallinckrodt, Nuclear Energy Institute [NEI], ABB-CE and Erickson) supported this option.

Most of these commenters called for close coordination with them in any systematic review of and revisions to the regulations to make them more performance based as well as in seeking to define low risk. The mechanism most commonly described by the commenters to accomplish this was an enhanced participatory rulemaking. Examples of areas that could be considered for reduced levels of regulatory oversight included gas chromatographs, nuclear pharmacy, and diagnostic nuclear medicine. One commenter (ACNP/SNM) also felt that the relative risk of therapeutic nuclear medicine needs to be reexamined and that it could be that such a reexamination could lead to general licensing of this area.

A consistent theme in the comments was that, while there is a clear need to revise the regulations to be less prescriptive, the removal of all controls over the use of radioactive materials is not necessary. Some commenters (OAS, MD, IL, MI, GA) were concerned about the possible adverse consequences of NRC decreasing its level of regulation of low-risk activities and specifically cited problems experienced with generally licensed devices. They went on to state that NRC should not decrease its regulation of such activities for the sake of expediency or resources. Rather, any steps to lessen the level of intensity of regulation should be carefully considered before being undertaken and should take into account the fact that some activities may only be low-risk because of the regulatory framework that is in place. One commenter (Veterans Administration Medical Center-Lexington, KY), in expressing its support for Option 2, noted that for NRC "to abandon regulatory oversight of diagnostic and therapeutic radiopharmaceuticals would be a serious error" in that such oversight would then fall to the Department of Health and Human Services (DHHS), Food and Drug Administration (FDA), which, in this commenter's view, may not be in the best interests of patient care. One commenter (Environmental Coalition on Nuclear Power [ECNP]) was opposed to the preliminary view, stating that regulatory controls over both generally and specifically licensed device as well as medical uses, needed to increase markedly, than decrease.

Three commenters (CORAR, ACNP/SNM, and Mallinckrodt) reversed their previous positions supporting the preferred option of the IOM study based on the prospect of working with NRC in Options 2 and 3 to review the regulations based on risk and to reduce the burden of regulation in the medical and materials areas.

Three commenters (KS, OR-EN, CORAR) supported Option 2 with the addition of accelerator-produced radioisotopes, noting that because of the similarities between these materials and byproduct material, the distinction that is currently drawn between them is an artificial one. Another commenter (NEI) supported the preliminary view in part, but recommended that NRC expand its scope to include a blend of the other options. This would mean having NRC take on responsibility for all Federal radiation protection standards setting (including X-ray, accelerators, and Naturally Occurring & Accelerator Produced Radioactive Materials [NARM], while at the same time devolving regulation of all materials licensees to the States, with the exception of major materials licensees (i.e., those licensees required to maintain Emergency plans). One commenter (Schultz) expressed her support for Option 4, but indicated her willingness to support the Commission's preliminary view if the Commission rescinded the 1979 Medical Policy Statement and made significant revisions to Part 35. In addition, the Advisory Committee on Medical Uses of Isotopes (ACMUI) indicated that its preference was for a variation of Option 4 as provided in the recommendations resulting from their February 21-22, 1996 meeting. The ACMUI went on to state that, given that these recommendations were not part of the Commission's preliminary view --

The 1979 Medical Policy Statement should be reconsidered; and the scientific basis of the statement needs to be reviewed with consideration of current research and studies; and the ACMUI is committed to working with the staff and Commissioners to provide guidelines for determination of procedures and activities that range from low risk to high risk to patients. Therefore, the ACMUI recommends that the 1979 Medical Policy Statement be revised.

One commenter (Marcus) disagreed with the Commission's preliminary view, as well as with the issue paper in its entirety.

B. Comments on Other Options

There was also broad support among the commenters (ACNP/SNM, CRCPD, OAS, Mallinckrodt, NEI, ABB-CE, GA, CO, MD, MI, IL, TN, FL, KS, NJ and TX) for Option 1, or a variation thereof, with the commenters stating that all exposures to ionizing radiation should be treated equally nationwide. While some commenters felt that a Federal agency with the mandate to address all sources of radiation should only have standard-setting authority and that the States should have the responsibility for implementing those standards, others felt that it should also have a regulatory program. Irrespective of the role, there was general support for NRC being the Federal agency responsible for national radiation safety.

The CRCPD indicated that it should play a major role in the establishment of radiation protection standards and that resources should be provided to it for this effort. It was also stated (OAS, CORAR, Mallinckrodt) that the resource estimates for this option seemed unusually high. Staff clarified this comment in the Washington, D.C. stakeholder meeting by stating that Option 1 was not limited to discrete NARM, but also included resources for regulation of X-ray and linear accelerators. Several supporters of Option 1 (OAS, TN) stated that, if NRC adopted Option 1, it would need to take into account the existing programs of many States and that when those programs are considered, the resource impacts on NRC might not be as great as projected in the issue paper.

One commenter (MI) supported Option 1, with the exclusion of X-ray machines and other radiation machines, which the commenter felt were being adequately regulated under the existing Federal-State framework. This commenter also noted that all NARM should be included under this option, not merely discrete NARM sources. Another commenter (TN) stated that NRC should "establish a program to regulate all radioactive material at any concentration which presents a risk beyond that presented by the natural concentrations of materials found in the earth." This commenter suggested that Option 1 should also be broadened to include all Federal facilities (including the Department of Energy) and that NRC should seek "a waiver of sovereign immunity in order for Agreement States to regulate all radioactive material in all facilities" One commenter (OR-EN) stated there was no need to extend NRC authority to include X-ray, accelerators or NORM, but said that accelerator-produced radioisotopes should be included under NRC's authority because of the similarities between these materials and byproduct material.

Several commenters (ACNP/SNM, OAS, CRCPD, Mallinckrodt, CORAR, GA, KS, MI, NJ, IL) expressed their lack of support for Option 4, indicating that this option probably represented an unfunded mandate for the States. Commenters said that **rather than discontinue the regulation of all medical users, NRC should recognize the unnecessarily burdensome and prescriptive requirements of Part 35 and undertake to revise that regulation.** One commenter (NJ) stated that "There is no other Federal agency with the vast knowledge and experience to replace the NRC as the agency responsible for medical uses of byproduct material." Several commenters (CRCPD,IL,TX) indicated that Option 4 "could have a detrimental impact on the users of radioactive material and the citizens of non-Agreement States which are unable to develop a State program that is not consistent with the national model" These commenters went on to state that selection of this option could also result in greater jurisdictional confusion at a time when greater consistency is needed. Another commenter (IL) stated that this option raised questions about inequitable treatment of medical licensees relative to all other material licensees. Two commenters (NEI, ABB-CE) indicated that NRC should discontinue its regulation of all medical activities, and allow FDA to regulate medical devices and activities, with the States regulating industrial and commercial products.

Three commenters (ACMUI, American Society of Nuclear Cardiology, Schultz) supported Option 4, with some indicating a willingness to support the Commission's preliminary view if the Commission made significant changes to the 1979 Medical Policy Statement and Part 35. Another commenter (NM) supported Option 4, noting that if Congress does not take the steps recommended in the IOM study, NRC should replace the Quality Management (QM) rule with a more performance-based rule and should revised Part 35 in its entirety. In their views on Option 4, several commenters (GA,IL,CRCPD) recommended that "NRC, FDA and representatives from applicable boards of medicine and pharmacy should jointly develop a paper describing the jurisdiction boundaries of each entity relative to regulated use of radioactive material and the practice of medicine."

Three commenters (NY, LA, Anonymous) supported Option 5, one of whom (NY) stated that this option was in accordance with the IOM study and the recommendations of NRC's National Performance Review Steering Committee. In a variation on Option 5, one commenter (NEI) indicated that NRC should continue to regulate only major materials licensees (i.e., those that are required to maintain emergency plans) and should devolve licensing and inspection of all

other licensees to the States. Another commenter (FL) indicated that he supported portions of the Commission's preliminary view in the near term, but stated that Option 5 was his preferred option. Other States felt that Option 5, as well as Option 4, represented unfunded mandates, abrogations of Federal authority and were not in the best interests of public health and safety. One other commenter (CORAR) indicated that both Options 4 and 5 could lead to non-uniformity between States, which could present logistical problems to the regulated community, and therefore, he could not support either option.

One commenter (Marcus) proposed an option not expressly addressed in the paper. Under this option the Commission would stop regulating medicine and pharmacy, increase the qualifications for physician-authorized users, and regulate nuclear medicine and nuclear pharmacy only on the basis of the radiation protection standards contained in Part 20.

C. Comments on Important Omissions

Two commenters (OAS,TN) stated that the issue paper did not contain complete discussion on radiation safety issues and made little mention of the fact that the "majority of radiation exposure is from non-AEA sources...." One of these commenters (TN) went on to say that the issue paper only dealt with select options and that discussion of those options did not "allow a fair unbiased assessment of one option versus other options...." Two commenters (NEI, Siemens) stated that the issue paper focused only on byproduct material licensees, to the exclusion of source material and special nuclear material licensees. One commenter (NEI) felt that the issue paper may have been too limited in its focus on the QM Rule as a major issue, in that this rule affects only a small portion of the regulated community. This commenter went on to note that NRC materials regulations are "too prescriptive and enforcement is based on compliance to paperwork rather than safety performance."

D. Comments on Internal/External Factors

There were limited comments on most of the internal and external factors affecting this DSI, with the exception of full cost recovery. Several commenters (NY, Marcus) said that this factor is a significant one in NRC's consideration of this DSI. One (NY) went on to state that the decline in licensee population as a result of full cost recovery stands to make NRC's materials program nonviable. This commenter said that the success of the Agreement State program makes the NRC materials program more marginal economically and difficult to support and offered ways to reduce NRC costs. These included greater use of technical staff to perform work normally done by contractors and adoption of rules already developed by Agreement States. Several commenters (OH, CORAR, GA, CRCPD) expressed their support for the Business Process Reengineering (BPR) effort as well as other NRC initiatives to streamline and improve the regulatory process. One commenter (GA) expressed the view that rather than spend resources on enforcement and civil penalties, the agency should spend more time visiting and inspecting licensed facilities.

E. Comments on Staff Requirements Memorandum Questions

In its preliminary view, the Commission requested specific comments on four issues. Those issues and the comments provided are listed below.

Application of a risk-informed performance-based approach to NRC's oversight of medical activities.

As stated above, the commenters generally supported this approach, not only to NRC's regulation of medical activities, but also to regulation of materials users. The Organization of Agreement States (OAS) indicated in its consensus view that a risk-based approach to regulation was favored by most of the States, but that the criteria must be applied both to existing and proposed regulations. OAS felt that NRC must not abandon control over "low-risk" activities solely to reduce its regulatory burden, and that NRC's identification and classification of "low-risk" activities should be done carefully and in close consultation with the Agreement States. Several individual Agreement and non-Agreement States agreed with this latter view.

Feasibility and desirability of having the remaining non-Agreement States acquire Agreement State authority for medical use only

Commenters did not specifically address this question. However, comments provided on Option 4 indicated that there was little support for this approach. Most commenters felt that this option would represent an unfunded mandate for the current non-Agreement States. Other commenters stated that such an approach could result in greater jurisdictional confusion at a time when greater consistency is needed and that this approach could raise questions about inequitable treatment of medical licensees relative to all other material licensees.

Whether a single agency should regulate radiation safety

As stated above, many commenters felt that there was a legitimate role for a Federal agency in the regulation of all forms of radiation safety, including NARM. Some felt that the Federal role should be limited to merely standards-setting, leaving the States to implement the standards as they would, without Federal oversight of that implementation. Others felt that the role needed to be broader than standards-setting to include regulation of radiation safety. There was general support for NRC being that agency, whatever the final role was. In expressing their support for NRC being the regulator of radiation safety, two commenters (CORAR, Mallinckrodt) recommended that another agency be responsible for standards-setting and specifically recommended that this agency not be the U.S. Environmental Protection Agency. Commenters also said that NRC needs to take into account the existing programs in the States in any decision to proceed on this option. However, one commenter (Marcus) said that no current Federal agency was appropriate for this role and recommended that a new Federal Radiation Council be developed expressly for this purpose.

Specific comments on the attachment to the issue paper entitled "Regulation of Radiation in Medicine - IOM issues

One commenter (OH) specifically commented on this attachment, noting that it did not support the recommendation in the report, to devolve all regulation to the States with the exception of regulation of manufacturers. This commenter also felt that the observation in the report regarding the reservations of the regulated community about seeking advice from the NRC was not a valid one. Finally, this commenter stated that the Department of Health and Human Services (DHHS), the agency recommended in the IOM report for Federal guidance

in the medical area, does not have an extensive history in regulation of radiation protection. Other commenters did not specifically comment on this attachment, but related comments on Option 4 are discussed above.

3.5.4 List of Commenters

WRITTEN COMMENTS

1. August 1, 1996, State of New Mexico (Gary E. Johnson)
2. September 16, 1996, American College of Nuclear Physicians/Society for Nuclear Medicine (David R. Brill/Michael D. Devous)
3. October 16, 1996, ACNP/CA Chapter (Dr. Carol S. Marcus)
4. October 18, 1996, ACNW/CA Chapter (Dr. Carol S. Marcus)
5. October 21, 1996, Organization of Agreement States & Conferences of Radiation Control Program Directors (Robert Quillin)
6. October 23, 1996, State of New York, Department of Labor (Rita Aldrich)
7. October 23, 1996, Summary of Agreement State Regulators Meeting
8. October 28, 1996, State of Washington Department of Health (Terry Frazee)
9. October 31, 1996, State of Florida (William A. Passetti)
10. November 4, 1996, State of New Hampshire Department of Health and Human Services (Diane Tefft)
11. November 5, 1996, State of Michigan Department of Environmental Quality (Flint C. Watt)
12. November 6, 1996, American Society of Nuclear Cardiology (Mario Verani)
13. November 6, 1996, Environmental Coalition on Nuclear Power (Judith Johnsrud)
14. November 7, 1996, State of Mississippi, Department of Health (Robert W. Goff)
15. November 7, 1996, American College of Cardiology (Richard Lewis)
16. November 8, 1996, State of Tennessee, Department of Environment and Conservation (Michael Mobley)
17. November 12, 1996, William Beaumont Hospital (Cheryl Culver Schultz)
18. November 12, 1996, State of Kansas, Department of Health and Environment (Ronald G. Fraass)
19. November 13, 1996, State of Oregon, Office of Energy (David Stewart-Smith)

20. November 13, 1996, State of Oregon, Department of Human Resources (Ray D. Paris)
21. November 14, 1996, State of South Carolina, Department of Health and Environmental Control (Max K. Batavia)
22. November 21, 1996, State of Louisiana, Department of Environmental Quality (Ronald Wascom)
23. November 21, 1996, State of Georgia, Department of Environmental Resources (Thomas E. Hill)
24. November 21, 1996, State of Utah, Department of Environmental Quality (William J. Sinclair)
25. November 21, 1996, Siemens Power Corporation (L. J. Maas)
26. November 22, 1996, South Carolina Electric and Gas (Gary J. Taylor)
27. November 26, 1996, ACMUI (Judith Anne Stitt)
28. November 27, 1996, American College of Radiology (Melanie T. Young)
29. November 27, 1996, Nuclear Energy Institute (Thomas D. Ryan)
30. November 27, 1996, State of Texas, Department of Health (Richard Ratliff)
31. November 27, 1996, CRCPD (William P. Dornsife)
32. November 27, 1996, CORAR (Roy W. Brown)
33. November 27, 1996, Department of Veteran Affairs, Lexington Medical Center (John J. Coupal)
34. November 27, 1996, A .N. Tschaeche
35. December 2, 1996, ACNP/SNM (David R. Brill and Michael D. Devous)
36. December 2, 1996, State of Ohio, Department of Health (Robert E. Owen)
37. December 2, 1996, State of New Jersey (Jill Lipoti)
38. December 2, 1996, State of Maryland (Roland G. Fletcher)
39. December 2, 1996, Mallinckrodt Medical, Inc. (Ashok Dhar)
40. December 2, 1996, ABB-CE (Charles B. Brinkman)
41. December 2, 1996, State of Illinois, Department of Nuclear Safety (Thomas W. Ortciger)
42. December 3, 1996, No Name

ORAL COMMENTS

Washington, D.C. (October 24 - 25, 1996) pages 87 - 109

1. Darrell McIndoe, ACNP/SNM
2. Thomas Hill, Organization of Agreement States
3. Roy Brown, CORAR
4. Ruth McBurney, Council of Radiation Control Program Directors

Colorado Springs, CO (October 31 -- November 1, 1996) pages 185 - 195)

1. Ashak Dhar, Mallinckrodt Medical, Inc.
2. William J. Sinclair, Organization of Agreement States
3. Ken Weaver, State of Colorado

Chicago, IL (November 7 -- 8, 1996) pages 196 - 227

1. Kathy Allen, State of Illinois, Department of Nuclear Safety
2. Steve Collins, Organization of Agreement States
3. Cheryl Schultz, William Beaumont Hospital
4. Mark Doruff, Amersham Corporation, Representing CORAR
5. Reg Ronnigen, Michigan State University
6. Kristen Erickson, Michigan State University
7. Jim Williams, State of Ohio
8. George Oliver, Unity Health System
9. Gordon Appel, State of Illinois, Department of Nuclear Safety

This page was intentionally left blank.

3.6 DECOMMISSIONING - NON REACTOR FACILITIES (DSI 9)

3.6.1 The Direction Setting Issue and the Options

What should be NRC's strategy to take advantage of new and different approaches to optimize site remediation of the Site Decommissioning Management Plan and other problem sites?

- Option 1: Continue Existing Program
- Option 2: Change the Decommissioning Review Process
- Option 3: Change Residual Contamination Criteria and Review Scenarios
- Option 4: Adopt the U.S. Environmental Protection Agency Superfund Approach
- Option 5: Regulate Source Material Consistently With Naturally Occurring and Accelerator-Produced Radioactive Materials
- Option 6: Focus on Decommissioning Cases in Which Progress Can Be Made; Transfer Stalled Sites to the Environmental Protection Agency's Superfund Program
- Option 7: Take an Aggressive Position to Develop Regulatory Frameworks for Lower Cost Decommissioning Waste Disposal Options
- Option 8: Develop a Strong Litigation Strategy
- Option 9: Seek Superfund Authority

3.6.2 Commission's Preliminary Views

The Commission's initial preference on this DSI is a combination of options, subject to the modifications specified below, including Option 2 (Change the Decommissioning Review Process), Option 6 (Focus on Decommissioning Cases in which progress can be made; Transfer Stalled Sites to EPA), Option 7 (Take an Aggressive Position to Develop Regulatory Frameworks for Lower Cost Decommissioning Waste Disposal Options), and Option 8 (Develop a Strong Litigation Strategy). In combination, these options would place appropriate responsibility on licensees to remediate their sites while giving NRC appropriate tools to deal with problem sites and licensees.

With regard to Option 2, the Commission believes that the option should be tested on a pilot scale for a few selected materials licensees to determine the potential success and effectiveness of this option if it were to be adopted on a broader scale. The pilot program participants should be volunteers that are found to be suitable for participation in the pilot program by the NRC. Based on the results of the results of the pilot program, the NRC could consider, at a later date, whether this option should be more adopted on a broader basis.

Full implementation of Option 2 could significantly affect the way NRC licensees carry out their responsibilities for decommissioning and remediating sites. Some licensees might be in a poor position to hire and effectively use the contractors they would need to carry out these responsibilities.

Accordingly, the NRC specifically seeks comment on whether NRC should hold seminars or workshops for licensees to make sure that they understand what NRC expects of them and what they, in turn, should expect of their contractors. Such training could help to assure that limited cleanup resources would be effectively applied.

With regard to Option 6, the Commission believes that rather than focusing only on the progress being made on the site review, the staff should also, consistent with DSI 12, examine the level of risk associated with each site. The NRC could focus on both progress and risk in making determinations on the disposition of sites. The NRC could focus on the higher risk sites where progress is being made and place lesser emphasis on the lower risk sites. Staff should consider the feasibility of transferring the low risk, stalled sites to the EPA's Superfund Program. Determinations on whether to send to EPA's Superfund Program a stalled, high-risk site or a low-risk site where progress is being made should be made on a case-by-case basis.

The implementation process for Option 6 should not preclude the Commission from reviewing a low risk, stalled site if conditions warrant, nor should the process automatically send the site to EPA's Superfund Program.

3.6.3 Summary of Comments

A. Significant/Important Comments Directly Affecting the Preliminary Views or the Direction-Setting Issue

In the written comments and the oral comments made at the stakeholder meetings, there was general agreement with most of the Commission's preliminary views.

Commenters (Organization of Agreement States (OAS), Conference of Radiation Control Program Directors (CRCPD), State of Illinois) indicated support for Options 2, 6, and 7. One commenter (OAS) indicated that some support for Option 8 exists, although some States questioned a need for further litigation. Commenters (OAS) generally stated that the current program was slow to resolve site decommissioning issues and that adequate flexibility is needed in both policy and regulations to allow unique approaches in decommissioning and decommissioning funding. Other commenters (States of Georgia, Louisiana, Mississippi, New Hampshire, Utah, South Carolina) endorsed the OAS comments. One commenter (State of New Jersey) said that taking a little from each of four options does not produce a strategic plan for addressing decommissioning issues.

Option 2

Several commenters (State of Tennessee, Siemens, Doruff, Nuclear Energy Institute (NEI), South Carolina Electric and Gas Company (SCE&G), Mallinckrodt, ABB-CE, Council on Radionuclides and Radiopharmaceuticals (CORAR), Westinghouse) supported the performance-based decommissioning approach in Option 2 to allow licensees to proceed directly to decommissioning. A commenter (ABB-CE) stated that the issue paper underestimates the benefit of removing the decommissioning plan review from the process, and the proposed pilot project should be as broad as possible and be expeditiously conducted. One commenter (Morton) supported the use of Option 2 for those licensees that are technically capable of undertaking

decommissioning. As a modification to Option 2, another commenter (Holmes) suggested an approach similar to the one used for reactor decommissioning. In this approach, the licensee would submit a short description of the planned remediation options without a formal review by NRC, partial remediation could take place, and resolution of final radiation level issues would be addressed at a later date. An anonymous commenter wrote that extensive review of decommissioning plans is not needed and substantial industry and NRC resources would be saved.

Several commenters (Erickson, States of Illinois, Michigan, Washington) indicated that Option 2, if implemented, should be limited to those licensees with demonstrable expertise and adequate funding. Commenters (CRCPD, States of Georgia, Louisiana, Texas) said that this option should apply only to sites that are minimally contaminated. These commenters considered that, for complex sites, improperly characterized sites could result in additional expense to licensees and additional resources required from regulatory agencies.

One commenter (Thompson) stated that NRC needs to stay involved in site characterization or questions could be raised at the time of final survey which could lead to site decommissioning or license termination being reopened. Another commenter (National Mining Association [NMA]) found it highly unlikely that licensees would proceed with decommissioning, and accept the risk of enormous resource expenditures, without NRC approvals. Another commenter (Weber) did not support this option for non-routine decommissioning actions because he felt that licensees will seek commitments from NRC in advance of investing limited resources to undertake decommissioning. This would be especially important for unlicensed responsible parties that are unfamiliar with NRC regulatory programs and radiation protection. A commenter (State of Michigan) did not support Option 2 because it considered that there will be extensive and costly repeat remediations if decommissioning plans are not approved in advance. Another commenter (State of Maryland) indicated that major licensees should be required to submit decommissioning plans, but the SDMP and SDMP Action Plan are too prescriptive and should be performance oriented. Another commenter (Environmental Coalition on Nuclear Power [ECNP]) strongly opposed this option.

Option 6

Several commenters (CRCPD, States of Georgia, Louisiana, Texas, Oregon, Washington) supported this option to defer difficult decommissioning cases to EPA. Commenters (CRCPD, States of Georgia, Louisiana, Texas) suggested that this option should also be available to Agreement States. One commenter (Erickson) stated that entities would move rapidly to remediate sites rather than to have jurisdiction transferred to EPA. Another commenter (Siemens) said it would support this option if a reasonable set of conditions is in place to set a threshold for transfers to EPA.

One commenter (State of Michigan) did not support this option, but suggested that by implementing Option 3 there would be less need for transferring sites to EPA. Another commenter (State of Colorado) said that if sites are transferred to EPA, not all would meet the threshold for listing on the National Priorities List. This commenter (State of Colorado) indicated that some risk assessment would be needed and that implicit in this option is the need to establish a "below regulatory concern" level. The same commenter (State of Colorado) indicated that the State had worked cooperatively with EPA

in several remediation cases involving hazardous wastes without completely deferring regulatory jurisdiction to EPA. Another commenter (NMA) did not support Option 6 unless there are no funds for decommissioning, but preferred resolving lack of funding cases by obtaining direct appropriations from Congress. This commenter also considered that transfer of sites to EPA's Superfund Program would be unlikely to achieve the intended results. Two commenters (NEI, SCE&G) did not support this option and suggested that NRC strive to resolve cases rather than to pass them off to another agency. Another commenter (ABB-CE) suggested that EPA needs to revamp the Superfund Program before adding more sites. A commenter (State of Maryland) also disagreed with this option because it may add years to the effective remediation of sites. One commenter (Weber) stated that the viability of this option is unclear at this time. Weber also indicated that most contaminated sites would not score high enough under the EPA Hazard Ranking System to qualify for the National Priorities List and that transfer to EPA could increase public and environmental risk as a result of limited EPA resources and low EPA priorities. Another commenter (ECNP) strongly opposed this option.

Option 7

Several commenters (NEI, NMA, SCE&G, Wyoming Mining Association, Siemens, States of Michigan, Oregon, and Washington) supported this option to establish a regulatory framework for lower cost disposal options. Several commenters (CRCPD, Weber, States of Georgia, Louisiana, Texas) supported this option and noted that it is already available. One commenter representing NEI (Morton) supported the use of mill tailings disposal sites for soil contaminated with uranium and thorium. Another commenter (State of Colorado) suggested exempting licensed natural uranium (although not enriched uranium or depleted uranium) from 10 CFR Part 61 so that these wastes could be disposed of at mill tailings facilities. The ECNP strongly opposed this option.

Option 8

Several commenters (CRCPD, States of Georgia, Louisiana, Texas) supported this option for developing a stronger litigation strategy, indicating it would force licensees to decommission sites before money can be funnelled out of corporations. The ECNP also supported this option. Another commenter (State of Michigan) supported this option, but considered that through aggressive implementation of Options 3 and 7, there would be a diminished need for stronger litigation tools.

Two commenters (States of Oregon, Washington) did not support this option. Washington said that there is already too much litigation and NRC should emphasize reasonable options for licensees to act responsibly. One commenter (Thompson) stated that stronger litigation strategies should not include changes that restrict the licensee's prerogative to propose different remediation methods where there is no imminent hazard. A commenter (NMA) indicated it would object to changing the basic NRC "audit" approach, which relies on the licensee to have the primary responsibility for public health and safety. This commenter (NMA) did indicate it would support changes addressing concerns about licensee bankruptcies and nonperformance issues. Siemens and NEI considered that NRC has sufficient authority to compel licensees to properly decommission sites. One commenter (Weber) stated that once the radiological criteria for decommissioning rulemaking is completed,

the regulatory framework should be in place to allow aggressive enforcement of the regulations to compel decommissioning. He added it is not clear that additional rules are required to provide strong enforcement.

B. Comments on Other Options

Option 1

There was general agreement that the current approach, proposed in Option 1, was ineffective and time consuming. Several commenters (CRCPD, States of Georgia, Louisiana, Texas) said that the current program is not working for all sites, but progress is being made at some sites. Another commenter (Siemens) indicated that the current program is acceptable, but a program that allows flexibility is preferable. A commenter (NEI) suggested that the current program be maintained, except that uranium- and thorium-contaminated sites should be addressed generically rather than on a case-by-case basis. Another commenter (NMA) indicated that continuing the current program is a viable option because it addresses issues in a meaningful site-specific basis. This commenter (NMA) was, however, concerned that decommissioning actions might not be final actions in the event a General Accounting Office report or EPA initiative would reopen decommissioning decisions. One commenter (Weber) stated that many of the options presented in the issue paper have already been considered or are already in use and can be seen as an affirmation of the current program.

Option 3

A commenter (State of Michigan) supported Option 3 to change the current decommissioning criteria and modeling scenarios, indicating that risk-based doses need to be practical and protective and that changes will result in less costly remediations and lower waste volumes. That commenter also indicated that this option is more consistent with international and national radiation protection recommendations. Another commenter (State of New Jersey) also supported this option, particularly with the emphasis on "brownfield" or restricted development, land use planning, and having the option to use deed restrictions to make contaminated sites economically desirable. A commenter (ABB-CE) also suggested that a "brownfield" option be considered. Several commenters (Westinghouse, Siemens, NEI, SCE&G, Mallinckrodt, CORAR, ABB-CE, Doruff, States of Washington, Colorado) also supported Option 3.

Several commenters (State of Maryland, Mallinckrodt, Siemens, ABB-CE, CORAR) noted that a 15-mrem/yr dose objective is arbitrary and needlessly conservative, and referred to a recent EPA report which suggested that a baseline value less than 75 mrem would produce large waste volumes and avert few cancer deaths. Another commenter (State of Tennessee) said that NRC needs to define what is "clean" and establish precise limits below which regulation is not warranted. A commenter (Morton) stated that he is in favor of performance-based regulations as long as they are capable of being implemented. He indicated that residual contamination standards need to consider the efficacy of demonstrating compliance at levels that are within the range of natural background. He and another commenter (NMA) suggested basing residual contamination criteria levels at 500 mrem/yr and allowing more realistic dose assessment scenarios. A commenter (Illinois) suggested using the 100 mrem/yr standard in 10 CFR Part 20 and the 25 mrem/yr standard in 10 CFR Part 40, Appendix A as being reasonable and protective. Three commenters (CRCPD, States of Georgia, Texas) indicated that there may be disagreement on

the values used for residual contamination criteria, but that this approach should be implemented with different criteria for intruder and non-intruder scenarios. They also suggested setting residual contamination criteria using non-binding regulatory standards that could be modified on a case-by-case basis considering occupancy factors and deed restrictions. An NRC employee (Barkley) stated that NRC needs to develop residual contamination criteria that strike a balance between public health and safety and cost effectiveness. Other commenters (Doruff, Mallinckrodt, CORAR) suggested that NRC should focus on progress and risk in making decommissioning decisions. A commenter (ECNP) strongly opposed this option and favoring a zero tolerance level above background as a decommissioning goal with no consideration of costs.

One commenter (Weber) suggested that, in light of the proposed radiological criteria for the decommissioning rule, which would authorize institutional control alternatives, there seems to be no technical justification for placing a cap on total dose as proposed in the option. He also did not support the use of less conservative dose scenarios because the existing approach is consistent with the policy of EPA and other agencies and is intended to be protective of existing and future populations and avoid debates about the probability of intrusion.

Several commenters (Mallinckrodt, CORAR, ABB-CE) supported the NRC position that an overall dose objective for radiological criteria for decommissioning provides sufficient protection without a separate standard for the groundwater pathway. A commenter (ECNP) supports the EPA position for having a separate, 4 mrem/yr groundwater standard.

Option 4

One commenter (State of Washington) said that EPA and NRC disposal requirements are not as far apart as stated in the issue paper, and supported adopting an EPA-like approach allowing greater residual contamination, but requiring active maintenance and monitoring. Several commenters (Siemens, NEI, SCE&G, Mallinckrodt, CORAR, Doruff) considered that the EPA approach would allow licensees more flexibility and result in lower costs. One commenter (Morton) suggested that NRC improve compatibility between government regulations and try to reconcile differences with EPA to accept more achievable decommissioning criteria.

A commenter (State of Michigan) did not support Option 4 because it does not ensure adequate consideration of long-term hazards and is inconsistent with international standards on radiation protection. One commenter (Mitchell) indicated that in the Superfund process, remediation technologies are often driven by the need to develop strong litigation positions rather than just to remediate a site. She suggested that appropriate cost-benefit analyses need to be performed so the right technologies are chosen for the right reasons. Several commenters (CRCPD, States of Georgia, Louisiana, Texas) indicated that this option should be considered, probably on a low-priority basis, but that it would be extremely difficult to implement. One commenter (NMA) stated it would be inappropriate to adopt EPA's approach because the EPA criteria are inconsistent with current uranium recovery and low-level waste disposal standards. Another commenter (State of Illinois) also did not support this option. One commenter (State of Colorado) suggested that the NRC compile a document of institutional control options related to uranium mill tailings disposal, low-level wastes, high-level wastes, and decommissioning. A commenter (ECNP) strongly opposed this option.

Option 5

There was little support for this option to transfer jurisdiction of source material to EPA where it would be regulated similarly to naturally occurring or accelerator-produced radioactive materials (NARM). Because this option would increase the expenditure of State resources, several commenters (CRCPD, States of Louisiana, Georgia, Texas, Washington, Michigan) did not support this option. Another commenter (ABB-CE) also did not support this option because EPA has not yet set criteria for decommissioning. One commenter (NMA) strongly opposed the transfer of source material jurisdiction to EPA. Several commenters (Siemens, NEI, SCE&G, CORAR, Mallinckrodt, States of Tennessee, Michigan, Washington) recommended that Federal oversight of NARM be given to the NRC. One commenter (NMA) recommended that authority for regulating discrete NARM be given to NRC. Another commenter (State of Colorado) indicated that, contrary to the discussion in the issue paper, there would be significant impact on Agreement State resources for this option if all sites contaminated with NARM require remediation since many have never been licensed. This commenter suggested that uranium NARM wastes containing uranium should also be allowed to be disposed at uranium mill tailings facilities. Another commenter (ABB-CE) suggested that low-enriched uranium should be included with NARM because it presents a low environmental hazard.

One commenter (Morton) suggested that NRC improve compatibility between government regulations and try to reconcile differences with EPA to accept more achievable decommissioning criteria.

One commenter (Weber) indicated that regulating source material consistently with NARM raised a new direction-setting issue of how NARM should be regulated. He said NARM regulation has broad and fundamental implications to the U.S. that encompass more than decommissioning.

Option 9

One commenter (State of Tennessee) provided comments on Option 9 to seek Superfund authority for the NRC and stated that the NRC decommissioning program relies on the viability of the licensee. The representative from Tennessee also suggested that NRC should seek authority to obtain funds from other parties. One commenter (ECNP) supports this option. Other commenters (States of Texas, Washington) indicated such authority is unnecessary if problem sites can be transferred to EPA. One commenter (State of Michigan) does not support this option at this time, unless other options fail to achieve expected results. Several commenters (CRCPD, States of Georgia, Louisiana, Texas) said that this option appeared to be unnecessary and duplicative, especially if NRC can transfer problem sites to EPA. Other commenter (NMA, SCE&G) indicated that Congress is unlikely to give NRC Superfund authority, and suggested it would be better if authority was given to NRC to request appropriated funds for problem decommissioning cases. Another commenter (NEI) stated that there is no value in NRC having Superfund authority because decommissioning of Superfund sites has resulted in additional delays and increased costs. Two other commenters (Siemens, Doruff) did not support this option. An NRC employee (Barkley) stated that, rather than use Superfund authority, NRC needs to ensure that licensees have adequate funding for decommissioning.

Relevant Reactor Decommissioning Comments

Several comments on the Reactor Decommissioning issue paper, DSI 24, are also applicable to the materials area. Two commenters (Collins, Holmes) questioned the basis for the proposed 15-mrem/yr residual contamination criteria. Several commenters (Barkley, Holmes, Collins) stated that there is an important need to establish residual contamination criteria that are practical to implement and that are consistent throughout the Agreement States. Two commenters (Collins, OAS) suggested that residual contamination criteria and review scenarios should be developed independent of EPA. Commenters (Holmes, Tipton, Floyd) also indicated that it is essential to make completed decommissioning actions final actions so that licensees are not forced to remediate sites to future, more restrictive criteria. One commenter (State of Oregon) agreed with NRC's proposed new approaches to focus less attention on the decommissioning process and more on the end result.

C. Comments on Important Omissions

One commenter (OAS) indicated that the issue paper was deficient in that it did not adequately address NARM. This commenter also stated that the issue paper should address tailings containing radioactive materials from those mills that process materials other than uranium. The commenter also indicated that resources needed for decommissioning NARM sites can be significant.

One commenter (Moeller) suggested applying the "open market trading rule" to decommissioning nuclear facilities. EPA allows the application of the "open market trading rule" in certain applications involving discharges of hazardous pollutants. In this concept, all sources of radiation exposure would be identified and an assessment would be performed to reduce the exposures from sources most readily controlled, e.g., indoor radon and medical exposures. In this manner, expensive site remediations could be eliminated by reducing exposures to other sources of radioactivity.

Several commenters (CRCPD, States of Georgia, Louisiana, Texas) indicated that the issue paper focused primarily on source material licenses, but the same concerns apply to other major licensees such as broad-scope licensees, research and development facilities, and waste processors. These commenters also said that States were only mentioned with respect to coordination of NRC decommissioning activities. They noted, however, that the policies and processes adopted by NRC will also affect State radiation control programs. Several commenters (CRCPD, States of Texas, Georgia, Louisiana, New Jersey) noted that recycle of materials was not addressed in the issue paper.

One commenter (ABB-CE) indicated that risk ranking needs to be taken into consideration in decision-making and must contain all risk elements (i.e., transportation, chemical, biological, and radiological hazards). This commenter suggested that the use of hazardous waste landfills for decommissioning waste should be considered. This commenter also recommended that industry be afforded an early opportunity to participate in the formulation of proposed rules. The commenter stated that better government coordination needs to be addressed, including addressing overlapping jurisdiction in the mixed-waste area. Another commenter (NMA) stated that the NRC needs to take an aggressive posture to resolve mixed waste issues.

One commenter (Weber) indicated that the scope of the issue paper focused on the Site Decommissioning Management Plan (SDMP) and "problem sites" and that by focusing on non-routine decommissioning cases, NRC may have missed an opportunity to enhance the broad decommissioning program, which includes routine casework. He indicated that because routine decommissioning casework could be expected to grow in the future, the scope of DSI-9 should be expanded and additional analysis should be performed to include routine decommissioning actions.

One commenter (Wyoming Mining Association) suggested that changes are needed to portions of 10 CFR Part 40 that are applicable to uranium recovery operations and to uranium recovery technical guidance documents.

D. Comments on Internal/External Factors

One commenter (Doruff) stated that the issue paper did a good job in the assumptions and projections for internal and external factors. Several commenters (NEI, SCE&G, CORAR, Mallinckrodt) also indicated that the internal and external factors appear to be accurate. Two commenters (NEI, SCE&G) stated that the assumption that EPA's Superfund would be effective in decommissioning sites is not supported by the record. Another commenter (ABB-CE) stated that the Department of Defense should be added as an important external factor.

E. Comments on Staff Requirements Memorandum Questions

In its preliminary view, the Commission requested specific comments on one issue. This issue and the comments provided are listed below.

NRC should hold seminars or workshops for licensees to make sure that they understand what NRC expects of them and what they, in turn, should expect of their contractors.

One commenter (Doruff) indicated that workshops and seminars would be useful. Another commenter (State of Colorado) suggested that it may not be effective to hold seminars about decommissioning, unless a significant number of site owners attended and the sites were decommissioned before the ground rules are changed.

3.6.4 List of Commenters

WRITTEN COMMENTS

1. October 18, 1996, Dade Moeller & Associates (Dade Moeller)
2. October 21, 1996, Organization of Agreement States (Robert Quillin)
3. October 28, 1996, State of Washington, Department of Health (Terry Frazee)
4. October 28, 1996, Richard S. Barkley, U.S. NRC
5. November 3, 1996, Marvin I. Lewis
6. November 4, 1996, State of New Hampshire, Department of Health and Human Services (Diana E. Tefft)

7. November 4, 1996, Organization of Agreement States (Robert M. Quillin)
8. November 5, 1996, State of Michigan, Department of Environmental Quality (Flint C. Watt)
9. November 7, 1996, State of Mississippi, Division of Radiological Health (Robert W. Goff)
10. November 8, 1996, State of Tennessee, Department of Environment and Conservation (Michael H. Mobley)
11. November 13, 1996, State of Oregon, Office of Energy (David Stewart-Smith)
12. November 14, 1996, State of Oregon, Department of Human Resources (Ray D. Paris)
13. November 14, 1996, State of South Carolina, Department of Health and Environmental Control (M.K. Batavia)
14. November 21, 1996, State of Louisiana, Department of Environmental Quality (Ronald Wascom)
15. November 21, 1996, State of Georgia, Department of Natural Resources (Thomas E. Hill)
16. November 21, 1996, State of Utah, Department of Environmental Quality (William J. Sinclair)
17. November 22, 1996, South Carolina Electric and Gas Company (Gary J. Taylor)
18. November 22, 1996, Siemens (L.J. Maas)
19. November 25, 1996, Westinghouse Electric Company (N.J. Liparulo)
20. November 27, 1996, Nuclear Energy Institute (Thomas D. Ryan)
21. November 27, 1996, State of Texas, Department of Health (Richard A. Ratliff)
22. November 27, 1996, Conference of Radiation Control Program Directors, Inc. (William P. Dornsife)
23. November 27, 1996, Council on Radionuclides and Radiopharmaceuticals (Roy W. Brown)
24. December 1, 1996, Environmental Coalition on Nuclear Power (Judith H. Johnsrud)
25. December 2, 1996, Michael Weber, U.S. NRC
26. December 2, 1996, Wyoming Mining Association (Marion Loomis)
27. December 2, 1996, State of New Jersey (Jill Lipoti)

28. December 2, 1996, State of Maryland, Department of the Environment (Roland G. Fletcher)
29. December 2, 1996, Mallinckrodt (Ashok Dhar)
30. December 2, 1996, ABB Combustion Engineering Nuclear Systems (Charles B. Brinkman)
31. December 2, 1996, National Mining Association (Richard L. Lawson)
32. December 2, 1996, State of Illinois, Department of Nuclear Safety (Thomas W. Ortziger)
33. December 3, 1996, No Name
34. December 5, 1996, Morton Associates (Henry W. Morton)

ORAL COMMENTS

Washington, D.C. (October 24 - 25, 1996) pages 98 - 112

1. Steve Collins, OAS
2. Tom Hill, CRCPD
3. Henry Morton, Technical Consultant
4. Tony Thompson, Shaw, Pittman representing National Mining Association
5. Lynnette Hendricks, NEI (Misidentified as Lynn Fairbent)

Colorado Springs, CO (October 31 - November 1, 1996) pages 323 - 332)

1. Mike Holmes, Public Service Company of Colorado
2. Tom Tipton, NEI
3. Steve Floyd, NEI
4. Ken Weaver, State of Colorado
5. Martha Mitchell, Roy F. Weston

Chicago, IL (November 7 - 8, 1996) pages 189 - 206

1. Kristen Erickson, Michigan State University
2. Mark Doruff, Amersham
3. Thor Strong, Michigan LLRW Authority
4. Gordon Appel, State of Illinois
5. Steve Collins, State of Illinois

This page was intentionally left blank.

3.7 REACTOR LICENSING FOR FUTURE APPLICANTS (DSI 10)

3.7.1 The Direction-Setting Issue and the Options

Given the current environment, what should the Commission's policy be on future reactors?

Option 1: Reassess-Reprioritize

Option 2: Sustained Responsiveness

Option 3: Refocus

Option 4: Single Solution

3.7.2 Commission's Preliminary Views

The Commission's preliminary views were that the NRC recognizes that the fundamental economic decisions by license applicants will determine the level of necessary support. The NRC should continue to give priority for reviewing standard and advanced reactor designs, early site approvals, and licensing for new reactor license applicants (Option 2, with elements of Option 1).

The staff should develop implementation guidance for the following:

1. Address maintenance of the Utility Requirements Document and the certified designs through first-of-a-kind engineering. Provide a plan for support of this process to the extent that, as a minimum, significant issues are addressed and the resolution path is provided in order to continue adequate support of the certified designs.
2. Address orderly closeout of all activities. Document to the greatest extent practicable the work performed such that its value for future technical and regulatory activities is not lost (e.g. SBWR, MHTGR, etc.).
3. Evaluate the design certification process following completion of current applications for lessons learned.

3.7.3 Summary of Comments

A. Significant/Important Comments Directly Affecting the Preliminary Views or the Direction-Setting Issue

Several commenters (Nuclear Energy Institute (NEI), South Carolina Electric & Gas Company, Asea Brown Boveri-Combustion Engineering (ABB-CE), GE Nuclear Energy (GE), Westinghouse) supported the elements of Option 2 and the Commission's preliminary views with some amplifications. NEI preferred Option 2 and was pleased that the Commission's preliminary view reflected the need to give continued high priority to the review of standard and advanced reactor designs such as the AP600, as well as to early siting and licensing for new plants. NEI believed that the Commission should be more specific in its final views on this paper on the need to begin now to address major generic issues associated with the siting and licensing elements of 10 CFR Part 52 and that

important progress could be made on implementation of Part 52 even though resources will be substantially reduced from levels expended during the various design certification reviews. In its written comments, ABB-CE emphasized the remarks relating to the necessity to fully define in the very near term the issues and processes with which the combined license (COL) applicant must comply in order to improve the operational regulation for the next generation of plants.

NEI encouraged the Commission to adopt this option because it is necessary to fulfill the Part 52 policy objective to establish a predictable, stable licensing process, and because it corresponds to the needs and priorities of the industry and the Nation. NEI further stated that the strategic assessment was a key opportunity to reinforce and amplify the Commission's 1986 policy statement on advanced plants and its policy should be to reduce unnecessary regulatory barriers and burdens on new orders for nuclear plants. GE thought that the NRC could augment its existing policy with a statement such as the following:

Given that the standard design are at least one to two orders of magnitude safer than the current generation of plants, it is the NRC's policy to reduce unnecessary regulatory burdens and barriers that may discourage orders for new plants.

Similarly, ABB-CE thought that the NRC could look "at the philosophy of regulating the new Advanced Light Water Reactor designs such that their vastly improved safety features result in added margin from regulatory requirements rather than tightening the regulations to enforce the new safety levels."

Three commenters (Westinghouse, ABB-CE, GE) provided specific comments relating to elements in the Commission's preliminary views. Westinghouse strongly requested that the AP600 design certification program with NRC be completed in a timely and efficient manner on a priority basis as described in the preliminary Commission view. ABB-CE did not support the Commission's view for the staff to document the work performed on "truncated" design certification reviews except to the extent someone is willing to fund such close-out work. GE indicated that it was unclear as to the Commission's intent concerning maintenance of the Utility Requirements Document and certified designs through first-of-a-kind engineering since no NRC action is needed and the industry has not requested any NRC decisions on these matters.

At stakeholder meetings, Westinghouse, NEI, and ABB-CE generally expressed support for Option 2 and the Commission's preliminary views.

Additionally, NEI and ABB-CE commented on a related issue in Direction Setting Issue (DSI) 10 concerning whether emergency planning requirements could be simplified for advanced light-water designs. Both organizations believed that they could and plan to support a petition for rulemaking to accomplish this objective in 1997. NEI reiterated this view at a stakeholder meeting.

B. Comments on Other Options

The Organization of Agreement States, in comments endorsed by the New Hampshire, Louisiana, Georgia, Utah, Ohio, and Mississippi radiological-related departments, specifically backed pursuing Option 3, the refocus option, after completion of the evolutionary design certifications, citing

that the economic and political environment will preclude the sale of any new nuclear power reactors in this country for a long time. The Ohio Department of Health further suggested that any additional future design reviews be accomplished on a case-by-case basis with the NRC conducting the review after an applicant signs a bonafide letter of intent with a nuclear steam supply system supplier to build an advanced reactor design. The South Carolina Department of Health and Environmental Control strongly endorsed the Organization of Agreement States' comments. The Oregon Health Division endorsed Option 3 without additional comment.

Although not specifically endorsing Option 3, several commenters (Barkley, Lewis, No Name) presented analyses of internal/external factors that concluded that pursuit of advanced reactor licensing activities is largely unnecessary with one adding that a small team could be used to keep abreast of future reactor technology and report annually on the status. One commenter (Environmental Coalition on Nuclear Power) rejected all options noting that the Commission would commit a serious error in assuming that there is any need, desire, or economic capability for any nuclear power reactors in the future.

With respect to Option 4, the single solution, no one specifically endorsed this option, although it was discussed at several of the stakeholder meetings. The commenters (NEI, El Paso Electric) recognized that the option was a provocative idea and that some Government role in the concept would be appropriate. However, their overall assessment was that the concept has been around for awhile, has not moved anywhere, and did not look as if it would move in the current environment.

C. Comments on Important Omissions

In its written comments, the NEI amplified on several areas in which it felt that the issue paper omitted important details related to this DSI. These areas include the following:

NEI believed that the issue paper did not fully articulate the policies expressed by the Commission when it promulgated Part 52 and that were adopted by Congress in the Energy Policy Act of 1992. In light of the substantial improvements in safety achieved by the standard designs, NEI believed that the NRC should have a policy of removing unnecessary regulatory burdens and barriers that may discourage new orders for nuclear plants referencing these designs. Several commenters (Morgan, Lewis, and Bockius, LLP; Electric Power Research Institute (EPRI); ABB-CE; NEI) reflected this view in discussions at the stakeholder meetings.

NEI believed that the issue paper failed to adequately recognize that the NRC Part 52 licensing reform initiative, like the industry's "Strategic Plan for Building New Nuclear Power Plants," is a work-in-progress. A thorough advance understanding of the complete Part 52 process, including major issues associated with plant licensing, construction, and operation, is essential to a prospective licensee's decision to build a new nuclear power plant. Several commenters (ABB-CE, EPRI, NEI, El Paso Electric) expressed similar views in discussions at the stakeholder meetings. Other commenters (Sinclair, NEI), in the context of these discussions, provided the additional insight that the bottom-line issue is what is the level of resources that NRC is willing to expend on this issue. One commenter (EPRI) noted that many of the details of

design certification came out in the discussion of the plant-specific applications, so there is a limit to the requirements-level approach to resolving COL issues.

NEI noted that the paper did not reflect that the industry and the NRC staff have made a start on post-design certification issues and met (on February 5, 1996) to discuss NEI's "Regulatory Issue Resolution Plan" (RIRP). Issues identified in the RIRP include rulemaking to amend Part 52 to reflect lessons learned from design certification, Part 50 rulemakings related to advance plant emergency planning and maintenance of design probabilistic risk assessments, development of regulatory guidance on ITAAC verification, implementation of the "50.59-like" process to preserve severe accident insights, and COL issues potentially requiring Commission policy guidance. NEI pointed out that the RIRP is structured to require relatively modest NRC resources over the next few years. ABB-CE and GE added several other potential topics in their written remarks.

With respect to design certification, NEI reiterated its concerns regarding shifting NRC staff positions during the rulemaking process and that certain staff positions are contrary to the Part 52 goal of a predictable and stable licensing process. Both EPRI and ABB-CE spoke to this point at stakeholder meetings.

D. Comments on Internal/External Factors

Several commenters (NEI, Illinois Department of Nuclear Safety, GE, League of Women Voters of Rockford, Davidson) provided additional perspective and specific information that related to internal and external factors discussed in the issue paper but did not present factors that were fundamentally different.

NEI believed that the paper did not adequately recognize the vital role of advanced reactor program activities in maintaining a strong nuclear power industry, noting that this was one of the principal motivations behind the industry's steadfast pursuit of design certification. The representative of the Illinois Department of Nuclear Safety at the Chicago stakeholder meeting made a similar observation concerning the maintenance of a cadre of experienced personnel familiar with the approved designs.

NEI noted that industry restructuring and competition may result in utilities' opting for baseload additions in the 600-MWe range. Therefore, the NRC should maintain high priority on the AP600 final design approval and design certification.

NEI points out that there is a continuing high level of interest in the industry, as reflected in its "Strategic Plan for Building New Nuclear Power Plants," including the investment of over \$150 million by Advanced Reactor Corporation utilities. It stated that industry projections clearly show the potential for nuclear generation to be economically competitive and perhaps superior, given the impact of future environmental controls on power plant costs. Therefore, the goal of opening the option for future nuclear power plant orders as distinct from the orders themselves remains important to them.

NEI stated that utility planning for the addition of new baseload capacity generally begins several years before construction of a plant is actually begun. NEI reasoned that all major aspects of Part 52 implementation must be understood when utility decision making about new baseload capacity is begun, or the nuclear option is likely to be dismissed.

NEI recognized that resolution of post-certification issues documented in Commission staff requirements memoranda, NUREGs, and the like, would not be binding on future NRC staff and Commissions. NEI's expectation was that properly documented generic issue resolutions that form part of the basis for proceeding with a new nuclear plant order and license application would not be revisited, except when it can be clearly shown that the prior Commission decision would not ensure public health and safety.

GE commented that the NRC should be cautious about applying lessons learned regarding the advanced reactors to current reactors because the advanced reactors have been designed to achieve a higher level of safety than required by NRC regulations, and therefore lessons learned for advanced reactors may not be applicable to current reactors.

At stakeholder meetings, one commenter (League of Women Voters of Rockford) inquired about the Department of Energy's plans for mixed oxide fuels and tritium production; a factor that was mentioned briefly in the context of this DSI but was considered more fully in other elements of the strategic assessment. Similarly, one commenter (Davidson) questioned whether the existing security regulations provide adequate security protection for the next generation of power reactors.

E. Comments on Staff Requirements Memorandum Questions

In its preliminary views, the Commission did not pose any additional questions for public comment.

3.7.4 List of Commenters

WRITTEN COMMENTS

1. October 21, 1996, Organization of Agreement States (Robert Quillin)
2. October 29, 1996, Richard S. Barkley, U.S. NRC
3. November 3, 1996, Marvin Lewis
4. November 4, 1996, New Hampshire Bureau of Radiological Health (Diane Tefft)
5. November 7, 1996, Mississippi State Department of Radiological Health (Robert W. Goff)
6. November 14, 1996, Oregon Department of Human Resources, Health Division (Ray D. Paris)
7. November 14, 1996, South Carolina Department of Health and Environmental Control (M. K. Batavia)

8. November 21, 1996, State of Louisiana, Department of Environmental Quality (Ronald Wascom)
9. November 21, 1996, Georgia Department of Natural Resources (Thomas E. Hill)
10. November 21, 1996, Utah Department of Environmental Quality (William J. Sinclair)
11. November 22, 1996, South Carolina Electric & Gas Company (Gary J. Taylor)
12. November 27, 1996, Nuclear Energy Institute (Thomas D. Ryan)
13. December 1, 1996, Environmental Coalition on Nuclear Power (Judith H. Johnsrud)
14. December 2, 1996, Ohio Department of Health (Robert E. Owen)
15. December 2, 1996, ABB-CE (Charles B. Brinkman)
16. December 3, 1996, GE Nuclear Energy (Steven A. Hucik)
17. December 3, 1996, No Name
18. December 3, 1996, Westinghouse Electric Corporation (H. J. Bruschi)
19. December 4, 1996, John Davidson, U.S. NRC

ORAL COMMENTS

Washington, D.C. (October 24 - 25, 1996) pages 7 - 35

1. Steve Franz, Morgan Lewis and Bockius, LLP
2. Gary Vine, EPRI
3. Russell Bell, NEI
4. Brian McIntyre, Westinghouse

Colorado Springs, CO (October 31 - November 1, 1996) pages 258 - 287

1. John Trotter, EPRI
2. Charles Brinkman, ABB-CE
3. Fred Gowers, El Paso Electric
4. Roger Huston, NEI
5. William Sinclair, Utah Department of Environmental Quality
6. Steve Floyd, NEI

Chicago, IL (November 7 – 8, 1996) pages 4 – 26

1. Roger Huston, NEI
2. Roy Wight, Illinois Department of Nuclear Safety
3. Betty Johnson, League of Women Voters of Rockford, Illinois

This page was intentionally left blank.

3.8 OPERATING REACTOR PROGRAM OVERSIGHT (DSI 11)

3.8.1 The Direction-Setting Issue and the Options

Given the changes in the external/internal environment, what are the implications for the current strategies for the operating reactor program?

- Option 1: Review the reactor oversight processes in the context of lessons learned from current issues and develop processes and mechanisms to provide for systematic reexamination of reactor oversight activities to ensure their continued effectiveness
- Option 2: Seek new approaches within the existing reactor oversight framework to improve effectiveness, work with the industry to foster an environment that is conducive to continued improvements in performance, and provide increased opportunities for public involvement in the regulatory process

Option 3: Perform a Business Process Redesign

3.8.2 Commission's Preliminary Views

The NRC should continue with its ongoing comprehensive review of the areas of licensing, inspection, and performance assessment to identify any areas of needed improvement. This would include development of mechanisms to provide for systematic reexamination of the reactor oversight program to ensure its continued effectiveness and to maximize agency learning in response to emerging issues (Option 1). The thoroughness of ongoing lessons-learned reviews will be key to improvement. The lessons-learned from these reviews must be applied across the industry, where appropriate, and must be verified for effectiveness. The staff should be proactive in ensuring continuing effectiveness of the reactor oversight program by considering in a systematic way how the changes in the regulatory environment might affect future reactor oversight. Currently, the changes in the regulatory environment involve such issues as industry deregulation and component and system aging.

The NRC should pursue several aspects of Option 2. These include encouraging the industry to develop generic guidelines that can be endorsed by the NRC and carried out by the industry, providing increased opportunities for public involvement, expanding the use of technology to improve the efficiency of the licensing and inspection processes where feasible and appropriate, increasing flexibility in staffing multiple-unit sites to enable improved distribution of NRC inspection resources on the basis of licensee performance, and improving the effectiveness and understanding of the performance assessment process.

With regard to performance of a Business Process Redesign (BPR) of the reactor oversight program (Option 3), the staff should consider lessons learned from the ongoing use of work process re-engineering to establish more efficient and automation-assisted processing of materials license and amendment requests. If successful, the NRC should consider similar methods to improve various aspects of the reactor oversight program. As an initial step, after the consideration of lessons learned, the staff should identify for Commission review and approval which areas, if any, of the reactor oversight program

could benefit from work process re-engineering. This could include a review of the consideration of "best practices" from regulatory agencies (foreign and domestic, nuclear and non-nuclear).

3.8.3 Summary of Comments

A. Significant/Important Comments Directly Affecting the Preliminary Views or the Direction-Setting Issue

Many commenters provided comments on one or more of the three options selected by the Commission in its preliminary view without expressing a preference for one option over another. Examples, grouped by option, include the following:

One commenter (Walker, Texas Utilities Electric Company) stated that as part of Option 1, NRC should also systematically reexamine the usefulness of oversight activities in promoting nuclear safety as determined by risk. The commenter stated that, as currently described, Option 1 connotes continued aggressive regulation, but there are some applications that NRC could be look at periodically to see whether they provide safety benefit or are being conducted because they have always been done.

One commenter (Fleming) cautioned that the public looks at the industry becoming more involved in setting the regulations and guidelines and acting more as a partner with NRC, as is provided for in Option 2, "with a jaundiced eye." The commenter emphasized that it is the NRC's responsibility as the regulator to protect the safety of the public.

Many commenters viewed the BPR, provided by Option 3, as a potentially beneficial tool. Several provided recommendations for areas to be included in the BPR. For example, one commenter (Gowers, El Paso Electric Company) stated that NRC should look at the industry's internal auditing and quality assurance programs to identify "best practices" for possible NRC application. Another commenter (Floyd, Nuclear Energy Institute [NEI]) recommended that NRC benchmark its enforcement program against that of other Federal agencies that have safety oversight responsibility, such as the Federal Aviation Administration and Environmental Protection Agency, and against the enforcement policies of foreign regulators. T. Tipton (NEI) stated that in the area of reactor oversight, several groups (internal licensee groups and various external groups, including the NRC, American Nuclear Insurers, etc.) look at the same things. Therefore, as part of the BPR, NRC should look at areas in which redundancy can be eliminated. In its written comments, NEI also stated that NRC should consider offering legislative proposals as a means of modifying or removing legal requirements that have been found to be unnecessary, unduly wasteful of resources, or unduly restrictive. NEI's written comments in their entirety were endorsed by the South Carolina Electric and Gas Company.

Several commenters (Swank, Washington Public Power Supply System, Gowers, and NEI in its written comments) stated that the BPR (Option 3) should include an evaluation of the effectiveness of the resident inspector program (outside the box) to see whether it is providing the expected gain for the resources expended. Specifically, the commenters suggested that NRC should revisit N+1 staffing policy in light of the "significant" improvements in the operational safety of the industry since the accident at Three Mile Island. This

evaluation should examine some Western European regulatory inspection programs with respect to their use of residents. NEI's comments with respect to this issue were endorsed by ABB-CE.

Finally, with respect to Option 3, several commenters cautioned that although BPRs can be valuable, NRC must be careful to ensure that time is not spent on efforts that are not worthwhile.

One commenter (Environmental Coalition on Nuclear Power) expressed opposition to all three options. The commenter stated that the wording of Option 1 is ambiguous enough to justify the conclusion that only reduction of regulation will be the result; Option 2 provides for co-regulation by the regulator and the regulated, an outcome seen as objectionable; and the BPR Option 3 approach is not suitable for strengthening reactor safety. With respect to Option 2, the commenter stated that the consequences listed in the issue paper describe the public-interest concerns and should be heeded.

B. Comments on Other Options

(Because the Commission's preliminary view chose elements of all three options, this section describes expressed views that would indicate commenters prefer one or more options over the remaining options.)

Most of the commenters expressed a preference for a specific option or for some options over the others. One commenter (Burton, NRC) stated that Option 1 allows for the best balance between effectively performing NRC's mission and meeting the goals of a smaller yet more effective and responsive government, while allowing maximum participation and information exchange between all stakeholders. Option 1 allows the NRC to continue its effective job of regulating the industry while at the same time making constant improvements to the way it does business. Another commenter (Public Citizen) stated its support for Option 1, but opposed Options 2 and 3. Public Citizen stated that Option 1 would help NRC reestablish credibility in the wake of recent revelations of incompetence, complacency, and corruption on the part of the NRC staff as a result of NRC's failure to identify the safety problems at the Millstone, Haddam Neck, and Maine Yankee plants. Public Citizen stated that NRC should not undertake activities to increase the role of industry in the oversight of licensing (Option 2) and that instead of "re-tooling the process" (Option 3), NRC should enforce the regulations that are on the books and hold the staff accountable.

Many commenters indicated that they believe that Option 2 represents the best means for both NRC and the industry to achieve common goals in the most efficient manner. For example, NEI, expressed this view, and Yankee Atomic Electric Company and ABB-CE endorsed NEI's comments with respect to this issue. Another commenter (Organization of Agreement States [OAS]), whose comments were endorsed by the New Hampshire Department of Health and Human Services, the Mississippi Department of Health, the South Carolina Department of Health and Environmental Control, the Georgia Department of Natural Resources, the Louisiana Department of Environmental Quality, and the Utah Department of Environmental Quality, stated that Option 2 is the best option for achieving additional needed improvements, given the maturity of the industry, its outstanding safety record, and the high level of safety standards. Other commenters endorsing Option 2 included the State of Oregon and R. Barkley (NRC).

One commenter (Advisory Committee on Reactor Safeguards [ACRS]) stated that Option 3 is the only approach that would result in an optimal program for oversight of operating reactors.

C. Comments on Important Omissions

In comments endorsed by Yankee Atomic Electric Company and ABB-CE, NEI identified several areas related to DSI 11 where it perceived that NRC omitted important considerations. The stated omissions include the following:

The paper omits discussion of what the NRC should be doing to establish a focus for the reactor oversight program. This program should be based on a credible standard. NEI stated that nuclear plant safety performance has improved steadily in recent years above a level that was found to be adequate. Performance increases have served to increase the margin of safety of existing plants, which challenges the economic viability of the nuclear option. NEI further stated that until there is an objective standard that is used to measure the adequacy of the existing body of regulation and the need for additional regulations, power reactor licensing, oversight, and rulemaking *initiative will continue to place undue emphasis on subjective judgments, non-quantitative criteria, and an apparently never-ending upward spiral of performance expectations for licensees.*

The enforcement policy or possible alternatives are not critically assessed in the Strategic Assessment and Rebaselining Initiative. This is believed by NEI to be a significant omission because the enforcement program has a pervasive effect on the relationship between NRC and its licensees.

The issue paper does not identify the present rulemaking process as a potential area for analysis and reform. NEI identified several perceived problems, such as the process takes too much time, regulatory analyses do not adequately address the issues, and the credibility of cost estimates could be improved.

The issue paper does not identify the current hearing process as a potential area for reform. NEI states that it should be possible to find better, more cost-effective ways for the public to state their views without recourse to the full adjudicatory hearing process.

Another commenter (Wight, Illinois Department of Nuclear Safety) recommended that NRC consider establishment of an independent oversight group that would be made up of knowledgeable and independent experts to oversee the effectiveness of NRC oversight activities. The oversight group would be made up of the major stakeholders in the area of operating reactor oversight. The commenter suggested that this group could report to the Commissioners on a periodic basis. Another commenter (Johnson, League of Women Voters of Rockford, IL) supported the need for responsible independent people to look at what the NRC does. Conversely, another commenter (Swank) expressed concern with the costs associated with such efforts and stated that there are already methods in place for oversight of the NRC that have been effective in the past.

D. Comments on Internal/External Factors

At the stakeholders' meeting in Washington, D.C. and in its written comments, NEI stated that the Northeast event has permeated the issue papers. NEI expressed a belief that the NRC must look at everything the industry has done. NEI stated that the industry has experienced a situation at Millstone and is learning from it, but NRC performance indicators indicate that the industry's performance has improved dramatically. NEI expressed concern that the NRC is throwing out everything and starting over and believes it to be a mistake. Conversely, Public Citizen stated that the problems at Millstone, Haddam Neck, and Maine Yankee have severely damaged NRC's credibility. It also stated that the nuclear industry has proven that it cannot be trusted to regulate itself, and the NRC has not been doing the job. In Public Citizen's stated view, unless this is recognized and acted upon, this current rebaselining effort is bound to fail. Similarly, the Environmental Coalition on Nuclear Power stated that the findings at Millstone, Main Yankee, Haddam Neck, and other reactors reveals that the NRC has not exercised enough oversight to realize that its licensees had been failing to abide by regulations for years.

In its written comments, NEI also stated that the estimate of the number of plants expected to prematurely shut down over the next 10 years (three to five) could be overly optimistic because of the number of additional factors, such as delays in resolution of the high-level waste disposal problem and an underestimation of the negative economic impact of the regulatory burden. NEI stated further that uncertainty regarding possible future increases in regulatory requirements and unpredictability resulting from the reactor oversight process could contribute to shutdown decisions. NEI's comments related to the internal and external factors were endorsed by ABB-CE.

In its comments, the Yankee Atomic Energy Company questioned the basis for a statement made in the issue paper that implies that the number of current NRC-mandated regulatory requirements requiring license amendments or licensee action is at a relatively low level, given the number of recent NRC initiatives.

E. Comments on Staff Requirements Memorandum Questions

In its preliminary views, the Commission did not pose any additional questions for public comment.

3.8.4 List of Commenters

WRITTEN COMMENTS

1. October 21, 1996, Organization of Agreement States (Robert Ceylon)
2. October 23, 1996, Eric J. Banner, U.S. NRC
3. October 29, 1996, Richard Barkley, U.S. NRC
4. November 1, 1996, William Burton, U.S. NRC
5. November 4, 1996, David Wigginton, U.S. NRC
6. November 4, 1996, New Hampshire Department of Health and Human Services

(Diane E. Tefft)

7. November 7, 1996, Mississippi Department of Health (Robert W. Goff)
8. November 7, 1996, John Thompson, et al., U.S. NRC
9. November 12, 199, Glenn Kelly, U.S. NRC
10. November 14, 1996, League of Women Voters of Rockford, IL (Betty Johnson)
11. November 14, 1996, Oregon Department of Human Resources (Ray D. Paris)
12. November 14, 1996, South Carolina Department of Health and Environmental Control (M.K. Batavia)
13. November 21, 1996, Louisiana Department of Environmental Quality (Ronald Wascom)
14. November 21, 1996, Georgia Department of Natural Resources (Thomas E. Hill)
15. November 21, 1996, Utah Department of Environmental Quality (William J. Sinclair)
16. November 22, 1996, South Carolina Electric and Gas Company (Gary J. Taylor)
17. November 27, 1996, John T. Larkins, ACRS
18. November 27, 1996, NEI (Thomas D. Ryan)
19. November 27, 1996, Texas Department of Health (Richard A. Ratliff)
20. December 1, 1996, Environmental Coalition on Nuclear Power (Judith H. Johnsrud)
21. December 2, 1996, James Noggle, U.S. NRC
22. December 2, 1996, Ohio Department of Health (Robert E. Owen)
23. December 2, 1996, Yankee Atomic Electric Company (Jane M. Grant)
24. December 2, 1996, ABB Combustion Engineering Nuclear Systems (Charles B. Brinkman)
25. December 2, 1996, Illinois Department of Nuclear Safety (Thomas W. Ortiger)
26. December 3, 1996, Public Citizen's Critical Mass Energy Project

ORAL COMMENTS

Washington, D.C. (October 24 - 25, 1996) pages 52 - 62

1. Thomas Tipton, NEI

2. Jane Fleming, NNSN DNAC

Colorado Springs, CO (October 31 - November 1, 1996) pages 287 - 317

1. Roger Walker, Texas Utilities Electric Company
2. Steve Floyd, NEI
3. Fred Gowers, El Paso Electric Company
4. William Sinclair, Utah Department of Environmental Quality, OAS
5. Thomas Tipton, NEI

Chicago, IL (November 7 - 8, 1996) pages 26 - 57

1. Paul Farron, Wisconsin Electric Power Company
2. Roy Wight, Illinois Department of Nuclear Safety
3. David Swank, Washington Public Power Supply System
4. Betty Johnson, League of Women Voters of Rockford, IL
5. Heather Westra, Prairie Island Indian Community
6. Glenn Kelly, U.S. NRC

This page was intentionally left blank.

3.9 RISK-INFORMED, PERFORMANCE-BASED REGULATION (DSI 12)

3.9.1 The Direction-Setting Issue and the Options

What criteria should NRC use in expanding the scope in applying a risk-informed, performance-based approach to rulemaking, licensing, inspection, and enforcement?

Option 1: Continue Current Process

Option 2: More Rigorously Assess Relationship to Public Health and Safety

Option 3: Perform a Comprehensive Assessment of NRC Regulatory Approaches

Option 4: Consider Risk-Informed, Performance-Based Approaches Primarily in Response to Stakeholder Initiatives

3.9.2 Commission's Preliminary Views

The Commission recognizes that, in order to accomplish the principal mission of the NRC in an efficient and cost-effective manner, it will in the future have to focus on those regulatory activities that pose the greatest risk to the public. This can be accomplished by building upon probabilistic risk assessment concepts, where applicable, or other approaches that would allow a risk-graded approach for determining high- and low-risk activities. In general, those activities that are of a higher risk should be the primary focus of the agency's efforts and resources. The level of staff activity associated with lower risk activities should be determined based on a consideration of the cumulative impacts on safety, stakeholder initiatives and burden reduction, and the effect on agency and licensee efficiency.

The staff should continue with the current efforts, in cooperation with the industry (Option 1), including pilot programs. The objective of this initiative is to obtain additional information regarding the appropriateness of a risk-informed, performance-based approach for the subject activities. These activities and their schedule are presently captured in the agency's PRA Implementation Plan. As data from performance-monitoring of structures, systems and components are accumulated, the staff should evaluate the performance data to determine the effectiveness of the approach on the subject activity.

The staff should proceed in the direction of enhancing the PRA Implementation Plan (i.e., moving toward implementation of elements of Option 3) by building on the Regulatory Review Group's (RRG) results, which were initially focused on reducing the regulatory burden, with a more focused assessment of those regulations that are amenable to a risk-informed, performance-based approach. In determining the priority and scope of regulatory activities to be included in moving in the direction of partial implementation of Option 3, the staff should consider the cumulative impacts on safety, stakeholder initiatives and burden reduction, and the effect on NRC and licensee efficiency. This approach should result in a further focusing of resources, on the various areas that the Commission regulates, that is commensurate with its risk significance, potential burden reduction and effect on efficiency.

The staff should evaluate and clarify any technical and/or administrative issues associated with performance-based approaches to regulation (e.g., inspection activities, enforcement, etc.). The staff should also perform a thorough review of the basis for nuclear materials regulations and process and should identify and prioritize those areas that are either now amenable, or can be made amenable with minimal additional effort and resources to a risk-informed, performance-based approach. This assessment should eventually lead to the development of a framework for applying PRA to nuclear material uses that is similar to the one developed for reactor regulation (SECY-95-280), where appropriate.

In the public comments on this issue, the NRC particularly solicited views on how it should deal with dual regulation when applying a risk-informed, performance-based regulatory philosophy.

3.9.3 Summary of Comments

A. Significant/Important Comments Directly Affecting the Preliminary Views or the Direction-Setting Issue

Almost all the commenters supported the Commission's view that, in general, those activities that are of a higher risk should be the primary focus of the agency's efforts and resources. Consequently, most commenters supported the movement toward more risk-informed, performance-based regulatory approaches.

Several commenters (including the Advisory Committee on the Medical Uses of Isotopes and commenters at the public meetings) suggested that the paper was difficult to understand. Although commenters supported the Commission's precept to focus on those activities that are of higher risk, most commenters either provided qualified support for the combination of options selected by the Commission in its preliminary view or supported combinations of the options that were different from the Commission's preliminary view. For example, the Organization of Agreement States (OAS)¹ and the Conference of Radiation Control Program Directors (CRCPD) supported a combination of all the options. The Nuclear Energy Institute² (NEI) generally concurred with the Commission's preliminary views but emphasized what it considered to be several important implementation issues including the need to consider changes to regulations without necessarily requiring an improvement in safety. NEI indicated that the implementation of a risk-informed, performance-based regulatory concept, framework, and practices should build on those established through the Maintenance Rule (10 CFR 50.65) and that there is no need for further protracted debate.

¹OAS' comments for DSI 12 were endorsed by the States of South Carolina, Mississippi, Georgia, Utah, Louisiana and New Hampshire. CRCPD and the State of Texas did not explicitly endorse OAS' comments but enclosed comments that were almost identical to those provided by the OAS.

²NEI's comments were endorsed by Westinghouse, South Carolina Electric and Gas Company, and Entergy Operations. Yankee Atomic Electric Company references NEI's responses and indicates support for NEI's comments on DSI 12. Siemens Power Corporation stated that they were in general agreement with NEI's comments.

Public Citizen supported Option 2, that is, to more rigorously assess relationship of proposed risk-informed, performance-based activities to public health and safety. The Environmental Coalition on Nuclear Power (ECNP) did not favor risk-informed, performance-based regulation indicating that risk-informed, performance-based regulation will result in deregulation and relaxation of requirements.

Some commenters, including the State of Washington, supported a stakeholder-driven process. The State of Washington stated that by allowing industry and stakeholders to drive the application of probabilistic risk assessment (PRA), the NRC may save staff time by applying resources only to those areas identified as significant and further suggested that the potential downside of "ramping up to speed" could be minimized by collectively agreeing on a 3-5 year plan of areas for emphasis.

One commenter (Maloney) noted that PRA estimates are based on the assumption that a plant completely conforms to design and license standards, and, given recent concerns at some plants, the relevance of PRA for policy decisions seems even farther from the practical decisions of NRC inspectors and plant managers. The commenter suggested that the NRC abandon continued attempts to incorporate PRA into the regulatory process because PRA continues to fall short on the most fundamental issues of any mathematical model: validation, reproducibility, precision and continuity, and measuring the experience of change. Finally, the commenter suggested that the agency and the industry might benefit from a study of how competitive industries deal with comparable issues of performance and reliability management.

After reviewing the comments, four general areas were identified that may affect the Commission's preliminary view.

1. Recognizing the distinction and defining the relationship between "risk-informed" and "performance-based."

Some commenters noted distinctions between "risk-informed" and "performance-based" and used the distinctions to support comments for moving more cautiously toward the performance-based aspects of risk-informed, performance-based regulation. For example, in the OAS response to Direction-Setting Issue (DSI) 11, the OAS indicated that the NRC should aggressively pursue the move toward risk-focused inspections. However, performance-based regulation is good for the licensees that have a good attitude and safety culture, and it will not work for those weaker licensees. Similarly, the State of Maryland cautioned that prescriptive regulation is good in that it has had a larger base of review against potential hazards and provides an increased attention to detail that may be lacking with performance-based regulation. Regulation should continue to reflect conservatism well below what a risk-based evaluation would allow.

The NRC Director for the Office of Enforcement (OE) expressed concern about the current agency emphasis on risk-informed, performance-based regulatory approaches and states that NRC should be focusing on the fundamentals and programmatic issues. The NRC should insist that reactors operate as designed and not achieve success fortuitously by relying on margins. The Director of OE further indicated that NRC needs to focus not only on the results, but also on the process, procedures, training, the degree of questioning attitude, self assessments, and so on, so that the agency can identify programmatic issues before negative results affect the public.

Other commenters asserted that more emphasis needs to be placed on the "performance-based" aspect of risk-informed, performance-based regulation. One commenter (Performance Technology) suggested that the NRC immediately start at least two pilot programs to demonstrate the efficiency of a risk-informed, performance-based decision process.

The Council on Radionuclides and Radiopharmaceuticals and Mallinckrodt Medical suggested that the relationship between "risk" and the type of regulation needs further consideration. That is, higher risk activities should not necessarily call for more prescriptive regulations and that the NRC will need to make a more sophisticated analysis when determining the appropriate regulatory basis for practices involving high hazards.

Finally, an NRC staff member suggested that because of the lack of a framework for performance-based regulation, a new policy statement that includes all aspects of risk-informed, performance-based regulation should be issued by the Commission to provide guidance to the staff and the industry and to ensure an efficient transition.

2. Demonstrating a commitment to change the regulatory environment and establishing a new strategic direction.

Several commenters (as discussed below) expressed concern about the agency's commitment to change the regulatory environment and to establish a new strategic direction. Some commenters emphasized that a new regulatory process will mean changes to NRC and industry assessment practices and culture, expressed skepticism that the agency is genuinely receptive to changing its longstanding regulatory approaches, or indicated that the direction-setting issue was not really a direction-setting issue.

The Oregon Office of Energy indicated that before choosing any of the options, the NRC must break a stalemate that has surrounded the use of PRA. Further if PRA is to be useful, the NRC and the industry must reach an agreement on what PRA will be used for. In a stakeholder public meeting, an NEI representative indicated that no matter what option is implemented, the industry is concerned that risk-informed, performance-based regulation does not become an additional layer of regulation. In addition, according to the NEI representative, if the industry and NRC continue with everything they are doing today instead of focusing on results, establishing performance criteria, and being able to show quantitatively that they have effective programs, a major step back will have been taken. Yankee Atomic Electric Company (YAEC) notes that the vagueness of the Commission's preliminary views does not bode well for achievement of significant progress in this area in the future.

Several commenters (associated with nuclear material users) indicated that the current level of interest and current efforts in pursuing more risk-informed, performance-based regulation in nuclear materials areas were not accurately characterized in the paper. According to some commenters, in this respect, the Commission's preliminary views do not respond to the current environment and challenge of material licensees (i.e., the urgency to systematically review regulations to develop cost-effective, risk-informed, performance-based regulations).

Two commenters suggested that the DSI should be redefined. The State of Tennessee suggested a high-level strategic direction in which the NRC should establish a program to regulate all radioactive material at any concentration

which presents a risk beyond that presented by the natural concentrations of material found in the earth. Entergy Operations stated that the description of the risk-informed, performance-based strategic issue did not appear to meet the intent of the rebaselining initiative. It did not appear that the staff revisited basic philosophy and principles. Rather, it summarized a set of options for how quickly the NRC should proceed with the use of risk-informed, performance-based regulation. According to Entergy, two issues that should have been considered are (1) establishing a regulatory threshold and (2) the adverse effect of regulation on safety. The Commission's preliminary view only seeks to preserve the status quo and avoids dealing with real risk-informed, performance-based rebaselining issues.

3. Fostering public confidence and ensuring public understanding of the process.

Several commenters (including commenters at the stakeholder public meetings) emphasized the importance of ensuring that information associated with risk-informed, performance-based regulation is effectively communicated to the public. The OAS suggested that risk should be explained in a form that the public can easily understand and the transition toward risk-informed, performance-based regulation should be accompanied by an aggressive public education program. The State of Oregon suggested that a transition toward risk-informed, performance-based regulation will likely be accompanied by a perceived decrease in public perception of NRC credibility because of "relaxation" in current requirements. The Advisory Committee on the Medical Uses of Isotopes and other commenters suggested that the DSI paper cannot be easily understood by the general public and the public will not understand the implications of proceeding toward risk-informed, performance-based regulations.

Public Citizen stated that safety has already been, and will continue to be, sacrificed as the NRC shifts its regulatory philosophy. So long as the nuclear industry views risk-informed, performance-based regulation as synonymous with non-enforcement, any move toward accelerating the transition will likely result in reducing the margin of safety at operating reactors across the country. The impression is that the NRC has been deregulating safety requirements on the basis of how burdensome the regulation was to the licensee.

4. Establishing an objective standard for adequate protection of the public health and safety.

Several comments concerning the application of risk-informed, performance-based regulation for power reactors and several comments concerning the application of risk-informed, performance-based regulation for nuclear material conveyed concerns about the development of objective standards for risk-informed, performance-based regulation.

In general, those comments concerning objective standards for power reactors emphasized the need to develop a "regulatory threshold" or objective standard for the adequate protection of public health and safety. An NEI representative commented that it is extremely important that we start using the Safety Goals. YAEF indicated that there was no meaningful discussion of any projected activities directed toward establishing a comprehensible nexus between the Safety Goals articulated 13 years ago by the Commission and an objective standard to assess the adequacy of the existing regulation and the

need, if any, for additional regulations. Entergy Corporation stated that if the Safety Goals set a sufficient level for public health and safety, then they should be formalized through regulation with appropriate implementation guidance. Entergy indicated that rational use of the Safety Goals within the regulatory framework is the ultimate marriage of risk-informed and performance-based regulation. Framatome Technologies emphasized that the use of nuclear energy clearly involves risks, but putting those risks into context with other societal risks is of fundamental, strategic importance.

In the nuclear materials area, where there are no Commission-approved Safety Goals, some commenters suggested the need for an independent agency to establish standards, the need for these standards to be performance-based, and the need for these standards to be adopted by appropriate regulatory agencies. The Non-Destructive Testing Management Association (NDTMA) stated that it is imperative that the NRC define objective safety goals for the radiography industry. NDTMA further stated that it is not possible to evaluate the cost efficiency of a proposed rule, nor perform a periodic review of the effectiveness of a rule, without measurable safety goals.

B. Comments on Other Options

As stated in 3.9.3.A, although commenters supported the Commission's precept to focus on those activities that are of higher risk, most commenters either provided qualified support for the combination of options selected by the Commission in its preliminary view or supported combinations of the options that were different from the Commission's preliminary view.

In general, comments associated with Options 2 and 4 either strongly supported the particular option or strongly opposed the particular option. The State of Michigan's comments epitomize some commenters' view concerning the options and their relationship to the NRC's mission. Michigan stated that Option 2 appears to most supportable, especially if scoping criteria are refined to guide NRC resources, and that Option 4 appears to depart from what Michigan believes should be a primary mission of the NRC.

As previously discussed, the OAS indicated that aspects of all options should be adopted. Under its discussion of Option 2, the OAS stated that rigorous PRAs should be required of power plant licensees so that they can be relied upon as satisfactory tools for regulatory applications. The OAS and the State of Illinois believed that plant-specific risk analyses should be required, should meet standards for accuracy and completeness, and should be kept current.

C. Comments on Important Omissions

Several commenters (including NEI, OAS, and others) provided detailed information concerning omissions from the paper. In summary, commenters suggested that the following should have been considered in the development of the DSI paper and/or the Commission's preliminary view.

1. A more comprehensive assessment and discussion of the necessary level of training and experience that may be necessary to implement risk-informed, performance-based regulation including an assessment of how the level of staffing and level of staff expertise may affect how fast and how far the agency and industry proceed toward risk-informed, performance-based regulation.

2. The effect of the transition toward risk-informed, performance-based regulatory approaches on continued cooperative efforts in materials programs such as parallel rulemaking process with the Agreement States.
3. A more detailed discussion of how risk-informed, performance-based approaches will be implemented, that is, the need to consider when risk-informed, performance-based regulation should be mandatory or optional.

D. Comments on Internal/External Factors

YAEC indicated that the discussion of factors is general and that it is difficult to offer substantive comments. Some of the factors discussed, such as "risk harmonization" have been given greater value than is warranted by actual results. Further YAEC believes that the NRC should accept the challenge of demonstrating results and clear benefits commensurate with the resources expended on initiatives such as the risk harmonization effort.

The NEI indicated that NRC's role as a leader in risk-informed, performance-based regulation, both domestically and internationally, should be considered a significant influencing factor. In addition, NEI suggested that the onset of electrical power deregulation should be reflected as an external factor.

E. Comments on Staff Requirements Memorandum Questions

The Commission solicited comments on how NRC should deal with dual regulation when applying a risk-informed, performance-based regulatory philosophy.

In the nuclear materials area, some commenters suggested the need for an independent agency to establish standards and the need for these standards to be performance-based. Furthermore, some commenters suggested, once these standards were established, the adverse effects of dual regulation may be minimized.

Other commenters indicated that the way to resolve dual regulation is to change the statutory authority to eliminate the dual regulation or to apply the concept of risk-informed, performance-based regulation across regulatory agency boundaries. Some commenters encouraged the use of NRC resources to seek a common risk philosophy among regulating agencies. NEI suggested that where there is dual regulatory jurisdiction on matters associated with radiological hazards and materials, it is essential for the NRC to be the lead agency. According to NEI, a common interagency regulatory framework is central to improving the effectiveness and efficiency of the nuclear regulatory process.

One commenter, the ECNP, supported continued dual regulation and viewed dual regulation as an extension of redundancy of safeguards.

3.9.4 List of Commenters

WRITTEN COMMENTS

1. September 24, 1996, Stephen Maloney, Devonrue LTD
2. October 21, 1996, Organization of Agreement States (Robert Quillin)

3. October 23, 1996, Summary of Discussion at Agreement State/ NRC Regulators' Meeting
4. October 28, 1996, State of Washington (Terry Frazee)
5. October 29, 1996, James Lieberman, U.S. NRC
6. October 29, 1996, Richard Barkley, U.S. NRC
7. October 30, 1996, Barry Mendelsohn, U.S. NRC
8. November 3, 1996, Marvin Lewis
9. November 4, 1996, State of New Hampshire (Diane E. Tefft)
10. November 5, 1996, State of Michigan (Flint C. Watt)
11. November 7, 1996, State of Mississippi (Robert W. Goff)
12. November 8, 1996, State of Tennessee (Michael H. Mobley)
13. November 12, 1996, Glenn Kelly, U.S. NRC
14. November 13, 1996, State of Oregon (David Stewart-Smith)
15. November 13, 1996, Glenn Kelly, U.S. NRC
16. November 13, 1996, Performance Technology (Bob Christie)
17. November 14, 1996, League of Women Voters of Rockford, IL (Betty Johnson)
18. November 14, 1996, State of Oregon (Ray D. Paris)
19. November 14, 1996, State of South Carolina (M. K. Batavia)
20. November 20, 1996, Dr. Moni Dey, U.S. NRC
21. November 20, 1996, U.S. Department of Energy, Office of Civilian Radioactive Waste Management (Daniel E. Dreyfus)
22. November 21, 1996, State of Louisiana (Ronald Wascom)
23. November 21, 1996, State of Georgia (Thomas E. Hill)
24. November 21, 1996, State of Utah (William J. Sinclair)
25. November 22, 1996, South Carolina Electric & Gas Company (Gary J. Taylor)
26. November 24, 1996, N. P. Kadambi, U.S. NRC
27. November 25, 1996, Westinghouse Electric Corporation (N. J. Liparulo)
28. November 25, 1996, Framatome Technologies (John R. Bohart)

29. November 26, 1996, Advisory Committee on the Medical Uses of Isotopes (Judith Anne Stitt, M.D.)
30. November 27, 1996, Nuclear Energy Institute (Dr. Thomas D. Ryan)
31. November 27, 1996, State of Texas (Richard A. Ratliff)
32. November 27, 1996, Conference of Radiation Control Program Directors, Inc. (William P. Dornsife)
33. November 27, 1996, Council on Radionuclides and Radiopharmaceuticals, Inc. (Roy W. Brown)
34. December 1, 1996, Environmental Coalition on Nuclear Power (Judith H. Johnsrud)
35. December 2, 1996, State of New Jersey (Jill Lipoti)
36. December 2, 1996, Yankee Atomic Electric Company (Jane M. Grant)
37. December 2, 1996, State of Maryland (Roland G. Fletcher)
38. December 2, 1996, Entergy Operations, Inc. (Michael J. Meisner)
39. December 2, 1996, Mallinckrodt Medical (Ashok Dhar)
40. December 2, 1996, ABB Combustion Engineering Nuclear Systems (Charles B. Brinkman)
41. December 2, 1996, Nuclear Waste Division, Clark County, Nevada (Dennis Bechtel)
42. December 2, 1996, National Mining Association (Richard L. Lawson)
43. December 2, 1996, Non-Destructive Testing Management Association (R. D. Dicharry)
44. December 2, 1996, State of Illinois (Thomas W. Ortciger)
45. December 3, 1996, Public Citizen's Critical Mass Energy Project (James Riccio)
46. December 3, 1996, Siemens Power Corporation (L. J. Maas)
47. December 4, 1996, State of Pennsylvania (William P. Dornsife)
48. December 5, 1996, Morton Associates (Henry M. Morton)
49. December 6, 1996, James Creed, U.S. NRC

ORAL COMMENTS

Washington, D.C. (October 24 - 25, 1996) pages 93 - 127

1. Clayton Hinnant, Carolina Power and Light

2. Jim Riccio, Public Citizen' Critical Mass Energy Project
3. Tony Thompson, National Mining Association
4. Henry Morton
5. Ruth McBurney, CRCPD
6. Lynn Fairbent, ATL International, Inc.
7. Greg Gurican, GPU Nuclear, Inc.
8. Tom Hill, OAS
9. Janice Stevens

Colorado Springs, CO (October 31 – November 1, 1996) pages 341 – 369

1. Steve Floyd, NEI
2. Thomas Tipton, NEI
3. Roger Huston, NEI
4. Roger Walker, Texas Utilities Electric Co.
5. Ashok Dhar, Mallinckrodt Medical
6. Bill Sinclair, OAS
7. Ken Weaver, CRCPD
8. Les England, Entergy Operations

Chicago, IL (November 7 – 8, 1996) pages 90 – 125

1. Roy White, Illinois Department of Nuclear Safety (IDNS)
2. Steve Collins, OAS
3. Mark Doruff, Amersham Corporation
4. Kristen Erickson, Michigan State University
5. Betty Johnson, League of Women Voters of Rockford, IL
6. Glenn Kelly, US NRC

13.10 ROLE OF INDUSTRY (DSI 13)

3.10.1. Direction-Setting Issue and the Options

In performing its regulatory responsibilities what consideration should NRC give to industry activities?

Option 1: Continue the Current Program

Option 2: Expand the Role of Industry

Option 3: Increase Accreditation and Certification of Licensee Activities

Option 4: Increase Interaction With Industry Groups

Option 5: Use a "Designated Industry Representative"

3.10.2 Commission's Preliminary Views

The NRC should move as expeditiously as possible, within budget constraints, to evaluate on a case-by-case basis, initiatives proposing further NRC reliance on industry activities as an alternative for NRC regulatory activities. Staff guidance should be developed to describe the process and the general decision criteria NRC would use for evaluating proposals. (Option 1) In addition, the NRC should increase its focus and emphasis on interacting with both industry groups and professional societies and technical institutes to develop new codes, standards, and guides needed to support efficient, effective, and consistent performance of industry activities important to safety. These codes, standards and guides would then be endorsed by the NRC. (Option 4) The NRC's initial activities in pursuing option 4 should focus on standards development in probabilistic risk assessment and the medical use area. Should the final Commission decision include Option 4, it is envisioned that the NRC staff would be requested to identify for the Commission where there are needs for new codes, standards, and guides and provide recommendations for additional areas of emphasis.

Although not a preferred option at this time, the Commission believes that use of a "Designated Industry Representative" (Option 5) may have some potential use in regard to large broad scope materials licensees where NRC oversight through inspection is not frequent. This would, in essence, be a potential method of increasing oversight rather than relying on industry initiatives to reduce NRC oversight.

3.10.3 Summary of Comments

A. Significant/Important Comments Directly Affecting the Preliminary Views or the Direction-Setting Issue

Most commenters from the nuclear power industry (including Nuclear Energy Institute (NEI), Westinghouse, ABB-CE, Siemens, and South Carolina Electric & Gas) favored the Commission's preliminary view that NRC should expeditiously evaluate, on a case-by-case basis, initiatives proposing further NRC reliance on industry activities (Option 1). Commenters for the Nuclear Energy Institute (NEI) in their written and oral comments stated that an expanded industry role is appropriate, but NEI preferred to achieve an increased role

for industry by continuing the current program (Option 1), rather than by choosing Option 2. NEI cited increased industry participation in the operator licensing examination process and inspection activities as examples of areas to be emulated. However, NEI viewed licensing actions as an inappropriate area for expanding industry's role. The written comments from the American Society of Mechanical Engineers (ASME), Board on Nuclear Codes and Standards (BNCS) Chairman and the Public Citizen Critical Mass Energy Project also supported the Commission's preliminary view favoring Option 1 as responsive to the current environment and challenge. Public Citizen stated, however, that any further reliance upon the industry will bring into question NRC's credibility as an effective regulator.

In the stakeholder meetings and in the written comments, there was very broad support for the Commission's preliminary view that NRC should increase its interaction with industry groups to develop new codes, standards, and guides (Option 4). Commenters, involving organizations and individuals, supported Option 4 and stated that the Commission's preliminary views responded to the current environment and challenge. Power reactor program external stakeholder organizations which supported Option 4 included NEI, Westinghouse, ABB-CE, Siemens, Entergy and South Carolina Electric & Gas. Materials program external stakeholder organizations which endorsed Option 4 included the Organization of Agreement States (OAS), the Conference of Radiation Control Program Directors (CRCPD), the Council on Radionuclides and Radiopharmaceuticals (CORAR), the National Mining Association (NMA), the Wyoming Mining Association, Kennecott Uranium Company, Mallinckrodt Medical and the Agreement States of Colorado, Georgia, Kansas, Louisiana, Mississippi, New Hampshire, Oregon, South Carolina, Texas and Utah. Other supporters of Option 4 were the American Society of Mechanical Engineers (ASME), Board on Nuclear Codes and Standards (BNCS) Chairman; and two internal stakeholder respondents involved an Advisory Committee on Reactor Safeguards (ACRS) member and an NRC staff member (Moni Dey). The ACRS member wrote that because of "downsizing" of licensee and NRC staffs, the NRC should place a high priority on Option 4, as codes and standards have had an established record of making significant contributions to the regulatory process. The OAS, with Agreement States endorsement, stated that Option 4 was the best approach for involving industry in the regulatory oversight process while maintaining public credibility. The ASME commenter noted that many improvements in plant safety performance had come about because of changes in nuclear codes and standards. And the Westinghouse respondent wrote that NRC activities in developing or revising codes, standards, guides and PRA and risk-informed, performance-based regulations were overdue.

Notwithstanding the extensive support for Option 4, several commenters expressed the view that NRC's participation on codes and standards committees either has involved, or could involve, negative influences and outcomes. For example, in their written comments Westinghouse stated that NRC participation in standards committees should be technical and should not promote a specific NRC regulatory objective associated with an existing or proposed regulation. Westinghouse indicated that NRC staff on these committees have inappropriately pressured non-NRC committee members to "give in" to the NRC member's views, in order to avoid having NRC later withhold its endorsement of the code or standard. Underscoring Westinghouse's concerns, NEI wrote that NRC should abide by the consensus of the code committee rather than "picking and choosing" from the code committee's consensus product. NEI also stated that standards developing bodies might refrain from developing new standards, or improving existing standards, out of concern that the standard would be

adopted by NRC and made into a regulatory requirement. Further, NEI wrote that industry should not be expected to contribute, through codes and standards activities, to the "growth in the margin of safety which will be required by the regulator." Several commenters (including Kennecott Uranium Company, NMA, State of Texas, Moni Dey) recommended earlier stakeholder involvement regulatory issues such as codes, standards or guidance development process in order to avoid delays or disagreements at the end of the consensus process. However, one commenter at the Washington D.C. stakeholder meeting (Thomas Crites) stated that there was a potential for conflict of interest when industry participated closely in writing standards that are incorporated into rules.

The radiation safety officer (RSO) for Michigan State University (a broad-scope materials licensee) stated at the Chicago Stakeholder meeting that she viewed herself as a "miniature NRC" reporting to the NRC, although working for the licensee. The commenter said that a "designated industry representative" (Option 5) was therefore "already in existence" at facilities that had an RSO. In their written comments, Entergy stated that NRC should consider using a designated industry representative in the power reactor industry as well as in the materials area. However, NEI wrote that a designated industry representative is inappropriate for reactor licensees but may be worthwhile for some classes of materials licensees.

B. Comments on Other Options

Most materials program external stakeholders that explicitly commented on either Option 1 or Option 2 supported NRC expanding its reliance on industry activities as an alternative to NRC regulatory activities, but described their preference in terms of Option 2, rather than Option 1. Comments from CORAR, Mallinckrodt Medical, State of Colorado, the Wyoming Mining Association, Michigan State University, Kennecott Uranium Company, favored Option 2 for expanding reliance on industry activities, while only NMA favored Option 1. (This may be due to the fact that the explanations in the issue paper for Options 1 and 2 gave no examples specific to the materials regulation area. Accordingly, materials program external stakeholders may have based their preference on the implication of the title of Option 2, "Expand the Role of Industry," versus the implication of the title of Option 1, "Continue the Current Program.") The OAS stated that, except for self-assessments, "it would be difficult to have industry groups self-policing without significant changes in the present regulatory structure and culture." Only Entergy, among power reactor program stakeholders, indicated support for the more aggressive approach to increasing the role for industry described by Option 2. A number of materials program stakeholders (including OAS, with Agreement State respondent endorsement, CORAR) endorsed an expanded role of industry in terms of allowing the industry to conduct more self-assessments. CORAR and the Wyoming Mining Association noted that materials licensee expertise and experience was now sufficient to warrant increasing industry's role. However, one anonymous commenter wrote that experience shows that licensees begin to "cut corners" in areas where NRC has eased its oversight. In this regard, the Environmental Coalition on Nuclear Power (ECNP) wrote that the nuclear industry could not be entrusted with protecting public health and safety, and so the NRC should reduce, rather than increase, industry self-regulation.

A number of materials stakeholders (including CRCPD, CORAR, Non-Destructive Testing (NDT) Management Association, Mallinckrodt Medical, the States of Colorado, Georgia, Louisiana, New Jersey and Illinois) commented that NRC should encourage industry participation in accreditation and certification

programs (Option 3). Written comments from the CRCPD and the State of New Jersey noted that accreditation and certification programs promote standardization and consistency in training and operations and would likely result in better radiation safety programs. CORAR wrote that accreditation by industry groups and certification of industry representatives as outlined in Option 3 would help licensees improve their technical expertise and should be adopted. Mallinckrodt Medical supported Option 3 for the same reasons cited by CORAR. The respondent for the State of New Jersey wrote that she did not understand why the Commission did not support Option 3 since other regulatory agencies are considering this approach. She stated that experience with an American College of Radiology accreditation process had directly contributed to improvement in health care radiological diagnostic capabilities. According to the commenter, the voluntary program was so successful, that the State had promulgated regulations to make it mandatory. The commenter urged that voluntary participation in accreditation programs should be explored more fully and be considered in either lengthening the regulator's inspection cycle, or reducing the length of onsite inspections. Materials program external stakeholders that cited other programs and positions in which accreditation either had or might be effectively utilized to improve performance included CORAR, CRCPD, NDT Management Association, Michigan State University, Mallinckrodt Medical and the State of Illinois. However, the NDT Management Association expressed a concern with respect to NRC's level of support and enforcement if it should require licensee participation in a radiographer safety certification. The Association stated that "simply requiring certification without enforcement could lead to companies skirting the requirement...thus creating an economic disadvantage to those who comply." In the power reactor program area, NEI, with Westinghouse, Entergy and SCE&G endorsement, stated that it may be appropriate to establish accreditation programs for certain issues, but that increasing accreditation and certification of licensee activities should not be the principal focus of industry/NRC interaction "as would be implied by Option 3."

C. Comments on Important Omissions

NEI wrote that an adversarial relationship has a chilling effect on open communications, and therefore, they would like to see a more cooperative relationship between industry and NRC in the resolution of safety issues. NEI indicated that a more constructive NRC/industry relationship should be cited as a mission-enabling strategic arena in the strategic plan and suggested that a different regulator-licensee relationship ought to be considered, such as that seen in some Western European countries. In their written responses, Westinghouse, ABB-CE, Entergy and SCE&G endorsed NEI's comments.

Respondents for CORAR and NMA disagreed that there are no broad industrywide advocacy or technical assistance groups that represent the interests of materials licensees. CORAR, NMA, NDT Management Association and the Fuel Cycle Facility Forum were given as examples of industry groups that support the common interests of their materials licensee membership.

NEI wrote that it may be incorrect to assume that industry will continue to perform self-assessments for regulatory credit if the overall resource burden and enforcement exposure for licensees are not decreased. Entergy and SCE&G endorsed the NEI comments.

D. Comments on Internal/External Factors

NEI and ASME wrote that, contrary to the concern that licensee cost-cutting in response to economic deregulation could be detrimental to safety, a fairly positive correlation exists between licensee cost performance and licensee safety performance. NEI also wrote that increased reliance on industry self-assessments would only occur if such assessments resulted in more efficient use of industry and NRC resources. That is, it may be incorrect to assume that the industry will continue to perform self-assessments for regulatory credit if the overall resource burden and enforcement exposure are not decreased. In their written responses, Westinghouse, ABB-CE, Entergy and SCE&G endorsed these NEI comments.

Comments from Public Citizen and NNSN reiterated that if NRC were to increase its reliance on industry activities, the public would need to have full access to industry documents and information that provide the basis for NRC's regulatory decisions on the industry activities.

E. Comments on Staff Requirements Memorandum Questions

In its preliminary views, the Commission did not pose any additional questions for public comment.

3.10.4 List of Commenters

WRITTEN COMMENTS

1. October 21, 1996, Organization of Agreement States (Robert Quillin)
2. November 3, 1996, Marvin Lewis, Philadelphia, PA
3. November 4, 1996, State of New Hampshire, Department of Health and Human Services (Diane E. Tefft)
4. November 7, 1996, State of Mississippi, Department of Health (Robert W. Goff)
5. November 12, 1996, Unknown
6. November 12, 1996, State of Kansas, Department of Health and Environment (Ronald G. Fraass)
7. November 13, 1996, American Society of Mechanical Engineers, Board of Nuclear Codes and Standards (James A. Perry)
8. November 14, 1996, State of Oregon, Department of Human Resources (Ray D. Paris)
9. November 14, 1996, State of South Carolina, Department of Health and Environmental Control (M.K. Batavia)
10. November 20, 1996, Moni Dey, USNRC
11. November 21, 1996, State of Louisiana, Department of Environmental Quality (Ronald Wascom)

12. November 21, 1996, State of Georgia, Department of Natural Resources (Thomas E. Hill)
13. November 21, 1996, State of Utah, Department of Environmental Quality (William Sinclair)
14. November 22, 1996, South Carolina Electric and Gas Company (Gary J Taylor)
15. November 25, 1996, Westinghouse Electric Company (N.J. Liparulo)
16. November 26, 1996, Kennecott Uranium Company (Oscar Paulson)
17. November 27, 1996, John T. Larkins, USNRC, Advisory Committee on Reactor Safeguards
18. November 27, 1996, Nuclear Energy Institute (Thomas D. Ryan)
19. November 27, 1996, State of Texas, Department of Health (Richard Ratliff)
20. November 27, 1996, Conference of Radiation Control Program Directors (William P. Dornsife)
21. November 27, 1996, Council on Radionuclides and Radiopharmaceuticals (Roy W. Brown)
22. December 1, 1996, Environmental Coalition on Nuclear Power (Judith H. Johnsrud)
23. December 2, 1996, Wyoming Mining Association (Marion Loomis)
24. December 2, 1996, State of New Jersey (Jill Lipoti)
25. December 2, 1996, Entergy Operations (Michael J. Meisner)
26. December 2, 1996, Mallinckrodt Medical, Inc. (Ashok Dhar)
27. December 2, 1996, ABB-Combustion Engineering Nuclear Systems (Charles B. Brinkman)
28. December 2, 1996, National Mining Association (Richard L. Lawson)
29. December 2, 1996, Non-Destructive Testing Management (R.D. Dicharry)
30. December 3, 1996, Public Citizen's Critical Mass Energy Project (James Riccio)
31. December 3, 1996, Siemens (L.J. Maas)

ORAL COMMENTS

Washington, D.C. (October 24-25, 1996) pages 78 - 96

1. Thomas Crites, Gaithersburg, MD

2. Richard Ratliff, Organization of Agreement States
3. Roy Brown, Council on Radionuclides and Radiopharmaceuticals
4. Judy Johnsrud, Environmental Coalition on Nuclear Power
5. Jane Fleming, NNSN, D.N.A.C.

Colorado Springs, CO (October 31– November 1, 1996) pages 99 – 115

1. William Sinclair, Organization of Agreement States
2. Steven Floyd, Nuclear Energy Institute
3. Ashok Dhar, Mallinckrodt Medical, Inc.
4. Kenneth Weaver, State of Colorado
5. Roger Walker, Texas Utilities
6. Les England, Entergy Operations

Chicago, IL (November 7–8, 1996) pages 86 – 99

1. Roger Huston, Nuclear Energy Institute
2. Mark Doruff, Amersham Industries
3. Paul Farron, Wisconsin Electric
4. Kristin Erickson, Michigan State University
5. Kathy Allen, State of Illinois, Department of Nuclear Safety

This page was intentionally left blank.

3.11 PUBLIC COMMUNICATION INITIATIVES (DSI 14)

3.11.1 The Direction-Setting Issue and the Options

What approach should NRC take to optimize its communication with the public?

Option 1: Continue Existing Approach

1a: Focus on Maximizing Effectiveness and Economy

Option 2: Place a Priority on Early Identification of Public Concerns and Methods for Public Interaction

Option 3: Place a Priority on Expanding General Public Outreach

3.11.2 Commission's Preliminary Views

The NRC should place a priority on early identification of public concerns and methods for public interaction in making regulatory decisions that are likely to generate substantial public interest or concern (Option 2). This approach is consistent with NRC's Principles of Good Regulation. The NRC should interpret the term "public" in its broadest sense, understand who our various publics are, and focus on what they need in order to facilitate interaction and dissemination of information. For this purpose, the public includes private citizens, interest groups, licensees, States, media, Congress, the executive branch, and the international community. Recognition should be given to both bilateral formal and informal communication, and particular attention should be given to review and improvement of formal communication. The appropriate role of technology as a facilitating/enabling device should be carefully examined within this context (e.g., particular care should be given to considering the forms of information dissemination such that the NRC does not eliminate paper in favor of electronic communication without full consideration of the public's ability to access information electronically). Although there should be centralized planning and coordination of a methodology for anticipating and involving the public in regulatory matters and decisionmaking, responsibility for implementing the methodology should reside with the program offices. The roles of the line organization and the Office of Public Affairs in facilitating public responsiveness should be clearly understood.

In addition, the NRC should focus on maximizing effectiveness and economy in its existing program for public communication (Option 1a), and in anticipating and involving the public (Option 2). As initial steps, the NRC should develop a consistent methodology, and coordinated planning for implementation of this approach, focus on examining the effectiveness and efficiency of activities that are of highest cost, and perform better assessments of proposed improvements to the existing approach. The NRC will consider the effectiveness and efficiency of certain formal forms of communication such as Freedom of Information Act requests in a manner consistent with the law. The Commission would envision establishment of a coordinating group and development of a plan to implement this philosophy.

3.11.3 Summary of Comments

A. Significant/Important Comments Directly Affecting the Preliminary Views or the Direction-Setting Issue

Only three comments--from the Illinois and Texas regulators and the Oregon Office of Energy--supported the Commission's Preliminary Views as the sole course of action. Most commenters preferred some combination of Options 1a, 2, and 3. These comments are summarized below in Section 3.11.3.B.

Several commenters suggested improvements in existing practices. Since most of the suggestions concern ways to engage the public early in the regulatory process, the suggestions are summarized here. They can be addressed by the staff during development of plans to implement the Commission's final decision on this DSI.

The Need for Broad Participation: A representative of the Environmental Coalition on Nuclear Power (ECNP) said that some environmentalists did not want to attend the meetings because they were called "stakeholder" meetings, and there is concern that such meetings, along with "reg neg" approaches and advisory committees of citizens, are attempts to exclude many and co-opt the few who can afford to attend such meetings. The agency must seek broad public involvement. OAS said that the NRC can benefit from the experience and expertise of the Agreement States in identifying and resolving issues.

More Public Meetings: An anonymous commenter made several suggestions for using public meetings to increase the NRC's visibility, and to demonstrate its willingness to listen to the public: Each time a plant is put on or taken off the "watch list", the Chairman should hold a public meeting near the plant, to explain the action and respond to questions; whenever a facility is the subject of controversy, the Chairman or a Commissioner should hold a public meeting near the facility to respond to questions; when a Commissioner visits a nuclear power plant, the Commissioner should hold a public evening meeting to explain the role of the NRC and respond to questions; the Commission should meet annually with environmental/public interest groups, as the NRC does with the industry and Agreement States. The Nuclear Energy Institute (NEI) and ABB-CE suggested that resident inspectors or site project managers might conduct monthly public meetings.

Better Public Meetings: Some commenters urged that the Commission continue to look for more satisfactory ways to conduct public meetings. Two of the commenters--a New Jersey regulator and the Conference of Radiation Control Program Directors (CRCPD)--said that technical vocabulary, microphones, and stenographers can intimidate some people. A third commenter, Eric Hartmann, urged that there be adequate time before a meeting for citizens to peruse available information and comment on it in writing, and for the staff to digest the comments.

Early Involvement in Information Notices and the Like: NEI and most of the industry commenters urged that the Commission allow the industry affected by something like an information notice to at least review it to make sure that issues are correctly identified, that the industry is available to the public to add clarification, and that the industry is informed of the notice before it is released. These commenters said that, if the agency does not allow some early form of involvement by the industry, and the agency disseminates some

erroneous information, the agency will make things worse by confusing the public--the recent bulletin on heavy loads being a case in point. NEI said that this industry involvement should be made fully public, say, by putting the information notice in draft form in the Public Document Room (PDR), and notifying the public that the agency will take action in 30 days. In this way, the agency can maintain an arm's-length relation with the industry. In a similar vein, Yankee Atomic Electric argued that industry input into rulemakings based on research should be sought while the research is going on, to assure that the industry more readily adopts changes in the regulations. However, the National Mining Association (NMA), while encouraging early public involvement, argued that in some circumstances, especially when preliminary ideas and data are the focus of dialogue between the NRC and licensees, public involvement can have a "chilling" effect.

Hearings: An anonymous commenter said that some public frustration arises from the NRC's application of Federal Court tests of standing to intervene in NRC proceedings. Some perceive these tests as an indication that the Commission is not interested in public participation. This commenter urged that the agency modify 10 CFR Part 2 to permit legislative hearings, to increase public participation and reduce the chance of unnecessary delay in licensing actions. The commenter pointed out that the NRC has already argued in court that the Atomic Energy Act would permit such hearings in place of trial-type hearings. Yankee Atomic Electric echoed this preference for more informal processes. The utility argued that the Commission should very "aggressively" review the hearing process with a view to establishing a risk-informed hearing process, in which less formal procedures would be used for lesser risks.

The 2.206 Process: Representatives of NNSN D.N.A.C. and Public Citizen said that it is essential in the 2.206 process that the NRC assign an independent reviewer to look at the NRC's handling of the issue raised by the petition. The commenters said that petitioners often use 10 CFR 2.206 not for licensing action but rather to bring about a good review of the NRC's own work on a matter. They said that it is impossible to ask the person who did the original work to review his or her own work, and that the result of doing so is that the NRC's response to a 2.206 petition becomes too adversarial. Yankee Atomic Electric agreed that having 2.206 petitions reviewed by the employees whose work is questioned by the petition raises questions of objectivity. The utility said that having licensee assertions that a staff action is a backfit reviewed by the staff that developed the action raises the same questions. The utility suggested having the Committee to Review Generic Requirements or the Advisory Committee on Reactor Safeguards (ACRS) review both 2.206 petitions and licensee backfit claims.

Examining the Appropriate Role of Technology: Most commenters expressed appreciation for the large amount of information that the agency makes available on the World Wide Web and in the *Federal Register*, but OAS, Yankee Atomic Electric, and the representative of the ECNP urged the agency to remember that too few people have access to the Web or read the *Register*. The representative of ECNP said she thought she had noticed a decline in the availability of paper copies of information from the agency. Yankee Atomic Electric urged that the agency continue to make printed copies available to people without access to computers or a PDR. The Oregon Office of Energy and a representative of Clark County, Nevada, suggested advertising public meetings in local newspapers. NEI said that whoever examines the appropriate use of a given technology should not be the same person who developed the

technology. An NRC employee said that, despite new technology, the Office of Public Affairs (OPA) will still need to be on the front line, expanding contacts with media and advocacy groups and keeping agency management informed of media and public concerns. The same commenter said that, if there is in the Commission's Preliminary Views a subsumed agenda for transferring regional OPA jobs to Rockville, the Commission should consider whether such a transfer would accomplish the early identification of public concerns.

Role of OPA: The representative of Clark County, Nevada, said that OPA should develop public communications plans that are similar to what advertising agencies develop. The same commenter urged more use of radio, television, videos, and meetings with editorial boards. NEI wondered whether OPA's broad responsibilities might serve as the basis for reducing the lack of integration in the NRC's communications with the public.

Timeliness: Yankee Atomic Electric argued that a priority should be placed on timeliness of decisions. The commenter argued that it does no good to identify public concerns if they are not resolved in a timely way. The commenter pointed to the decommissioning and decontamination rulemaking as an **example of a lack of timely resolution.**

ACRS Membership: An anonymous commenter urged **appointing a technically qualified, public interest/environmental group representative to the ACRS.**

Writing Style: A few commenters, mainly from State agencies, said that the agency must first learn to write and package material in a way that stimulates interest. These same commenters pointed to the writing style of the issue paper on DSI 14 as an example of how not to package material. Two commenters from Oregon State agencies ran the issue paper through some writing software that concluded that understanding the paper required 20 years of formal education. The commenter argued that such a writing style is a bar to public communication and suggests to readers that they are not smart enough to appreciate what the agency says. The representative from Clark County, Nevada, said that public information should be directed to the average person's level of understanding without talking down to anyone. In a similar vein, NEI said that the information the agency distributes should be useful and understandable, and that the agency should have greater sensitivity to the "impact of its communications on a generally non-expert audience."

B. Comments on Other Options

Option 2 Is Not Enough: Most commenters, particularly the industry and the States, favored Option 3, or some combination of Option 3 with one or more of the other options. Commenters thought that such an approach would give the agency greater flexibility to respond to needs, help participants understand each other, move the NRC toward informed decisions, and help the public understand the regulatory process and radiation in general. Eighty percent of the work, a Colorado regulator said, is in answering the questions, What is *my* risk? and How safe is the facility? The OAS said that the NRC cannot leave it to industry and professional groups to "get the message out", and that the agency's outreach effort needs to be directed to schools, community meetings, and legislative hearings, as well as to the newer electronic media. The National Mining Association said that the need for effective communication will increase substantially as the NRC develops risk-informed, performance-based regulation.

The commenters argued that the agency could play a necessary, non-promotional, tutorial role of informing the public about the agency's programs (according to surveys by NEI, few people even know the agency exists, and sister agencies do not understand its processes), publishing information that benefits everyone, and correcting data. The commenters said that the industry could not perform all the educational work, because its efforts would be viewed as self-serving. A representative of Southern California Edison said that, without an agency effort, public ignorance would make problems for the industry and perhaps even make the industry impossible.

NEI thought that the NRC could avoid being promotional by being more accurate. NEI suggested, for example, that the NRC could point out the agency's role in the improvement in the level of safety in the last 15 years, and that, when explaining an event, the agency could try to be more accurate in characterizing the significance of the event. NEI argued that, if the agency is in the public eye only when there has been an event or a non-compliance, then the agency will be on the defensive and it will be hard to persuade the public that the agency is effective. For example, NEI said, the agency's public notices focus on enforcement, and so non-compliance is what the public attends to; the public is therefore left with the impression that the agency is ineffective.

CORAR went so far as to suggest that the agency should play a more active role in communicating information on the "valuable products [that licensees provide] that improve the quality of life in ways that the public may not either recognize or be willing to accept."

An Integrated Program: NEI suggested an integrated "performance-based" public communications program that focused on effectiveness, and established measurable goals and benchmarked them against some private sector efforts. NEI suggested that the NRC should form an assessment team that includes public sector communications organizations, looks at their experiences--what worked and what did not--and conducts some baseline surveys to find out what the public knows about the agency.

Some commenters from Colorado--two from the State regulator and the other from Public Service of Colorado--said that the agency could look to efforts there, two public and one private, for models of communication with the public. The commenters said that Public Service of Colorado (PSC) had a program that was a model for informing the public about decommissioning; the company created a common language that enabled the process to be understood more widely; the company worked for years to establish a good relation with the community; it disseminated a newsletter that let the public know what the company was going to do, it participated in local festivals, etc. The representative of PSC said that DOE's Rocky Flats has improved greatly in the last 10 years or so, from giving no information to inundating the public with it, and as a result the facility has been successful in increasing public confidence. One of the Colorado State regulators suggested reviewing the Environmental Protection Agency's (EPA's) community involvement at Superfund sites.

An NRC employee urged better coordination with EPA on public communications about such issues as high-level waste disposal, and said that the NRC should encourage the industry to play a more proactive role in public communications. The same commenter suggested that the NRC should consider whether to seek a non-fee-based appropriation for its public communications programs.

CORAR and Amersham Corporation said that public concerns should be addressed in a way that is "commensurate with the level of risk involved", rather than with the level of public concern. These commenters said that the agency places too much emphasis on events or concerns with relatively insignificant risks.

Stakeholders' Advisory Board: A representative of the law firm of Carter and Hernman suggested the formation of a stakeholders' advisory board, like DOE's Environmental Management Advisory Board, which advises an Assistant Secretary on public involvement and stakeholder issues. ABB-CE recommended that such committees be formed to help the Commission consider options and plan implementation of the direction chosen by the Commission.

Let Citizens Manage Public Communications: Marvin Lewis urged placing the agency's public communication initiatives in the hands of the Nuclear Information Resource Service, or the commenter, to increase public involvement.

Another Option: One NRC employee said that, for the sake of completeness, the issue paper should have considered an option that reduced the amount of public involvement or information.

C. Comments on Important Omissions

Scoping Process for the Strategic Assessment: The representative from the law firm of Carter and Hernman said that, at an early stage in the strategic assessment, the agency should have conducted a scoping process like the one required under the National Environmental Policy Act. The commenter said that such a process would have given the public a greater sense of participation in the assessment. The representative of the ECNP said that the Commission's withholding of eight papers on DSIs was "proof that the NRC has no intention of abiding by the [public communications] policy it claims."

Other Public Process: An NRC employee said that the paper should have considered certain other agency efforts that serve both safety and communication functions--for example, the 2.206 process, the environmental impact statements under 10 CFR Part 51, and the hearing requirements in 10 CFR Part 2--and the impacts of the options on these processes.

Objectives for Communication: The CRCPD, a New Jersey regulator, and an NRC employee said that the Commission's decision on options for public communication needs to be driven by a Commission decision on the fundamental objectives for public communication. Is the objective to inform the public, involve the public, reduce litigation, obtain information, identify new issues, or influence public sentiment, or some or all of these? NEI and ABB-CE said that the paper and the Commission's preliminary views should have acknowledged that "an overarching goal of its strategic assessment [is] the need to establish the credibility of the agency." The representative of the ECNP said that one goal of public communications is "to listen to and act upon the recommendations that [citizens] submit to it."

Costs and Benefits: NEI, ABB-CE, and Yankee Atomic Electric said that the paper should have defined clearly the costs and benefits of each of the options. According to NEI, much of the information

the agency issues is of little value to the public. The utility urged the agency to realize that public involvement, "while important, does not ensure safety."

Mixed Message: The "nub of the matter", according to a representative of Michigan State University, is that the agency sends a mixed message--it says that small doses have little if any effect, and we know this is true, but then the agency penalizes licensees for any small contamination. The commenter said that, until the agency stops regulating to a level below any known risk, the public won't trust the agency or the industry because of this mixed message.

Citizens' Suits: The representative of the ECNP said that the 2.206 process does not work, that the power to bring "citizens' suits", such as the environmental statutes provide, would enhance the public's sense that there is a potential for effective involvement. [Under most of the environmental statutes, if the EPA is not enforcing a provision of environmental law against a certain regulated party, any citizen may sue that party in Federal District Court for non-compliance with the provision.]

"Accountability" for Comments: The Council on Radionuclides and Radiopharmaceuticals (CORAR) and Amersham Corporation said that the agency needs to find ways to ensure that members of the public are "accountable" for their comments and the information they provide. CORAR was concerned that informal methods of participation can be exploited by persons expressing "irrational viewpoints" rather than well-founded, technically based arguments. In a similar vein, an NRC employee said that the agency needs to find ways to deal with the few members of the public who "inordinately detain" NRC staff from attending to more important risks.

Emergency Information: NEI said that the paper should have discussed the NRC's role "in communicating to the public and working with licensees in the emergency public information area."

D. Comments on Internal/External Factors

Pursuing the Impossible?: An NRC employee suggested that the agency may be hoping for too much. The commenter claimed that the fate of the "Below Regulatory Concern" Policy Statement showed that only extraordinary efforts can guarantee that every group fully understands all the ramifications of every action the agency proposes. The commenter said that such efforts would not be warranted.

E. Comments on Staff Requirements Memorandum Questions

In its preliminary views, the Commission did not pose any additional questions for public comment.

3.11.4. List of Commenters

WRITTEN COMMENTS

1. October 4, 1996, Kenneth Clark, USNRC
2. October 8, 1996, Breck Henderson, USNRC

3. October 11, 1996, Eric Hartmann
4. October 21, 1996, Organization of Agreement States (Robert Quillin)
5. October 24, 1996, Pennsylvania Department of Environmental Protection (Rich Janati)
6. October 28, 1996, Washington State Department of Health (Terry Frazee)
7. November 3, 1996, Marvin Lewis
8. November 4, 1996, New Hampshire Department of Health and Human Services (Diane Tefft)
9. November 5, 1996, Colorado Department of Public Health and Environment (Philip Stoffey)
10. November 5, 1996, Anonymous
11. November 7, 1996, Mississippi State Department of Health (Robert Goff)
12. November 7, 1996, Organization of Agreement States (Robert Quillin)
13. November 13, 1996, Oregon Office of Energy (David Stewart-Smith)
14. November 14, 1996, Oregon Department of Human Resources (Ray Paris)
15. November 14, 1996, South Carolina Department of Health and Environmental Control (M.K. Batavia)
16. November 21, 1996, Louisiana Department of Environmental Quality (Ronald Wascom)
17. November 21, 1996, Georgia Department of Natural Resources (Thomas Hill)
18. November 21, 1996, Utah Department of Environmental Quality (William Sinclair)
19. November 22, 1996, South Carolina Electric & Gas (Gary Taylor)
20. November 27, 1996, Nuclear Energy Institute (Thomas Ryan)
21. November 27, 1996, Texas Department of Health (Richard Ratliff)
22. November 27, 1996, Conference of Radiation Control Program Directors (William Dornsife)
23. November 27, 1996, Council on Radionuclides and Radiopharmaceuticals (Roy Brown)
24. December 1, 1996, Environmental Coalition on Nuclear Power (Judith Johnsrud)
25. December 2, 1996, SENTINEL, Amersham (Cathleen Roughan)
26. December 2, 1996, Michael Weber, USNRC

27. December 2, 1996, New Jersey Department of Environmental Protection (Jill Lipoti)
28. December 2, 1996, Yankee Atomic Electric (Jane Grant)
29. December 2, 1996, Maryland Department of the Environment (Roland Fletcher)
30. December 2, 1996, Mallinckrodt Medical (Ashok Dhar)
31. December 2, 1996, ABB Combustion Engineering Nuclear Systems (Charles Brinkman)
32. December 2, 1996, Clark County, Nevada, Department of Comprehensive Planning (Dennis Bechtel)
33. December 2, 1996, National Mining Association (Richard Lawson)
34. December 2, 1996, Illinois Department of Nuclear Safety (Thomas Ortciger)

ORAL COMMENTS

Washington, D.C. (October 24-25, 1996) pages 40 - 64

1. John Carter, law firm of Carter and Hernman
2. Richard Ratliff, Organization of Agreement States
3. Judith Johnsrud, Environmental Coalition on Nuclear Power
4. Dennis Bechtel, Clark County, Nevada
5. Jane Fleming, NNSN D.N.A.C.
6. Jim Riccio, Public Citizen's Critical Mass Energy Project

Colorado Springs, CO (October 31-November 1, 1996) pages 67 - 88

1. Stephen Floyd, Nuclear Energy Institute
2. Ashok Dhar, Mallinckrodt Medical
3. William Sinclair, Organization of Agreement States
4. Thomas Tipton, Nuclear Energy Institute
5. Michael Holmes, Public Service of Colorado
6. Kenneth Weaver, Colorado and Conference of Radiation Control Program Directors

Chicago, IL (November 7-8, 1996) pages 46 - 70

1. Kristin Erickson, Michigan State University

2. T. Derrick Mercurio, Southern California Edison
3. Mark Doruff, Amersham Corporation
4. Tom Tipton, Nuclear Energy Institute

3.12 INTERNATIONAL ACTIVITIES (DSI 20)

3.12.1 The Direction-Setting Issue and the Options

What is the appropriate role of NRC in the development and implementation of policies on international nuclear matters?

Option 1: Seek To Reduce NRC's International Role to a Minimum

Option 2: Perform NRC's Statutory Role and Limit Other International Activity to a Minimum

Option 3: Conduct Activities of Benefit to NRC's Domestic Mission

Option 4: Conduct Activities of Benefit to NRC's Domestic Mission or U.S. National Interests (similar to its current role)

Option 5: Expand Activities

3.12.2 Commission's Preliminary Views

The Commission agrees that Option 4, which fundamentally allows the Commission to conduct international activities of importance and benefit to NRC's domestic mission or U.S. national interests, is a desirable goal. However, modifications are expected to be required because of expected continued reductions in NRC budgets. Therefore, we need to examine individual international activities with respect to budget and priority to provide the basis for an orderly reduction and/or sunset of certain activities to meet expected future constraints on the program.

Option 4 reaffirms NRC's current policy basis for participation in international activities. Under Option 4, NRC would continue to perform its current statutory role in matters related to export-import licensing and its current and prospective role in treaty implementation and would, in addition, actively participate in international activities that support and benefit NRC domestic safety and security responsibilities or U.S. national interests. Also the NRC would participate in exchange activities of benefit to its domestic responsibilities or U.S. national interests and would provide a wide but carefully selected range of safety and safeguards assistance.

The Commission believes that international activities performed in support of U.S. national interests actually undergird our domestic mission. For example, NRC's nuclear safety cooperative research agreements with other countries allow NRC to obtain valuable information, often at a comparatively small cost, to support our own programmatic needs. Furthermore, NRC's own research program allows it to play a leadership role in such international organizations as the Nuclear Energy Agency and the International Atomic Energy Agency, thus providing substantial benefit to the U.S. In addition, NRC's role in export licensing has direct impact on overall U.S. commercial interest.

Recognizing that we must also address the issue of future constraints on the NRC's international program, staff should develop a plan to include criteria which would address the basis for prioritizing NRC's international activities, including research. This will assist the Commission in determining where appropriate programmatic expansion or reductions may be made, depending on

future budget constraints. In particular, since NRC is licensee fee based, careful consideration of international programs and their primacy to NRC's mission are important considerations. The plan should also identify areas where efficiencies can be considered and develop criteria for sunseting certain activities.

3.12.3 Summary of Comments

A. Significant/Important Comments Directly Affecting the Commission's Preliminary Views or the Direction-Setting Issue

Most of the comments supported the Commission's preliminary views, both the Commission's choice of Option 4 as a goal and the Commission's emphasis on the need to prioritize the agency's international activities.

Option 4

The International Atomic Energy Agency (IAEA) said that there are "many substantial benefits to global nuclear safety that accrue from NRC support for international nuclear safety activities and the provision of results of its safety research programmes." A Mexican regulator said, in full support of the Commission's preliminary views, that NRC had exercised "distinguished leadership" in international forums and its proposals had paved the way for safer worldwide use of nuclear power. He pointed to NRC's assistance to, and exchanges with, his country and said that these had been fundamental to his country's development of a robust and healthy regulatory framework. He said that, although the issue paper's assumptions and projections for internal and external factors were accurate enough to provide a solid basis for strategic planning, they were not sufficient to establish policies to face forthcoming challenges, unless these policies are based on an explicit commitment to excel. He argued that such a commitment had been the driving force behind NRC's past leadership, and that the absence of such leadership would have grave consequences for the nuclear industry worldwide. He would like to see NRC lead other countries into the future, rather than merely react to local and global changes. In the same vein, a Czech regulator said that the Commission's preliminary views should be much stronger in their argument against reducing the agency's current international role. An Australian regulator said that NRC's international involvement would benefit NRC also, especially in enabling NRC to remain aware of new developments in regulation abroad. An employee of SCIENTECH viewed Option 4 as "realistic under present objectives and constraints" and as necessary "in today's world" for achieving the agency's domestic mission.

The Nuclear Energy Institute (NEI) supported Option 4, partly on the grounds that the association did not want another foreign accident to jeopardize the U.S. nuclear option. Westinghouse also supported Option 4, arguing that regulators in the former Soviet Union and Central and Eastern Europe (CEE) need to more fully replicate the U.S. regulatory structure, and that NRC was the best-positioned agency to help stabilize these regulators. The same firm also said that application of U.S. regulatory practices abroad benefits U.S. industries.

International Nuclear Regulators Forum: Most comments about the International Nuclear Regulators Forum were favorable. For example, the Mexican regulator said that the Forum would contribute to NRC's leadership and to improvement in

regulatory activities. NEI was more cautious. It suggested that it would be "appropriate" to consider the relationship between the Forum and the Nuclear Energy Agency's (NEA's) activities, or the process for implementing the new Convention on Nuclear Safety. The International Atomic Energy Agency's (IAEA's) comment was similar, and it noted the opportunities for discussions among senior regulators provided by the NEA and the annual Meeting of Senior Regulators at the IAEA General Conference. An NRC employee argued that NRC should make more use of the NEA, instead of creating the International Nuclear Regulators' Forum. He said that, at the NEA, senior regulators can discuss policy and invite regulators from Eastern Europe, the former Soviet Union, and Taiwan to take part in the discussions on an equal basis, and that use of the NEA group instead of a new forum would also maintain a close-knit relationship with the exchanges and cooperative projects now managed by NEA committees headed by senior regulators. The employee of SCIENTECH said that, until there are criteria for regulatory performance, an International Nuclear Regulators' Forum may not serve to improve regulation.

Coordination of Safety Assistance: Several commenters urged close coordination with other organizations, both public and private, in carrying out NRC's international assistance. The employee of SCIENTECH recommended coordination of assistance, not just for the sake of efficiency, but also to foster "the right business-like attitude" in the recipient. He argued that NRC has the reputation and experience necessary to take the lead in this coordination. He also said that there must be adequate controls to ensure that the objective of the assistance is met, and that contractors were useful not only for quality control and quality assurance purposes but also because they minimize the use of the regulator's own resources and take advantage of the expertise of many institutions. NEI suggested looking at assistance requests to see whether some other organization, like the World Association of Nuclear Operators (WANO), could be the best entity to respond to the request. In the same vein, the Australian regulator urged looking to see whether NRC could collaborate with other agencies, transfer certain activities to other agencies, or hire more contractors, after giving due regard to the need to retain in-house corporate knowledge. Representatives of Commonwealth Edison and Pacific Northwest National Laboratory urged more coordination with the assistance efforts of DOE and the IAEA.

NRC/NEA Relationship: An NRC employee suggested that the agency should establish a post to support work done through the NEA. He argued that this group has the regulators with whom NRC has the most active exchanges, and that through such a post NRC could increase its presence, attend every meeting of the technical and management committees of cooperative international projects, enlist contributions from its colleagues to solve common problems, and influence outcomes in areas of interest to NRC, all with less time and money than NRC spends now. Another NRC employee said that NRC's Office of Research should have the lead NRC role in NRC's dealings with other countries' nuclear safety research programs, but that the other program offices should have the lead on licensing and pre-licensing matters, for example in the provision of technical assistance to other countries on how to regulate radioactive waste disposal.

Priorities: Several commenters recommended ways to prioritize the agency's international activities. The employee of SCIENTECH recommended taking a close look at the efficiency of exchanges and assistance on the grounds that these are the most labor-intensive of the agency's four international functions.

Several commenters said that NRC's domestic program should dictate some of the agency's international priorities. An NRC employee argued that international cooperative research programs and international activities that could support NRC's transition to risk-informed, performance-based regulation, should be given increased priority because, in the commenter's view, other international activities are less directly related to the NRC's domestic mission. A Swedish regulator said that, given NRC's budget constraints, the increasing development of nuclear technology abroad, and the similarity of many foreign designs to U.S. designs, cooperative research and exchange of operating experience should be agency priorities. The Organization of Agreement States (OAS) and most of the State regulators, who endorsed the comments of the OAS, argued that NRC should consider cuts in some areas--international for instance--that would not result in reduced levels of domestic safety. NEI said that the Commission's preliminary views should more explicitly recognize that the agency has a primary responsibility to the domestic industry to ensure effective implementation of its export-import responsibilities.

The Australian regulator said that a high priority should be given to maintaining NRC's role in the Comprehensive Threat Reduction Program. The Swedish regulator said more generally that the United States should focus on areas in which it has unique competence, for example, in the protection and handling of weapons-grade materials, especially materials from dismantled weapons.

The Australian regulator said that it would be to the benefit of all concerned to have clear guidance from NRC and the Executive Branch as to the relative priorities of international activities in the eyes of the Executive Branch, the relative priorities of NRC's international activities compared to NRC's other activities, and the relative priorities of assistance to the former Soviet Union and Eastern Europe compared to assistance to developing countries in the early stages of building nuclear power infrastructures.

Framatome Technologies said that a better understanding of how nuclear risks compare to the risks of other means of generating electricity would suggest new areas of cooperation, information exchange, and research.

B. Comments on Other Options

Option 5

The U.S. Assistant Secretary of State for Political-Military Affairs Thomas McNamara and two other commenters preferred Option 5. The State Department argued that, for assistance, Option 5 is "probably the most realistic assessment of both recipient and policy needs for the foreseeable future." The Department said that the consistency of American policy across two Administrations and three Congresses (in supporting assistance to improve the safety of Soviet-designed reactors) is a "clear indication" of the extent of national interest in reducing the risk of a nuclear accident abroad. The Department agreed with the conclusion of the issue paper on DSI 20 that the results to date of some assistance efforts have been "disappointing." According to the Department, some foreign regulators still lack the legal bases, technical capability, and resources required to match the size of their problems. In this connection, the Department said it would be pleased to contribute to the comprehensive evaluation of FSU/CEE assistance called for by the paper.

Along the same lines, a representative of ABB-CE said, in support of Option 5, that NRC should expand its current level of activity to export the culture and safety standards of the United States. The commenter said that such expansion would benefit world health and the U.S. industry, because the world can ill afford another significant accident. The commenter also said that if the agency could not get more resources for expansion, it should shift some of its domestic budget to international activities.

A Washington State regulator argued, in support of Option 5, that, because the agency is losing licensees to the Agreement States and the reactor program is in decline, NRC should expand its international work to help ensure that nuclear problems abroad do not become problems for the United States.

A representative of the Council of Radiation Control Program Directors said that NRC's presence in the discussions on the international convention on the handling of radioactive waste is very important, and that this therefore is one area in which expansion might be appropriate.

Option 3

The OAS and most State regulators preferred Option 3. They argued that the money now spent on foreign trainees and other international activities could then be spent for other purposes, for example training for Agreement States. The Maryland regulator said that NRC should give higher priority to the Agreement States Program than to international activities. Arguing against some forms of assistance, a representative of the Washington Public Power Supply System asked why NRC should give assistance to countries that are expanding their nuclear power programs but not buying U.S. reactors.

Other Options

A representative of the Environmental Coalition on Nuclear Power asserted that the United States should exercise leadership in the "prevention" of international trade in nuclear materials and waste, and that NRC should help other nations "maximize control" over, and "minimize the movements" of, these materials and wastes. The commenter said that NRC's domestic mission should be "to bring about an end of the nuclear industry and of nuclear weapons facilities and activities as expeditiously as possible."

A group of NRC Regional employees said that the agency should engage in only those international activities that are funded by Congress.

C. Comments on Important Omissions

The IAEA said that the issue paper does not reflect NRC's significant contribution to the preparation of international safety standards.

The OAS and most State regulators said that the issue paper had failed to take into account the role that the States can play in international activities. For example, the OAS and others said that the Agreement States can respond to radiological incidents resulting from imports of contaminated items and to foreign incidents along U.S. borders (especially the border with Mexico, where all the States are Agreement States). They also noted that they can help train regulators from other countries. Most State regulators said that the

Agreement States may have a role in inspecting imported devices using radioactive materials, and possibly the facilities abroad that produce them, to ensure their safety.

The NEI said that the paper on DSI 20 had omitted three important considerations:

The paper should have considered the impact on the Commissioners of some of NRC's international activities, especially its policy function, and, assuming the impact disproportionately burdensome, should have sought ways to achieve the agency's international goals with less impact on the Commission,

The paper should have considered the effect on licensee fees of international activities other than those which directly benefit licensees. These other activities, such as support of U.S. national interests, should be funded by general revenues or by the entity (such as the State Department) that asked for the activity.

No matter which option is chosen, NRC should assess the value of each specific exchange or assistance program, and not limit itself just to either continuing or ending the program.

D. Comments on Internal/External Factors

The NEI listed a number of external factors whose impacts on NRC should have been considered in the issue paper: possible increased commercial nuclear trade with China (which could significantly increase NRC's export role), implementation of the Convention on Nuclear Safety (which could require additional resources), and the possibility of insufficient congressional appropriations to continue the agency's foreign assistance programs (which could raise a question either about how NRC would turn these over to others or, if they were continued, how they would be funded without charging the costs to licensees). The IAEA said that carrying out the obligations of the Convention will "entail co-operation with other countries beyond that required by the specific obligations." Commenting more generally on trade with Asia, a Chinese regulator said that the paper should have taken into account more the rapid expansion of nuclear power programs in developing countries. He said that more attention should be paid to cooperation in inspections between NRC and the regulatory bodies of countries in which U.S.-designed plants are operating or will be built. The IAEA foresaw an increase in the worldwide use of nuclear power, not just in Asia, to meet projected energy demands and to stabilize the production of carbon dioxide.

Marvin Lewis and the representative of the Environmental Coalition on Nuclear Power asked how the General Agreement on Tariffs and Trade (GATT), the North American Free Trade Agreement, and the International Standards Organization's 14000 standards affect NRC's role in the regulation of international trade in radioactive materials. Marvin Lewis thought that GATT gave the international community power over U.S. policy on nuclear materials, to the point of prohibiting NRC from exceeding international regulatory standards.

E. Comments on Staff Requirements Memorandum Questions

In its preliminary views, the Commission did not pose any additional questions for public comment.

3.1.4 List of Commenters

WRITTEN COMMENTS

1. October 21, 1996, Organization of Agreement States (Richard Ratliff for Robert Quillin) [draft]
2. October 23, 1996, Organization of Agreement States (summary, prepared by NRC/OSP, of discussions between State and NRC regulators)
3. October 24, 1996, Organization of Agreement States (Richard Ratliff for Robert Quillin)
4. October 24, 1996, Organization of Agreement States (Steven Collins)
5. October 24, 1996, Texas Department of Health (Richard Ratliff)
6. October 28, 1996, John Randall, USNRC
7. October 28, 1996, Washington State Department of Health (Terry Frazee)
8. November 3, 1996, Marvin Lewis
9. November 4, 1996, New Hampshire Department of Health and Human Services (Diane Tefft)
10. November 5, 1996, SCIENTECH Moscow office (Serguei Rouchkine)
11. November 7, 1996, Mississippi State Department of Health (Robert Goff)
12. November 11, 1996, People's Republic of China, National Nuclear Safety Administration (Wang Liren)
13. November 11, 1996, Mexico, Comision Nacional de Seguridad Nuclear y Salvaguardias (Miguel Vaillard)
14. November 11, 1996, Czech Republic, State Office for Nuclear Safety (Miroslav Hrehor)
15. November 12, 1996, Slovak Republic, Nuclear Regulatory Authority (Jozef Zlatňanský)
16. November 14, 1996, Oregon Department of Human Resources (Ray Paris)
17. November 14, 1996, South Carolina Department of Health and Environmental Control (M.K. Batavia)
18. November 18, 1996, G. Donald McPherson, USNRC
19. November 18, 1996, Australian Nuclear Science & Technology Organization (Robert Godfrey, forwarded by Allan Murray of the Australian Embassy)
20. November 20, 1996, Moni Dey, USNRC

21. November 21, 1996, Louisiana Department of Environmental Quality (Ronald Wascom)
22. November 21, 1996, Georgia Department of Natural Resources (Thomas Hill)
23. November 21, 1996, Utah Department of Environmental Quality (William Sinclair)
24. November 22, 1996, South Carolina Electric & Gas Company (Gary Taylor)
25. November 22, 1996, International Atomic Energy Agency (Z. Domaratzki)
26. November 25, 1996, Westinghouse Electric Corporation, Energy Systems (N.J. Liparulo)
27. November 25, 1996, Framatome Technologies (John Bohart)
28. November 27, 1996, Nuclear Energy Institute (Thomas Ryan)
29. November 27, 1996, Texas Department of Health (Richard Ratliff)
30. November 27, 1996, Dyle Acker, et al., USNRC Region IV
31. December 1, 1996, Environmental Coalition on Nuclear Power (Judith Johnsrud)
32. December 2, 1996, Swedish Nuclear Power Inspectorate (Lars Högberg)
33. December 2, 1996, Maryland Department of the Environment (Roland Fletcher)
34. December 2, 1996, ABB Combustion Engineering Nuclear Systems (Charles Brinkman)
35. December 2, 1996, Illinois Department of Nuclear Safety (Thomas Ortciger)
36. December 3, 1996, No Name
37. December 5, 1996, U.S. Department of State (Eric Newsome for Thomas McNamara)

ORAL COMMENTS

Washington, D.C. (October 24–25, 1996) pages 22 – 39

1. Al Ankrum, Pacific Northwest Laboratory
2. Judith Johnsrud, Environmental Coalition on Nuclear Power

Colorado Springs, CO (October 31–November 1, 1996) pages 235 – 246

1. Tom Tipton, Nuclear Energy Institute
2. Charles Brinkman, ABB Combustion Engineering

3. Stephen Floyd, Nuclear Energy Institute
4. Kenneth Weaver, Conference of Radiation Control Program Directors
Chicago, IL (November 7-8, 1996) pages 19 - 29
1. Mr. Narinder Kaushal, Commonwealth Edison
2. Irene Johnson, Commonwealth Edison
3. David Swank, Washington Public Power Supply System

This page was intentionally left blank.

3.13 FEES (DSI 21)

3.13.1 The Direction-Setting Issue and the Options

In making decisions about what activities the NRC should perform in support of its mission, to what extent should fees be considered?

Option 1: Continue Existing Approach

Option 2: No Consideration of Fees for Mandated Activities

Option 3: No Consideration of Fees in Making Decisions About Any NRC Activities

Option 4: Fee for Service

Related Issues To Be Addressed

How should the NRC recover its costs in a fair and equitable manner?

- What funding mechanisms should the NRC pursue, in addition to annual appropriations with fee recovery, to fund activities that are not required to be funded through appropriations, for example, certain international activities?
- In performing reimbursable work, how should NRC address the full-time equivalent (FTE) constraints that limit the number of NRC staff?

Funding Mechanism 1

Recover the cost of providing requested services from the requestor, using fees and reimbursable agreements. The cost of activities that serve the collective interest of the general public would be recovered from general revenues raised from taxes.

Funding Mechanism 2 (Current Approach)

NRC applicants and licensees would continue to pay for approximately 100 percent of the appropriated budget authority. Reimbursable agreements would be used to fund all non-mandated activities.

Funding Mechanism 3

Amend the Omnibus Budget Reconciliation Act of 1990 (OBRA-90) and the Atomic Energy Act of 1954 (AEA) to give the NRC maximum flexibility to assess fees.

Funding Mechanism 4

Rescind the Independent Offices Appropriation Act of 1952 (IOAA) and OBRA-90 so that the NRC would be fully funded through taxes, as was the case until 1968.

3.13.2 Commission's Preliminary Views

The Commission believes that the NRC's public health and safety mission must be the foundation for making decisions about what activities the agency should perform. In making decisions on the work that the NRC will perform, the Commission does, and will continue to, consider the cost of its activities and consistently examine ways to accomplish its mission within a responsible budget. Whether the NRC's budget is funded by the public through taxes paid to the Treasury or by licensees through fees paid to the Treasury, the NRC's decisions about its programs should be the same. The Commission believes that fees should not be a primary factor in determining the work to be performed in response to the NRC's health and safety mission. It is the Commission's position that programmatic decisions should not be fee driven and should be based on their contribution to public health and safety.

The Commission does not believe that it was Congress's intent to limit the NRC's activities to those that are directly attributable to a specific regulatory action for a specific licensee or class of licensees.

In OBRA-90 (PL 101-508), Congress stated that any licensee of the Commission may be required to pay, in addition to the fees for services or thing of value, an annual charge. Congressional history and language in the Conference Report that accompanied PL 101-508 takes notice and allows that "increasing the amount of recovery to 100 percent of the NRC's budget authority will result in the imposition of fees upon certain licensees for costs that cannot be attributed to those licensees or classes of licensees."

After review of the policy options, it is the Commission's preliminary view to approve Option 2.

Programmatic decisions in response to NRC mandates will not be driven by fees. Specific activities conducted by the NRC will be evaluated for efficiency and effectiveness.

The NRC performs two primary types of activities. These types of activities are defined as mandated and non-mandated. Mandated activities include statutes, Executive Orders, treaties, Commission decisions, and so on. Non-mandated activities include those activities that are not required to respond to mandates but are performed as a 'service' to another organization. This policy option (Option 2) approved by the Commission provides for a responsible decisionmaking process for mandated activities while allowing the NRC to assist other organizations on a reimbursable basis.

In selecting Option 2, the Commission will establish a process for making its programmatic decisions based on public health and safety considerations for mandated activities. When the Commission is requested to perform non-mandated activities, the requestor will reimburse the NRC for the cost of performing them.

In order to implement Option 2, the staff will develop, for the Commission's review and approval, a set of criteria for defining mandated and non-mandated activities. These criteria will allow for a clear framework within which to consistently determine funding of NRC activities.

Two related issues, in addition to the direction-setting issue (DSI), are also addressed. These two issues address funding mechanisms and personnel full time equivalent (FTE) ceilings.

It is the Commission's preliminary view to support Funding Mechanism 2, which continues the agency's current approach.

Although the Commission believes that its decisions on activities that the NRC should perform in support of its mission and its total budget authority should be independent of fee considerations, it also believes that NRC fees should be assessed in as fair and as equitable a manner as practicable.

OBRA-90 requires that NRC collect fees equal to approximately 100 percent of the NRC's budget. OBRA-90 further states that these fees should be collected from NRC's licensees and applicants. The Commission has sought to comply with OBRA-90 and to distribute fees fairly and equitably among its licensees and applicants. The NRC has reexamined its fee policy each year, issued draft fee rules for public comment, and made changes to the process to respond to those comments whenever possible within the limits of existing statutes. The Commission has also addressed those concerns raised by the public and licensees about the limitations of applying fees within OBRA-90 in its Report to Congress on the U.S. Nuclear Regulatory Commission's Licensee Fee Policy Review Issued in February 1994.

The Commission believes that carrying out the intent of Congress by implementing fee policy within existing law is the most effective and efficient option. The Commission will, however, consider comments and recommendations on specific proposals if they present new approaches to improve the process or to accomplish a more equitable distribution of fees.

It is the Commission's preliminary view to support the NRC's identification of FTEs associated with reimbursable work as business-like activities.

When the NRC receives a request to conduct an activity that is not necessary for the NRC to meet its mandates but will provide a "service" to another organization, the NRC must consider the cost of providing the service. This cost consideration includes both dollars and FTEs. The requesting organization can enter into a reimbursable agreement with the NRC and reimburse the agency for the dollars expended on providing the assistance. The requesting organization does not, however, provide FTEs to the NRC.

The current FTE ceiling constraints may make it difficult, if not impossible, for the NRC to provide assistance for non-mandated activities in response to specific requests. The approach to remove those FTEs used for business-like activities from the NRC's ceiling would allow the NRC to provide assistance to other Government agencies and organizations that might otherwise be turned down.

3.13.3 Summary of Comments

A. Significant/Important Comments Directly Affecting the Preliminary Views or the Direction-Setting Issue.

In both the written comments and those provided at the stakeholder meetings, there was general support for the preliminary view of adopting Option 2, Funding Mechanism 2, and the NRC's identification of FTEs associated with reimbursable work as business-like activities. The Nuclear Energy Institute (NEI) did not support Funding Mechanism 2.

Both the Organization of Agreement States (OAS) and the Conference of Radiation Control Program Directors (CRCPD) support Option 2 and Funding Mechanism 2 indicating that if NRC is mandated to perform a task, it should do so without the negative influence of fees. Five States submitted comments supporting the OAS comments, and five States submitted comments supporting Option 2. OAS, CRCPD, and most States commented that because training for Agreement States is a mandated activity, the NRC should not charge Agreement States for training or for other services provided to the Agreement States, such as technical assistance. One State (Illinois) endorsed Option 3 as they perceived it as the option most likely to achieve the result discussed under DSI 4 of restoring funding for Agreement State programs. Funding for Agreement States is addressed further in the stakeholder comments on DSI 4.

NEI and Westinghouse supported Option 2, whereby the use of reimbursable agreements would be increased to avoid costs that do not benefit NRC licensees. Two commenters (ABB-CE Nuclear Systems and South Carolina Electric and Gas Company) submitted comments supporting the NEI comments. The National Mining Association (NMA) while supporting Option 2, still has some serious concerns about the underpinnings of the fee structure and indicates that without legislative changes to OBRA-90 there is no way to alleviate completely the major concerns of NMA licensees about the fairness and equity of the NRC fee schedule.

One commenter (Richard Barkley), while supporting the preliminary views of the Commission, pointed out that, in the future, if substantial numbers of reactor licensees elect to decommission early, the NRC will not be able to ignore the increasing burden that fees impose on the shrinking pool of licensees. Therefore, NRC needs to prioritize programs and initiatives more than ever, operate in a business-like fashion, and pursue those activities having the most noteworthy benefit to public health and safety. These measures support the Commission's preliminary view that the Commission will consider the cost of its activities and consistently examine ways to accomplish its mission within a responsible budget.

B. Comments on Other Options

Although supporting Funding Mechanism 2, the OAS commented that NRC should be charging other Federal agencies for specific services provided to them (Funding Mechanism 3). In addition, although individual States endorsed the comments made by the OAS, they indicated that NRC should advise the Congress that (1) activities that do not benefit licensees (e.g., international program, research, the Agreement States program, etc.) should be excluded from the fee base for recovery (Funding Mechanism 1) and (2) any new activities that the NRC is required to perform should be specifically designated as to

how the costs should be recovered. One State (Washington) commented that the NRC should be proactive in finding ways to get Congress to fund NRC involvement in crucial countries overseas and also work toward finding countries willing to pay for NRC expertise.

NEI, the Council on Radionuclides and Radiopharmaceuticals, and three other commenters (State of Washington, Amersham and Mallinckrodt Medical) disagreed with the Commission's preliminary view of supporting Funding Mechanism 2 and strongly supported Funding Mechanism 1. NEI stated that it is fundamentally unfair to impose fees on NRC licensees, thereby increasing their costs and adversely offsetting their competitive position, for which they derive no benefit. The Council on Radionuclides and Radiopharmaceuticals and two other commenters (Amersham and Mallinckrodt Medical) stated that activities that serve the collective interest of the public should be funded by general revenues raised from taxes. NEI suggested that the NRC redouble its efforts to ensure that Congress understands and corrects this basic inequity and recommended that NRC submit a legislative package to Congress that would allow less than 100 percent fee recovery from licensees. Yankee Atomic Electric Company recommended that the NRC take a more proactive and aggressive approach to solving this issue at the Congressional level.

The NMA supports a mix of Funding Mechanisms 1 and 3, indicating that by pursuing these options, NRC would put into effect the recommendation made by the Commission in its February 1994 Report to Congress that OBRA-90 be modified to relax the 100-percent budget recovery requirement, thereby eliminating many of the inequitable burdens imposed on NRC licensees. NMA acknowledges that the pressure on the Federal Government to achieve a balanced budget may make this legislative solution difficult to achieve, but it believes that fairness issues and the impact of the current system on competitiveness requires that the attempt be made. NMA points out that the fee problem will be exacerbated in future years as more States become Agreement States, leaving fewer NRC licensees to bear an even greater share of the burden, and that the number of operating sites can be expected to decline if NRC does not find a more equitable means of assessing fees on its licensees. One State (Illinois) supported Funding Mechanism 3 stating that they supported any necessary statutory changes to allow general funding of the Agreement State program, the assessment of fees for services to Federal agencies and either direct funding for international activities or billing to international agencies.

Two commenters (Yankee Atomic Electric Company and Ken Peveler) supported Funding Mechanism 4 (NRC to be funded through taxes), noting that the current arrangement of assessing fees to utilities, for example, drives the nuclear industry in a negative direction. That is, the utilities pay the NRC fees but, in turn, pass the costs on to its rate payers, who are the public. Thus, the public is paying the price of fees, which has the same effect as taxes, that is, the public pays. Mr. Peveler stated that NRC fees assessed to applicants and licensees are simply a way of rearranging the funds, and such an arrangement puts the nuclear industry at an economic disadvantage. In the same vein, ABB-CE Nuclear Systems stated that fees are onerous and a contentious issue, particularly in a deregulated environment in which nuclear utilities are bearing most of the burden of the half billion dollars or so per year that the NRC receives in fees. ABB-CE Nuclear Systems and Yankee Atomic Electric Company recommended that until such time as legislative relief can be provided, 10 CFR Part 171 annual fees be rescinded and NRC establish a process of recovering the agency's budget from fees imposed on the industry that are

limited to those costs directly associated with the regulatory service provided, a "fee for service" concept similar to Option 4.

C. Comments on Important Omissions

One commenter (Entergy Operations, Inc.) identified an option not addressed in the paper. Under this option, the Commission would seek legislation to allow the NRC to supplement its appropriation for mandated activities. Entergy stated that currently there is no mechanism for the NRC to hire a contractor to perform industry-needed mandated reviews and then bill the requestor for the review. Entergy cited the example of the full-scope probabilistic risk assessment being submitted to NRC that has not been acted on in 3 years, noting that "we pay for the reviews that we get, but we can't always get the reviews that we want." Entergy would support changes in the legislation that would permit the NRC, at the utility's request, to select the contractor of the utility's choice to perform technical reviews of licensing requests and tender the invoices directly to the requesting utility or organization for these reviews above budget and FTE caps. The Council on Radionuclides and Radiopharmaceuticals, Amersham, and Mallinckrodt Medical indicated that the inability to have an application reviewed and approved in a timely fashion affects the public when products cannot be manufactured and distributed because an application for a license, amendments, or container approval takes several months or years.

D. Comments on Internal/External Factors

Yankee Atomic Electric Company stated that although the paper accurately describes the history of and the equity issues associated with fees, it completely fails to note and address the fact that the entire electric power industry is in an era of sweeping change through initiatives in Congress and the States to restructure and deregulate the electric power industry.

Pacific Gas and Electric (Angus) at one of the stakeholders meetings noted that the competitive environment in which utilities must operate is an external factor that should be considered. The commenter stated that currently each operating power reactor pays an annual fee of \$2.7 million. Of this amount, approximately \$500,000 is for activities that do not benefit the utility. The commenter indicated that as they begin to look ahead to the turn of the century (year 2000 and 2001), the \$500,000 could constitute about one-half of 1 percent of the profit of a plant (estimated at \$100 million) and, therefore, the \$500,000 takes a very significant part of the revenue base for the power plants; this amount actually "is at the point where it contributes to the decision whether or not you operate or continue to operate the power plants." The commenter stated that given the competitive environment faced by operating power reactors at the turn of the century, this external factor would support the position that the \$50 million identified by the NRC as not benefitting licensees should be removed from the fee base and recovered through general tax structures (Funding Mechanism 1).

E. In its preliminary views, the Commission did not pose any additional questions for public comment.

3.13.4 List of Commenters

WRITTEN COMMENTS

1. October 21, 1996, Organization of Agreement States and Conference of Radiation Control Program Directors (Robert Quillin)
2. October 21, 1996, Organization of Agreement States (Robert Quillin)
3. October 23, 1996, State of New York, Department of Labor (Rita Aldrich)
4. October 23, 1996, Agreement State/NRC Regulators' meeting summary
5. October 25, 1996, Organization of Agreement States (Thomas Hill)
6. October 28, 1996, State of Washington, Department of Health (Terry Frazee)
7. October 29, 1996, Richard Barkley, NRC
8. November 3, 1996, Marvin Lewis
9. November 4, 1996, State of New Hampshire, Department of Health and Human Services (Diane Tefft)
10. November 7, 1996, State of Mississippi, Department of Health (Robert Goff)
11. November 7, 1996, Organization of Agreement States amended comments (Robert Quillin)
12. November 14, 1996, State of Oregon, Department of Human Resources (Ray D. Paris)
13. November 14, 1996, State of South Carolina, Department of Health and Environmental Control (M. K. Batavia)
14. November 21, 1996, State of Louisiana, Department of Environmental Quality (Ronald Wascom)
15. November 21, 1996, State of Georgia, Department of Natural Resources (Thomas E. Hill)
16. November 21, 1996, State of Utah, Department of Environmental Quality (William J. Sinclair)
17. November 22, 1996, South Carolina Electric & Gas Co. (Gary Taylor)
18. November 25, 1996, Westinghouse Electric (N. J. Liparulo)
19. November 27, 1996, Nuclear Energy Institute (Thomas D. Ryan)
20. November 27, 1996, State of Texas, Department of Health (Richard Ratliff)

21. November 27, 1996, Council of Radiation Control Programs Directors (CRCPD) (William P. Dornsife)
22. November 27, 1996, Council on Radionuclides and Radiopharmaceuticals (Roy W. Brown)
23. December 1, 1996, Environmental Coalition on Nuclear Power (Judith H. Johnsrud)
24. December 2, 1996, SENTINEL, Amersham Corporation (Kate Roughan)
25. December 2, 1996, State of New Jersey (Jill Lipoti)
26. December 2, 1996, Yankee Atomic Electric Co. (Jane M. Grant)
27. December 2, 1996, State of Maryland, Department of the Environment (Roland G. Fletcher)
28. December 2, 1996, Entergy Operations, Inc. (Michael J. Meisner)
29. December 2, 1996, Mallinckrodt Medical, Inc. (Ashok Dhar)
30. December 2, 1996, ABB Combustion Engineering Nuclear Systems (Charles Brinkman)
31. December 2, 1996, National Mining Association (Richard Lawson)
32. December 2, 1996, Illinois Department of Nuclear Safety (Thomas W. Ortziger)
33. December 2, 1996, No Name

ORAL COMMENTS

Washington, D.C. (October 24–25, 1996) pages 23 – 43

1. OAS and CRCPD (Tom Hill)
2. Ken Peveler, IES Utilities, Inc.

Colorado Springs, CO (October 31 – November 1, 1996) pages 449 – 463

1. Entergy Operations, Inc. (Mr. England)
2. ABB Combustion Engineering Nuclear Systems (Charles Brinkman)

Chicago, IL (November 7–8, 1996) pages 17 – 39

1. Pacific Gas and Electric (Mike Angus)
2. Washington Public Power Supply Systems (Mr. Swank)
3. Commonwealth Edison (Irene Johnson)
4. Commonwealth Edison (Ken Ainger)

3.14 RESEARCH (DSI 22)

3.14.1 The Direction-Setting Issue and the Options

What should be the future role and scope of NRC's research program? The options include discontinuing the research program or modifying the role and scope of research; that is, whether and to what extent it should be confirmatory rather than exploratory. Also addressed are options dealing with the Educational Grant Program and NRC's leadership in international safety research.

Option 1: Discontinue NRC's Research Program

Option 2: Conduct Only Confirmatory Research

Option 3: Conduct Only Exploratory Research

Option 4: Conduct Both Confirmatory and Exploratory Research

Option 5: Establishing and Maintaining Core Research Capabilities

Option 6: Having University-Based Resources as a Component of the Overall NRC Research Program

Option 7: Continue To Actively Participate in International Safety Programs

3.14.2 Commission's Preliminary Views

The staff should continue with the research program, which should include elements of both confirmatory and exploratory research (Option 4) balanced in such a way that both current as well as potentially emerging issues are being addressed. This option permits response to programmatic needs as well as anticipation of future needs.

In order to develop the scope of these technical capabilities, the Office of Research (RES) should develop criteria for determining core research capabilities for Commission approval prior to going forward. Therefore, the Commission also approves Option 5 in conjunction with Option 4. It is recommended that RES be tasked with developing a set of core research capabilities for the NRC in consultation with the other program offices.

The staff should continue to support the Educational Grant Program (Option 6). Universities have and continue to serve the Commission as a significant component of its overall research program. However, this program should be reevaluated at least every 2 years to ensure that it continues to meet the Commission's policies and goals.

The staff should continue to support active participation in International Safety Programs (Option 7). The staff should ensure that these international activities and the related programs are prioritized and appropriately integrated with other NRC research efforts (Option 4) and are also properly considered in the establishment and maintenance of core research capabilities (Option 5).

There are many key questions raised in the paper (note in particular pages 12 and 16) that require much thought to resolve but whose answers will have a strong bearing on how the agency will operate in the future. Implementation of Option 4 would include development of an integrated set of recommendations to be provided for the Commission's consideration.

3.14.3 Summary of Comments

A. Significant/Important Comments Directly Affecting the Preliminary Views or the Direction-Setting Issue

In both the written comments and those provided at the stakeholders' meetings, there was general agreement that the NRC should continue a research program that involves both confirmatory and exploratory research (Option 4). One commenter (the Advisory Committee on Reactor Safeguards [ACRS]) considered the preliminary view as continuing "business as usual" and recommended a more aggressive research program, without explicitly specifying whether this approach would result in more confirmatory or exploratory research. Several commenters (e.g., Vine, Shriver) questioned the distinction between confirmatory and exploratory research. One commenter (Vine) questioned whether research should be characterized as short-term and long-term research, while another (Reed) disagreed with using short-term and long-term to refer to confirmatory and exploratory research. One commenter (the Nuclear Energy Institute [NEI]) suggested that all research be based on user requests, including exploratory research. Several commenters (e.g., ACRS, Reed) indicated that the NRC should reevaluate the current split between confirmatory and exploratory research but did not suggest an appropriate split.

Those commenters (e.g., Organization of Agreement States, Randall) that addressed the other aspects of the preliminary view also supported the need for maintaining core research capabilities (Option 5), and several commenters (e.g., NEI, Dey) specifically commented on the need for a core of technically competent staff at the NRC. There was also support for continuation of research at universities (Option 6) and support for international cooperative efforts (Option 7). One commenter (Randall) noted that Option 6 implies that the only way that the NRC can support university research is through the Educational Grant Program. This commenter correctly pointed out that research at universities, in addition to being supported through the grant program, has been supported through the normal contracting process.

A number of industry commenters (e.g., NEI, Vine) noted that although the issue paper included an option for international cooperative research (which the Commission supported in the preliminary view), it did not consider an option for cooperative research with industry. These commenters suggested that the NRC should not duplicate research performed by industry and suggested that an option should have been included to utilize or cooperate in this research instead of performing separate confirmatory research. ABB Combustion Engineering Nuclear Systems (ABB-CE) recommended that there "should be a reassessment of how the NRC and the nuclear industry can work together to cover the research needs common to both parties." Yankee Atomic Electric Company (Yankee) recommended that the NRC and the Electric Power Research Institute work together to "establish independent reviews of each other's work to reduce duplication" and that industry have a larger role in the decisions on the scope of research and in the formulation of specific research programs.

NEI specifically disagreed with the view that duplication of research is needed to maintain independence. NEI suggested that if NRC retains sufficient in-house expertise to independently verify industry research, it could include industry contractors as part of its core capabilities. NEI also commented on the duplication of research, stating that this "area of overlap represents a large and costly portion of the ongoing nuclear R&D [research and development] in the U.S." A related area for collaboration suggested by NEI was with the Department of Energy (DOE) research programs. Specifically, NEI, suggested that a joint program between the NRC and DOE in support of the former Soviet Union and Central/Eastern European countries would be more cost-effective than separate efforts.

B. Comments on Other Options

In general, the commenters did not explicitly address Options 1, 2, or 3. One commenter (Randall) who did specifically offer views regarding Options 1, 2, and 3, did not support these options. Although NEI concurred with the Commission's preliminary views on Options 4, 5, 6, and 7, when commenting on Option 1, NEI offered the view that the research program could be significantly reduced in scope and expense and suggested this view as a sub-option (discontinuing NRC's research program was not considered credible).

C. Comments on Important Omissions

In addition to those areas discussed above in which commenters noted omissions from the paper, a number of commenters (e.g., NEI, ABB-CE, McNeil, Lewis) raised other issues that deal primarily with the implementation of the research program. For example, several industry commenters (e.g., NEI, ABB-CE) raised concerns regarding the "openness of the research program." Several commenters (e.g., ABB-CE, Yankee), although supporting international cooperative research, expressed frustration regarding the inability to either participate in or obtain information from the international research programs (information is either privileged information or is obtainable only by paying to participate in the research program). Several industry commenters (e.g., Vine, Yankee) expressed frustration with their inability to obtain access to NRC research while the research was going on, thus denying the industry an opportunity to influence the direction of the research.

Several industry commenters (e.g., Yankee, ABB-CE) also raised the issue of timeliness of utilization of research results. These commenters expressed frustration with the slowness of utilizing research results to revise regulations that are too conservative and restrictive. One commenter (McNeil) questioned whether the NRC can restructure its administrative practices and management culture to permit more rapid and efficient deployment of resources to address RES objectives. Another commenter (Lewis) suggested that the NRC utilize a non-Government organization to perform the research that NRC believes is necessary. Another commenter (McPherson) proposed the establishment of a post to support the International Safety Programs, which would involve a split assignment between Europe and NRC Headquarters.

Several commenters (e.g., Randall, Silberberg) noted that they were opposed to the user offices performing research (decentralized research). One commenter (NEI) raised the question of whether the Office of Nuclear Reactor Regulation (NRR) should conduct confirmatory research as part of a regulatory analysis responsibility, or whether RES should be asked to do this work, noting that "there is significant NRR funding of contractors to do work that is similar to

either RES work or industry work in the 'confirmatory research' field." Several commenters (e.g., Yankee, Reed) raised the question of whether most rulemaking should continue to be managed by RES or be moved to the program offices. One commenter (Reed) suggested this area as a separate DSI, while others (e.g., Yankee, ABB-CE) specifically recommended that rulemaking be moved from RES.

Other commenters (e.g., ACRS, Holmes) suggested specific areas in which research should be undertaken. Several commenters (e.g., Silberberg, Reed) expressed the view that more research was needed in the area of high-level and low-level waste. Further, they recommended that this research not be under the direction of the program office but rather directed by RES. The ACRS provided a number of suggestions regarding areas for specific research.

D. Comments on Internal/External Factors

One commenter (ACRS) gave detailed comments expanding on the external and internal factors discussed in the DSI to support its recommendations regarding areas of research and the need for a more aggressive research program to address these areas. However, it did not identify any new factors or take issue with any of the factors discussed in the DSI. Another commenter (NEI), although agreeing with most of the assumptions for internal and external factors, discussed the duplication of industry research as an external factor that was not considered.

E. Comments on Staff Requirements Memorandum Questions

In its preliminary views, the Commission did not pose any additional questions for public comment.

3.14.4 List of Commenters

WRITTEN COMMENTS

1. September 19, 1996, Michael McNeil, U.S. NRC
2. October 21, 1996, Organization of Agreement States (Robert M. Quillin)
3. October 28 1996, John Randall, U.S. NRC
4. November 3, 1996, Marvin Lewis
5. November 4, 1996, State of New Hampshire, Department of Health and Human Services (Diane E. Tefft)
6. November 7, 1996, State of Mississippi, Department of Health (Robert W. Goff)
7. November 7, 1996, Organization of Agreement States (Robert M. Quillin)
8. November 14, 1996, State of Oregon, Department of Human Resources (Ray D. Paris)
9. November 14, 1996, State of South Carolina, Department of Health and Environmental Control (M.K. Batavia)

10. November 18, 1996, G.D. McPherson, U.S. NRC
11. November 19, 1996, Advisory Committee on Reactor Safeguards (T.S. Kress)
12. November 20, 1996, Moni Dey, U.S. NRC
13. November 21, 1996, State of Louisiana, Department of Environmental Quality (Ronald Wascom)
14. November 21, 1996, State of Georgia, Department of Natural Resources, (Thomas Hill)
15. November 21, 1996, State of Utah, Department of Environmental Quality, Division of Radiation Control (William Sinclair)
16. November 22, 1996, South Carolina Electric & Gas Company (Gary Taylor)
17. November 25, 1996, Framatome Technologies (John Bohart)
18. November 27, 1996, Nuclear Energy Institute (Thomas D. Ryan)
19. November 27, 1996, State of Texas, Department of Health, (Richard Ratliff)
20. November 27, 1996, Conference of Radiation Control Program Directors, Inc. (William P. Dornsife)
21. November 29, 1996, Phillip R. Reed, U.S. NRC
22. December 1, 1996, Environmental Coalition on Nuclear Power (Judith Johnsrud)
23. December 2, 1996, Thomas Dragoun, U.S. NRC
24. December 2, 1996, Mel Silberberg & Associates, (Mel Silberberg)
25. December 2, 1996, State of New Jersey, (Jill Lipoti)
26. December 2, 1996, Yankee Atomic Electric Company, (Jane M. Grant)
27. December 2, 1996, ABB Combustion Engineering Nuclear Systems (Charles Brinkman)
28. December 2, 1996, State of Illinois, Department of Nuclear Safety (Thomas Ortciger)
29. December 3, 1996, "No Name"

ORAL COMMENTS

Washington, D.C. (October 24-25, 1996) pages 1 - 37

1. Kenneth Peveler, IES Utilities
2. Gary Vine, Electric Power Research Institute (EPRI)

3. Bryce Shriver, Virginia Electric and Power Company (VEPCO)
Colorado Springs, CO (October 31–November 1, 1996) pages 197 – 221

1. Michael Holmes, Public Service Company of Colorado
2. Charles Brinkman, ABB-CE
3. Ashok Dhar, Mallinckrodt Medical, Inc.
4. John Trotter, Polestar Applied Technology

Chicago, IL (November 7–8, 1996) pages 1 – 28

1. Narinder Kaushal, Commonwealth Edison Company
2. David Swank, Washington Public Power Supply System (WPPSS)

3.15 ENHANCING REGULATORY EXCELLENCE (DSI 23)

3.15.1. Direction-Setting Issue and the Options

How can NRC enhance regulatory excellence through the maintenance of regulatory standards, rules, and requirements?

Option 1: Continue the Current Approach

Option 2: Initiate a More Proactive Approach to Improvement

3.15.2 Commission's Preliminary Views

The Commission believes that striving for regulatory excellence in all NRC functions is both desirable and necessary to maintain an effective and efficient regulatory framework in today's changing environment. Recent events have shown that we could be more proactive in identifying potential problem areas and responding appropriately. Other DSIs have focused on critical areas that involve how the regulatory process can be improved. This DSI should emphasize how the NRC can implement strategies designed to improve its own internal performance, that is, for the NRC to be proactive in making our own people and processes function with a goal of excellence. Therefore, while the Commission supports taking a proactive approach as described under option 2, including the establishment of an agency-wide senior management review group, it does not support the limited focus of the approach which emphasized making improvements in the regulatory framework such as the SRP and the license amendment process.

The Commission would support an approach under option 2 in which the focus of the effort would be broadened to include addressing how to improve the way the NRC does its job. The Commission envisions development of an implementation plan that includes, but is not necessarily limited to, the following: 1) Identified goals with milestones and clear criteria for judging success; 2) Measures to engage the work force at the grassroots level and to stimulate management and employee communications in problem solving; 3) Improvements that address elements involving all NRC regulatory areas; and 4) Improvements to the NRC's processes and management and support functions so as to enhance the efficiency and performance of the NRC staff.

3.15.3 Summary of Comments

A. Significant/Important Comments Directly Affecting the Preliminary Views or the Direction Setting Issue

In both the written comments and those presented at the stakeholder meetings, there was very broad support for NRC initiating a more proactive approach to improving its regulatory effectiveness with a goal of excellence (Option 2). Thirteen of fifteen stakeholder organizations and individuals that stated a preference in their written or oral comments favored Option 2. Supporters of Option 2 came from the external stakeholders in the power reactor and materials program areas as well as an internal stakeholder respondent and included, the Nuclear Energy Institute (NEI), the Organization of Agreement

States (OAS), almost all³ of the State respondents, three nuclear utility licensees (South Carolina Electric & Gas, Southern California Edison, Yankee Atomic Electric Company) and Moni Dey within the NRC.

There was considerable diversity in the stakeholder comments on the focus, priorities, process, and timing with which NRC should pursue regulatory excellence. Stakeholders expressed a range of meanings or areas of specific interest for achieving regulatory excellence. An extensive number of commenters emphasized areas and activities that involved direct, rather than indirect, regulatory impact. For example, most stakeholders characterized enhancing regulatory excellence as applying either risk insights to NRC's framework of regulations, standards, and guidance as a means of changing or eliminating requirements in areas of little environmental or public risk, or a performance-based approach to revise requirements that are too restrictive, or both. However, comments from Public Citizen indicated that recent changes in regulations made in connection with the Marginal-to-Safety Program amounted to industry deregulation rather than the pursuit of regulatory excellence. NEI indicated that achieving quality and consistency in implementing agency policies at all levels and across organizations were important elements in enhancing regulatory effectiveness. In this regard, an NEI commenter suggested that NRC consider regulatory skills training (in addition to technical skills training) for the NRC staff at all levels to enhance staff knowledge, skills, abilities and consistency in regulatory oversight activities. NEI and OAS commented that NRC resource expenditures and activity (e.g., inspection) levels should be commensurate with the degree of risk associated with the issues. NEI's comments were endorsed by Entergy and South Carolina Electric & Gas and OAS's comments were endorsed by the responding Agreement States.

Most commenters that explicitly expressed a view on the scope of the more proactive approach to improvement, agreed that the approach should not be limited to the areas described in the issue paper but should be more broadly scoped to include all agency programs and functions. However, OAS, with the endorsement of the responding Agreement States, felt that the more proactive approach should be phased in over an extended period so that cumulative changes resulting from the actions taken by the staff in connection with DSI 23 and the other DSIs do not introduce a destabilizing organizational effect on the agency.

Many commenters (including OAS with Agreement States endorsement, Conference of Radiation Control Program Directors, ABB-CE) urged that knowledgeable external stakeholder (e.g., the public, Agreement States, vendors) representatives participate in the NRC's screening and assessment process, in order that they might help in identifying regulatory program elements for priority evaluation, as well as in providing specific ideas for enhancing regulatory effectiveness. Several internal commenters (including NTEU, Richard Barkley, Moni Dey) also supported the Commission's preliminary view that the work force should be engaged and empowered at the grassroots level to assist in identifying areas, ideas, and actions for improvement. However, Barry Mendelsohn questioned how "another 'agency-wide senior management review group' will make a difference in regulatory effectiveness."

³ The State of Washington commenter preferred Option 1. The eight other Agreement States that responded preferred Option 2.

B. Comments on Other Options

The State of Washington favored Option 1 on the basis of the view that implementation of Option 2 would come at the same time as numerous other change activities from the staff actions on this and other DSIs and could result in "too much, too fast." Additionally, one internal stakeholder (John Davidson) indicated that NRC's periodic program assessments, self-initiated reviews, response to industry initiatives and external events, and other internal review programs already provide a wide range of approaches that move the agency toward regulatory excellence.

C. Comments on Important Omissions

NEI suggested that the NRC consider having another Federal agency, such as the Environmental Protection Agency or the Federal Aviation Administration, conduct a peer review of NRC's processes. The commenter for Supply System suggested that the NRC consider baselining itself against a foreign organization performing the same function as the NRC. In this regard, the Swedish Nuclear Power Inspectorate (SKI) commenter stated that an internal "QA system" for the regulatory body, designed according to modern industry principles, was an important element in monitoring the quality and efficiency of regulatory processes.

A representative of the NRC's Subcommittee on Managing Diversity, responding to the concern identified in the strategic issue paper that initiatives aimed at streamlining and regulatory efficiency might undermine staff safety vigilance, recommended that an agency-wide assessment of NRC's organizational culture be conducted for the purpose of (1) characterizing the current culture and (2) identifying culture changes that might be needed as a result of streamlining. ABB-CE commented that NRC contractors should also be considered in the scope of initiatives for enhancing regulatory excellence.

NEI's written comments contained a number of additional aspects that it characterized as significant omissions from the issue paper. NEI (and YAEC) specifically wrote that to achieve regulatory excellence, NRC would have to adopt a consistent, coherent, and objective safety standard for adequate protection in order for the Agency to objectively evaluate the need for additional measures. Further, NEI stated that without such a baseline standard, it would be impossible for the NRC to determine whether individual NRC activities were contributing to the Agency's mission, or were distracting staff and licensee personnel from activities needed to support adequate safety. Such a baseline (e.g., applying existing safety goals) would help focus NRC's activities and adjust (lessen) the response to events and issues of low significance. NEI also stated that the NRC lacks agency performance measures for evaluating its own activities and thereby spends significant resources on activities of low safety significance. Accordingly, metrics were needed to measure the agency's own effectiveness. In this regard, SKI stated in its written comments that indicators for regulatory body performance were "a must."

D. Comments on Internal/External Factors

Several respondents took issue with the concern that changes directed at regulatory efficiency, organizational streamlining and reducing regulatory burden in response to Federal Government policy and budgetary considerations might be misinterpreted by the staff as a basis for relaxing safety vigilance.

A common theme of the commenters was that highly successful organizations are both effective and efficient in carrying out their mission.

The internal and external factors description of the issue paper indicates that licensees have not emphasized changes specifically focused on enhancing regulatory effectiveness. However, the comments provided in both the stakeholder meetings and in writing clearly indicate that there is broad support among external stakeholders, including the regulated industry, for NRC actions aimed at improving its regulatory effectiveness.

E. Comments on Staff Requirements Memorandum Questions

In its preliminary views, the Commission did not pose any additional questions for public comment.

3.15.4. List of Commenters

WRITTEN COMMENTS

1. October 21, 1996, Organization of Agreement States (Robert Quillin)
2. October 25, 1996, Barry Mendelsohn, USNRC
3. October 28, 1996, State of Washington (Terry Frazee)
4. October 29, 1996, Richard Barkley, USNRC
5. November 3, 1996, Marvin Lewis, Philadelphia, Pennsylvania
6. November 4, 1996, State of New Hampshire, Department of Health and Human Services (Diane Tefft)
7. November 7, 1996, State of Mississippi, Department of Health (Robert W. Goff)
8. November 7, 1996, Organization of Agreement States (Robert M. Quillin)
9. November 13, 1996, Roxanne Summers, USNRC Subcommittee on Managing Diversity
10. November 14, 1996, State of Oregon, Department of Human Resources (Ray D. Paris)
11. November 14, 1996, State of South Carolina, Department of Health and Environmental Control (M.K. Batavia)
12. November 20, 1996, Moni Dey, USNRC
13. November 21, 1996, State of Louisiana, Department of Environmental Quality (Ronald Wascom)
14. November 21, 1996, State of Georgia, Department of Natural Resources (Thomas E. Hill)

15. November 21, 1996, State of Utah, Department of Environmental Quality (William J. Sinclair)
16. November 22, 1996, South Carolina Electric and Gas Company (Gary Taylor)
17. November 26, 1996, Kennecott Uranium Company (Oscar Paulson)
18. November 27, 1996, Nuclear Energy Institute (Thomas D. Ryan)
19. November 27, 1996, State of Texas, Department of Health (Richard Ratliff)
20. November 27, 1996, Conference of Radiation Control Program Directors (William P. Dornsife)
21. December 1, 1996, Environmental Coalition on Nuclear Power (Judith H. Johnsrud)
22. December 2, 1996, Swedish Nuclear Power Inspectorate (Lars Hogberg)
23. December 2, 1996, Barry Mendelsohn, USNRC
24. December 2, 1996, Wyoming Mining Association (Marion Loomis)
25. December 2, 1996, State of New Jersey (Jill Lipoti)
26. December 2, 1996, Yankee Atomic Electric Company (Jane Grant)
27. December 2, 1996, Entergy Operations (Michael J. Meisner)
28. December 2, 1996, ABB-Combustion Engineering Nuclear Systems (Charles B. Brinkman)
29. December 2, 1996, Non-Destructive Testing Management (R.D. Dicharry)
30. December 3, 1996, Public Citizen's Critical Mass Energy Project (James Riccio)
31. December 4, 1996, John Davidson, USNRC
32. December 6, 1996, James Creed, USNRC

ORAL COMMENTS

Washington, D.C. (October 24-25, 1996) pages 104 - 115

1. James Riccio, Public Citizen's Critical Energy Project
2. Richard Ratliff, Organization of Agreement States
3. Scott Innett, affiliation unknown
4. Dale Yielding, National Treasury Employees Union
5. Judy Johnsrud, Environmental Coalition on Nuclear Power

Colorado Springs, CO (October 31– November 1, 1996) pages 121 – 136

1. William Sinclair, Organization of Agreement States
2. Steven Floyd, Nuclear Energy Institute
3. Tom Tipton, Nuclear Energy Institute
4. Roger Walker, Texas Utilities
5. Charles Brinkman, ABB-CE
6. Les England, Entergy Operations
7. Kenneth Weaver, State of Colorado

Chicago, IL (November 7–8, 1996) pages 113 – 131

1. Dave Swank, Supply System
2. Steve Collins, Organization of Agreement States
3. Derek Mercurio, Southern California Edison
4. Ron Fraass, State of Kansas
5. Thomas Tipton, Nuclear Energy Institute
6. Glen Kelly, USNRC
7. Kristin Erickson, Michigan State University
8. Paul Farron, Wisconsin Electric

3.16 POWER REACTOR DECOMMISSIONING (DSI 24)

3.16.1 The Direction-Setting Issue and the Options

What should the NRC's strategy be for regulating decommissioning activities at power reactor sites?

Option 1: Continue Current Direction and Approaches

Option 2: Pursue Current Direction and Approaches More Aggressively

Option 3: Proceed More Slowly Implementing Current Direction and Approaches

3.16.2 Commission's Preliminary Views

From the options presented, Option 1: Continue the current direction and approach is the recommended option. Implementation guidance in pursuing this option should be expanded to explore more innovative approaches in line with the current Commission strategy in this area.

The paper does provide a good discussion of rulemaking currently underway that outline the current Commission strategy in the power reactor decommissioning area: 1) that there should be assurance that decommissioning will be conducted in a safe and timely manner, 2) that adequate licensee funds will be available for this purpose, and 3) recognition that risks associated with decommissioning reactor facilities are not the same as for operating reactor facilities.

In pursuing the current pace of rulemaking, the staff, as stated above, should consider new and innovative regulatory approaches. Examples of possible approaches that might be considered are:

1. Transfer of nuclear power plants to Agreement State control after fuel has been put into dry storage or has been removed from the Part 50 site.
2. Placing a resident site inspector during all phases of decommissioning, only during specific phases of decommissioning, or not at all.
3. Having NRC take an enhanced performance-oriented approach by reducing oversight and performing a radiological assessment of the site when it is ready to be released.

3.16.3 Summary of Comments

A. Significant/Important Comments Directly Affecting the Preliminary Views or the Direction-Setting Issue

In both written comments and comments provided at the stockholders' meetings, most of the commenters did not support the Commission's preliminary view of adopting Option 1. Rather, they strongly encouraged the Commission to adopt Option 2, Pursue Current Direction and Approaches More Aggressively because they would like to see the decommissioning issues resolved as quickly as possible. Thus, both cutting down the costs of decommissioning for licensees

and saving some NRC resources related to reviewing the licensing actions. Commenters supported predictability and stability in the regulatory process for decommissioning. However, with respect to the single issue of radiological criteria for decommissioning, the Organization of Agreement States (OAS) recommended that NRC select Option 3 and that the NRC move more slowly in implementing its current rulemaking approach for the site release criteria. This approach received endorsement from the States of New Hampshire, Mississippi, South Carolina, Texas, Illinois, and Utah, and ABB Combustion Engineering Nuclear Systems (ABB-CE).

The Commission's preliminary views regarding consideration of new and innovative regulatory approaches received overwhelming support from the commenters. However, a possible approach, transfer of nuclear power plants to Agreement State control after fuel has been put into dry storage or has been removed from the Part 50 site and assigning a resident site inspector during all phases of decommissioning or not at all was rejected. The presence of a site inspector during specific phases of decommissioning was supported by the Nuclear Energy Institute (NEI) and other nuclear industry participants. The concept of NRC's taking an enhanced performance-oriented approach by reducing oversight and performing a radiological assessment of the site when it is ready to be released was supported by the large majority of the commenters (regulatory bodies and the industry, including NEI).

Option 1

Most commenters did not support the Commission's preliminary view of adopting Option 1. The commenters would like the NRC to make the final decommissioning requirements known to the public and the industry as soon as possible. The commenters like to see the Commission give high priority to the rulemaking effort to eliminate the uncertainties in the decommissioning area because decommissioning cost recovery mechanisms have to be built into rate-base structure. Therefore, NRC should combine all the decommissioning-related rulemakings into one package instead of three to five separate rulemakings. The industry and the commenters generally did not want to see the status quo. As the State of Georgia pointed out, "the examples of innovative regulatory approaches that the Commission suggests could change the direction dramatically," are not consistent with the status quo. Yankee Atomic Electric Company (YAEC) agreed with NEI that the Commission's preliminary views (to continue the current direction and approach) fail to respond to the current dynamic environment of decommissioning and the need to afford licensees every opportunity to use their finite decommissioning monies wisely. ABB-CE supported Option 1 with a caveat that additional attention must be given to seeking innovative and less burdensome regulatory approaches and suggested the NRC consider adopting a risk-based approach that would impose a level of regulation commensurate with the degree of risk to the health and safety of the general public.

B. Comments on Other Options

Option 2

Most commenters supported this option. Public Service Company of Colorado (PSC), endorsed the idea of NRC's moving more aggressively to solve the rulemaking issues in order to both cut down the costs of decommissioning for licensees and save the NRC's resources used to conduct technical reviews. PSC stated that dual regulation (Environmental Protection Agency [EPA], NRC)

uncertainty must be eliminated in an expeditious manner. Commonwealth Edison suggested that rulemaking efforts in progress affecting the direction-setting issue (DSI) should be brought to closure as soon as possible so that all decommissioning requirements are known and stable. NEI supported this option in handling the rulemaking activities. NEI suggested that the NRC should apply the same performance-based regulatory approaches that were applied to the maintenance rule. This new approach to decommissioning may result in a "win-win" paradigm for both the NRC and the licensee. NEI also suggested that resources needed for these activities be made available from the curtailment of other NRC activities. NEI comments were endorsed by South Carolina Electric and Gas Company (SCE&G). Detroit Edison (DE) recommended that the NRC should plan for more than 3-5 power reactors to be shut down in the next 5 years and should allocate resources accordingly. YAEAC endorsed this option and noted that all initiatives should carefully consider their impact on the economic viability of operating plants and on current decommissioning facilities so as to complete decommissioning safely and efficiently.

Mr. Floyd supported Option 2 and stated that as industry moves toward a deregulated embarkment, it must soon have a good understanding of what the final set of requirements are going to be and what the final set of implementation costs for those requirements is going to be. These requirements and costs will greatly influence the recovery mechanisms for decommissioning costs which will be a part of the rate structure ultimately. He recommended that the NRC consider combining all the rulemaking efforts related to decommissioning. The State of Oregon Office of Energy also supported Option 2 in the area of rulemaking activities related to decommissioning.

DE believes the NRC should more aggressively pursue establishing radiological release criteria and more realistic guidance for final surveys. This uncertainty created difficulty in decision-making and increased costs for decommissioning. Furthermore, costs associated with a final survey have become significantly more than NRC-sponsored and other cost studies predict.

Option 3

Most of the commenters did not support this option. OAS recommended this option only for the site release criteria rulemaking. The OAS recommended that the NRC move slowly in finalizing the current proposed rule and that it conduct a study of this issue independent of the EPA. This OAS comment was endorsed by the States of New Hampshire, Mississippi, Illinois, Utah, and Texas. Several other commenters supported this idea. The Illinois Department of Nuclear Safety was against the EPA standard and requested NRC to provide flexibility in decommissioning; it also stated that overly restrictive standards may bankrupt the licensee. A private citizen stated that there is no technical basis for selective 15-millirem-per-year as a site release criterion for decommissioning. This 'statement' was endorsed by the States of Texas and Illinois. Commenters (Halmes, Tipton, and Floyd) also indicated that it is essential to make completed decommissioning actions final actions so that licensees are not forced to remediate sites in accordance with future, more restrictive criteria. The Environmental Coalition on Nuclear Power supported the option but at the same time recommended that NRC move rapidly enough so that a restructured utility industry will not be allowed to walk away from its obligations.

Mr. Holmes made a point that Shoreham and Fort St. Vrain were both relatively clean plants to begin with, and both of the plants are spending somewhere in the neighborhood of \$10 to 20 million to confirm that the radiological criteria they had to meet were, in fact, met. NRC cost estimates prepared by the Pacific Northwest National Laboratory (PNL) project estimate this cost to be \$1 to 2 million and that estimate is in the wrong order of magnitude as far as reality versus the regulatory anticipation is concerned. The questions are, "What is a reasonable amount of inspection; what is the final acceptance criteria?" He also stated that licensees are trying to find 5 micro-R per hour, in a setting in which that naturally occurring background varies between 5 and 30 micro-R per hour; it is not realistic.

C. Comments on Important Omissions

Dade Moeller & Associates, Inc., recommended that the Commission implement the "open-market trading rule" for the cleanup of various nuclear facilities. He expressed his thoughts in a paper, "Innovative Policies for Radioactive Waste Management and the Cleanup of Contaminated Nuclear Facilities." Marvin Lewis recommended that NRC develop a DSI on shutting down the expensive and counter productive nuclear fuel cycle, in plain English. He also recommended that NRC use productive methods to build public trust. Mr. Crites suggested combining DSI 9 and DSI 24 and retitling it. Otherwise, Options 2, 3, and 5 from DSI 9 should be made part of DSI 24. He also pointed out that non-power reactors are not addressed in DSI 9 or DSI 24.

NEI stated that economic problems associated with the outdated generic funding formula found in 10 CFR 50.75(c) requires utilities to fund decommissioning funds at unrealistic levels to ensure compliance. NEI recommended that site-specific funding should be addressed. NEI recommended that rulemakings be considered for dry storage of greater-than-class C waste on site. The licensee for the Trojan plant endorsed NEI's comment on Class C waste. NEI also recommended that NRC increase its dialogue with the Federal Energy Regulatory Commission (FERC) regarding proposed stranded cost recovery mechanisms included in FERC Orders 888 and 889.

An anonymous commenter recommended that the Commission focus on an organizational structure that distributes functional responsibility among the program offices and the regions to ensure the success of the decommissioning program and DSI 24. Anonymous commenter recommended the centralization of the decommissioning function at NRC headquarters under the Office of Nuclear Reactor Regulation (NRR) to improve the effectiveness of the decommissioning program. This individual also recommended the separation of functional responsibility for overseeing the decommissioning activities between the Office of Nuclear Material Safety and Safeguards (NMSS) and NRR be properly stated so that NRR would be responsible for reactors and related activities and NMSS responsible for material facilities, as designed by the Commission. The anonymous commenter recommended that NRC request the Congress to pass legislation that exempts the nuclear facilities regulated by the NRC from the EPA regulation in the area of radiation standards. This approach should eliminate the uncertainty of dual regulations.

YAEC challenged the NRC's estimate "that three to five power reactors will cease operation in next 5 years" and that "resources for this increased workload should be offset by the decrease in the operating reactors' workload caused by the plants that shut down." YAEC states that NRC's estimate could be unduly optimistic, given existing issues for decommissioning facilities and

increasing NRC initiatives imposed on operating plants. These activities have created such a significant operating reactor workload for the NRC (and licensees) that even if three to five plants were to shut down, the commenters do not see how any of the resources assigned to those plants could be made available for decommissioning of the same plants. Commenters pointed out that it is important that NRC dedicate sufficient resources to ensure that definite decommissioning funds can be focused on important issues, that is, remediating the site safely and efficiently. ABB-CE stated that assuming that three to five reactors will cease operation in the next 5 years and have to be decommissioned probably underestimates the potential size of the problem.

Florida Power Corporation recommended that entombment or long term assured storage beyond 60 years be allowed as a decommissioning option. The licensee for the Trojan plant commented on 10 CFR Part 71 interpretation of the current regulations was overly restrictive in the area of packaging and transportation of large reactor component Type B packages. Clear guidance by the NRC should ensure lower exposure, conserve decommissioning funds, and improve public safety.

DE recommended that decommissioning rulemaking needs to take into account that all shut down reactors are not large, recently shut down plants. There are power reactors that have shut down for more than 20 years and that last operated in a different regulatory climate. Recent rulemaking attempts to standardize the requirements for future shutdowns are helpful, but the impact on previously shut down plants is not recognized or addressed; staffing is an example.

D. Comments on Internal/External Factors

Janice Stevens, an independent consultant suggested that NRC can certainly learn a lot from the experience of European countries in developing a realistic approach to estimating costs and technical approaches for decommissioning power reactors. She indicated that the NRC should look into international experience in developing this decommissioning strategy. Jane Fleming commented on the issue of deregulation with two questions: (1) whether the decommissioning funds follow the facility and (2) whether the operating cost to care for the spent fuel collected by the Department of Energy (DOE) will be refunded to the original owners or to the new owners since the title of the fuel will be transferred to the new owners. It was indicated that the NRC should address decommissioning funding costs in terms of the deregulation of industry.

NEI stated that an important external factor not considered is how State Public Utility Commissions handle decommissioning costs in the transition to competition. The treatment of these costs could have a dramatic effect on the timing of a decision to cease operations permanently. Jill Lipoti stated that if there are more plants that are shut down prematurely as a result of deregulation, States are particularly concerned about a shortfall of decommissioning funds. ABB-CE commented that deregulation will potentially compromise the ability of some utilities to set aside funding for decommissioning.

DE commented that decommissioning funding is becoming extremely complex, with requirements being imposed by State Public Utility Commissions, FERC, Securities and Exchange Commission (SEC), and Financial Accounting Studies

Board (FASB), as well as the NRC. It was indicated that the NRC should be careful to not add further complexity without achieving a true benefit.

E. Comments on Staff Requirements Memorandum Questions

In its preliminary view, the Commission requested specific comments on three issues. Those issues and the comments provided are listed below:

1. Transfer of nuclear power plants to Agreement State control after fuel has been put into dry storage or has been removed from the Part 50 site.

In general, this issue did not receive any endorsement from the States. The Illinois Department of Nuclear Safety did not support the idea of transferring nuclear power plants to Agreement State control and also stated that the plant was sited, constructed, licensed, and operated without the regulatory involvement of an Agreement State and it should be decommissioned without State regulatory involvement. The OAS endorsed the State of Illinois comments and stated that NRC should have States involved in the process of rulemaking much earlier than issuance of the draft rule. The State of Ohio also endorsed the State of Illinois comments and stated that the NRC should transfer reactors and facilities to the EPA instead of to the States. Tom Hill stated that transferring reactors to the States for regulating decommissioning is a bad idea, "don't do it." This thought was shared by the State of New Hampshire.

The State of Louisiana, an Agreement State, did not find this approach acceptable because of the additional resources that would be required if this approach could be viewed as an unfunded mandate. The State of Georgia, NEI, J. Lipoti, the State of Texas, and the Conference of Radiation Control Program Directors, Inc., did not approve the idea of transferring decommissioning power reactors to the Agreement States. There was general agreement among the states that if the Commission selects this approach, the States should be invited to take part in the rulemaking discussions before the regulations are developed.

The State of Florida's Bureau of Radiation Control commented that under certain circumstances they would support this approach. However, they stated that this should not be a regulatory requirement that is mandated to the states, but rather, it should be an option that should be available if it is determined that it would be beneficial in the decommissioning of a power reactor.

2. Placing a resident site inspector during all phases of decommissioning, only during specific phases of decommissioning, or not at all.

Commenters generally rejected the idea of placing resident site inspectors on site during all phases of decommissioning and endorsed the idea of having a resident site inspector on an as-needed basis for specific phases of decommissioning.

Mr. Huston stated that decommissioning activities at reactor sites are not high technology nor are they high risk, especially in comparison with reactor operations; therefore, it is not appropriate to devote resources to decommissioning in terms of a full-time resident inspector. It was also stated that the NRC should have general oversight of the decommissioning process and implement a performance-oriented approach that observes an

established standard for releasing the site. Certainly communication is needed, whether there is a resident inspector or not.

NEI stated that appropriate oversight has been provided by the NRC, and that resident inspectors would be an unnecessary added cost that is currently not budgeted in decommissioning cost estimates.

3. Having NRC take an enhanced performance-oriented approach by reducing oversight and performing a radiological assessment of the site when it is ready to be released.

This idea elicited significant comments and was generally supported. Kristin Erickson, Michigan State University, supported the idea of performance-based regulations and risk-based criteria. She believes that the industry is overregulated in this area by the NRC/EPA. Mr. Holmes suggested that non-reactor facilities should follow the reactor facility decommissioning rule. Steve Collins, commenting as a private citizen, recommended that materials facilities and reactor facilities be treated in a similar manner. It was indicated that the NRC should not review the decommissioning plan and still require the licensee to make final surveys to demonstrate that it meets the site release criteria. It was also indicated that confirmatory surveys may or may not be performed by the NRC, depending on the situation. Henry Morton, a technical consultant, supported the idea of no decommissioning plan reviews by the NRC, just the final survey. Mr. Tipton asked what threshold would the licensee use to go back and reopen the issue? Oregon State, Office of Energy, expressed its concern regarding NRC's overregulation of transport of reactor vessels and other large components. It was indicated that licensees should not be subject to review as if they were transporting casks used to ship discrete sources. It was also indicated that these new approaches are supported by recent industry experience and should be implemented without undue delay. DOE comments were endorsed by the State of Oregon and the licensee for the Trojan plant. Ms. Erickson, Michigan State University, stated that licensees are overregulated by the NRC, performance-based/risk-based regulations should be developed and the licensees should be freed from the tedious reviews and approvals by the NRC.

NEI stated that an enhanced performance-oriented approach would be in the best interests of both the NRC and licensees. NEI recommended that NRC explore one integrated rulemaking with a scope commensurate with the reduced risk from decommissioning relative to power operation. NEI also stated that several of the issues related to plant decommissioning are intertwined and their resolution through rulemaking should proceed concurrently rather than in series. It was indicated that the decommissioning issues are changing rapidly and the time restraints of the rulemaking process utilized by the NRC can fall behind the industry's changing economic environment.

YAEC stated that the Commission's proposed new and innovative performance-based, risk-informed regulatory approach to decommissioning required detailed analysis. It was indicated that decommissioning funds are limited, and, therefore, it is critical that NRC use a performance-based, risk-informed approach to decommissioning. Commonwealth Edison supported enhanced performance-oriented approach.

3.16.4 List of Commenters

WRITTEN COMMENTS

1. October 18, 1996, Dade Moeller & Associates, Inc. (Dade W. Moeller)
2. October 29, 1996, NRC, Project Engineer, Region 1 (Richard S. Barkley)
3. November 3, 1996, Member of the Public (Marvin Lewis)
4. November 4, 1996, State of New Hampshire, Bureau of Radiological Health Administration (Diane E. Tafft)
5. November 5, 1996, State of Michigan, Department of Environmental Quality (Flint C. Watt)
6. November 7, 1996, Mississippi State Department of Health (Robert W. Goff)
7. November 7, 1996, Organization of Agreement States (Robert M. Quillin)
8. November 13, 1996, Oregon Office of Energy (David Stewart-Smith)
9. November 14, 1996, Oregon Department of Human Resources (Ray D. Paris)
10. November 14, 1996, South Carolina, Department of Health and Environmental Control (M. K. Batavia)
11. November 20, 1996, Florida Department of Health & Rehabilitative Services (William A. Passetti)
12. November 21, 1996, State of Louisiana, Department of Environmental Quality (Ronald Wascom)
13. November 21, 1996, Georgia Department of Natural Resources (Thomas E. Hill)
14. November 21, 1996, State of Utah, Department of Environmental Quality (William J. Sinclair)
15. November 22, 1996, South Carolina Electric & Gas Company (Gary J. Taylor)
16. November 25, 1996, Westinghouse Electric Corporation, Energy Systems (N. J. Liparulo)
17. November 27, 1996, Nuclear Energy Institute (Thomas P. Ryan)
18. November 27, 1996, Texas Department of Health (Richard A. Ratliff)
19. November 27, 1996, Conference of Radiation Control Program Directors Inc. (William P. Dornsife)
20. November 27, 1996, Trojan Nuclear Plant (Stephen M. Quennoz)

21. November 27, 1996, Detroit Edison (Douglas R. Gipson)
22. December 1, 1996, Environmental Coalition on Nuclear Power (Judith H. Johnsrud)
23. December 2, 1996, Florida Power Corporation (Steven M. Garry)
24. December 2, 1996, Individual from New Jersey (Jill Lipoti)
25. December 2, 1996, Yankee Atomic Electric Company (Jane M. Grant)
26. December 2, 1996, ABB Combustion Engineering Nuclear Systems (Charles B. Brinkman)
27. December 2, 1996, State of Illinois, Department of Nuclear Safety (Thomas W. Ortziger)
28. December 3, 1996, No Name

ORAL COMMENTS

Washington, DC (October 24-25, 1996) pages 70 - 92

1. Tom Crites, Gaithersburg, MD (LLNL)
2. Janice Stevens, Independent Consultant
3. Jane Fleming, Member of the Public (NNSN D.N.A.C.)
4. Alan Nelson, NEI
5. Tom Hill, Georgia Department of Natural Resources, Radioactive Material Program
6. Steve Collins, Member of the Public
7. Henry Morton, Technical Consultant

Colorado Springs, CO (October 31-November 1, 1996) pages 323 - 340

1. Mike Holmes, Public Service Company of Colorado
2. Tom Tipton (NEI)
3. Steve Floyd, (NEI)
4. Ken Weaver

Chicago, IL (November 7-8, 1996) pages 68 - 89

1. Gordon Appel, Illinois Department of Nuclear Safety
2. Steve Collins, Organization of Agreement States
3. Steve Crockett, U.S. NRC

4. Jim Williams, State of Ohio
5. Dave Swank, Washington Public Power
6. Kristin Erickson, Michigan State University
7. Ken Anger, Commonwealth Edison
8. Roger Huston, NEI

3.17 GENERAL COMMENTS

In addition to specific comments on the sixteen DSI's, general comments were received on the overall strategic assessment and rebaselining initiative. The general focus of these comments were on three aspects of the effort. The three areas were: (1) the schedule for soliciting and processing stakeholder views, (2) the completeness of the assessment and (3) comments on segments of the Strategic Plan framework document. A discussion of each of these three areas follows:

A number of commenters (NEI, ENVIROCARE, NJ, SKI, CORAR) commended and supported the NRC for undertaking this effort to determine the strategies and direction the agency should take to meet current and future challenges. One commenter (NJ) stated that they viewed the "NRC's strategic assessment and rebaselining project as a part of a cultural shift for the agency. there seems to be a shift to a more inclusive environment, where stakeholders can make a contribution to the direction of the agency." Another commenter, (Envirocare) stated that "It is helpful to the public and regulated industry to have an agency such as NRC that is willing to engage in a critical assessment. NRC's review is further enhanced by the Agency's willingness to allow interested stakeholders to review the analysis and provide additional input".

Conversely, several commenters (Envirocare, NEI, TN, Nevada Nuclear Waste Task Force, Incorp.) expressed the view that the process should have involved the public, industry and the states earlier in the process. In the opinion of one commenter (TN,) in the very initial stage of Phase I, a meeting or workshop should have been convened where the staff members of the public and representatives of the public interest organizations could meet and discuss priorities, expectations, assumptions goals and other related topics.

Two commenters (League of Women Voters, Environmental Coalition of Nuclear Power) provided comments on the public meetings. The League of Women Voters expressed the view that NRC's efforts to notify stakeholders was insufficient. The Environmental Coalition of Nuclear Power noted that the location of the meetings denied a section of the nation, particularly those on the West Coast a realistic opportunity to attend any of the three public meetings that were held in Washington, DC, Chicago, IL and Colorado Springs, Co.

Another schedule issue was the amount of time that was provided to stakeholders to review and consider the direction-setting issues. A number of commenters indicated that there was very limited time to compile comments on an extensive amount of material. A few commenters stated that the comment period was too brief and requested for extensions of the comment period. These requests for extensions varied in length of time from thirty days to ninety days.

In its written comments, NEI stated that insufficient review time would reduce the effectiveness of the stakeholder comment process. The NEI also stated that the schedule for NRC staff to assess and forward the comments to the Commission for consideration within three weeks after the comment deadline may make it difficult for NRC management to consider the variety and volume of public comments that are likely to be received.

The second area that a number of comments were received on was the methodology used and the completeness of the strategic assessment documents. Several commenters stated that the review was not an unbiased full assessment. One commenter (TN) indicated that the information presented appeared to be developed to justify the continuation of the NRC activities as currently constituted. Another commenter expressed a similar view by stating that the "Effort appears to be constrained so that only select options are presented. In many cases those options are analyzed or presented in a manner that does not allow a fair unbiased assessment of one option versus other options".

A commenter (Walker) at a stakeholder meeting suggested that it would have been useful for the NRC to go to its peers, such as the regulatory agencies in the Western European nations, Japan, et cetera, to identify common activities as well as differences, this review would facilitate identification of the best practices from other regulatory organizations. The NRC could then assimilate them into its regulatory process and as a result increase efficiency and effectiveness.

Several comments were received regarding the eight DSI's that were not released for public comment. One commenter, (New York State Department of Labor) noted that several of the DSI's that were not released for public comment appeared to be relevant to the Agreement States programs and should be shared with the states. Another commenter (Environmental Coalition on Nuclear Power) stated that issues relating to NRC Management Philosophy, NRC's Internal Management and Organization, Information Resources Management Planning, Staffing and Core Capabilities and Independent Oversight are all of great importance to the overall functioning of the agency. This commenter said the decision not to release the papers is contrary to NRC policy and public interest. Finally, this commenter said these subject areas are "matters of health, safety, present and future environmental quality and appropriate, defensible expenditures of public tax funds."

Another commenter, (NRC staff) stated that the Management and Organization, and Staffing and Core Capabilities issue papers should be made available for comment by staff. This commenter said that staff input might provide something useful regarding how the agency will continue to perform existing functions, and probably assume additional responsibilities with expected high levels of attrition due to retirements and downsizing which may accelerate the loss of vital technical expertise and invaluable experience.

A number of comments were related to omissions of NRC functional areas and specific regulatory activities. For example, NRC staff noted that there is no direction-setting issue addressing the nuclear fuel cycle or related facilities. Another NRC staff commenter stated that the absence of nuclear safeguards throughout the documentation was a serious omission. This commenter noted that safeguards is relevant to several of the direction setting issues. The commenter concluded that, "Additionally the documentation did not include the issue of safeguards as it relates to nonproliferation concerns, security of radioactive materials as an international concern or international trafficking in stolen nuclear materials".

A comment that reflected the views of a number of NRC regional staff members stated that two critical issues facing the NRC were not addressed. First, the commenter noted that with the advent of deregulation of the electrical power industry that it is unclear how many nuclear sites will be able to survive in a regulated marketplace. Therefore, the potential for shutdown of a

significant number of power reactors needs to be addressed. Second, the comments from NRC staff indicated that funding for the Office of Nuclear Material Safety and Safeguards activities needs to be addressed in the context that NRC will have fewer materials licensees as more states become Agreement States. The commenter, concluded that these material licensees and power reactors should not be required to pay for maintaining a national program for materials, including training and oversight of Agreement states and believe that the Commission needs to ask Congress to fund this program.

Another NRC commenter, noted that the function, organization and products of the Office of Investigations was not addressed. A member of the Atomic Safety and Licensing Board Panel (ASLBP) noted that the papers did not address the ASLBP functions and role within the Commission.

External stakeholders provided comments on omissions as well. Two commenters (NEI, NUBARG) encouraged the NRC to subject the enforcement policy to the same type of review that has been applied to other programs in many of the DSI's.

Another commenter (NUBARG) suggested that NRC reexamine the regulatory approval process that will apply to utility reorganization or restructuring initiatives. This commenter also noted that since the 1970s the NRC licensing function has declined and suggested that NRC reexamine the structure and functions of the Staff offices that were developed under the Energy Reorganization Act of 1974, when the NRC was heavily engaged in licensing new plants.

The third area on which stakeholders commented on was related to the strategic framework of the NRC's Strategic Plan. There were a limited number of comments on various components of the framework document that included a mission statement, a vision statement, a set of agency-wide goals, the strategic arenas and values. Two commenters, (CORAR and Lewis) provided comments on the mission, vision, goals, principles of good regulation, safety philosophy and organizational values.

One commenter, (CORAR) recommended a revision to the terms used to express NRC's intent. This commenter stated that: "The regulatory role is to assure that licensees exercise their responsibility for safety and protection. This could be expressed in the mission statement by replacing "ensure" with "assure" and by replacing "protect" with "assure the protection of." Additionally, this commenter stated that the NRC should revise the mission statement to reflect that the NRC is also responsible to assure that occupational safety and protection is adequate at licensee facilities.

With respect to the vision statement, this same commenter (CORAR) suggested changes to the terms used to express NRC intent. This commenter recommended two revisions to the statement. First, the phrase "Commission actions enable the safe use of radioactive materials" should be replaced to articulate that it's the responsibility of the licensee to implement procedures that enable the safe use of radioactive material. The NRC's role is to assure that licensee responsibility is exercised. Second, the choice of "efficiently" in the vision statement should be reconsidered. The commenter recommends "that while efficiency is a worthy objective, it should be subordinate to the use of radioactive materials being effective and for the net benefit of society. The vision statement might better reflect the NRC intent if "efficiently" were replaced by "effectively".

A few comments were received on the Goals, specifically Goal b: "That its regulations are consistent with other federal regulations, nationally and internationally recognized standards, and state regulations to the greatest extent possible."

One commenter, (NRC staff) stated that the goal appears to be inconsistent with past Commission policy in negotiations with the U.S. Department of Environmental Protection Agency (EPA). Therefore, the goal should be revised to be consistent with past Commission policy (i.e., "... to the greatest extent practical" rather than "possible") As an alternative, if the Commission intends to drive for consistency with other federal regulations, including EPA, then the costs and impacts of such a change in policy should be carefully considered by the Commission in making decisions of the Direction Setting Issues and future decisions.

Regarding Goal b, another commenter, (Lewis) stated that this statement implies that in some cases NRC would not meet the international standards which is required by the General Agreement on Treaties and Trade in Article XVI 4 "Each member shall ensure the conformity of its laws, regulations and administrative procedures with its obligations as provided in the annexed Agreements".

Another commenter, (NM) stated that in its overview and also within its documents relate by-product regulation effectiveness to state NRC/Agreement programs to the effectiveness of regulating by-product materials licensees in the United States. This commenter stated that the arenas do not specifically mention Agreement States and the relationship in ensuring regulatory safety in compatible programs. The plan should recognize the role of the Agreement States. The description of Mission enabling strategies, building public trust and confidence fails to address building trust and confidence in the regulatory programs administered by Agreement States. The NRC should implement an NRC/Agreement State regulatory excellence initiative.

3.17.1 List of Commenters

WRITTEN COMMENTS

1. September 23, 1996, Southwest Research Foundation (Stephen Dwyer)
2. September 30, 1996, Marvin Lewis
3. October 23, 1996, State of New York, Department of Labor (Rita Aldrich)
4. October 24, 1996, Anonymous
5. October 28, 1996, James E. Foster, U. S. NRC
6. November 3, 1996, Marvin I. Lewis
7. November 5, 1996, State of New Mexico, New Mexico Environment Department (Bill Floyd)
8. November 5, 1996, Nevada Nuclear Waste Task Force, Incorporated (Judy Treichel)

9. November 6, 1996, Environmental Coalition on Nuclear Power, (Judith Johnsrud)
10. November 8, 1996, State of Tennessee (Michael Mobley)
11. November 14, 1996, League of Women Voters of Rockford, IL. (Betty Johnson)
12. November 21, 1996, Atomic Safety and Licensing Board Panel, (B. Paul Cotter, Jr.)
13. November 27, 1996, Nuclear Energy Institute (Thomas D. Ryan)
14. November 27, 1996, Dyle Acker, U. S. NRC
15. November 27, 1996, Council on Radionuclides and Radiopharmaceuticals Inc. (CORAR) (Roy W. Brown)
16. November 30, 1996, Gerald Troup, U. S. NRC
17. December 2, 1996, Swedish Nuclear Power Inspectorate, Office of the Director General, (Lars Hogberg)
18. December 2, 1996, Envirocare of Utah, Inc. (Charles A. Judd)
19. December 2, 1996, Mel Silberberg Associates, (Mel Silberberg)
20. December 2, 1996, Michael Weber, U.S. NRC
21. December 2, 1996, State of New Jersey (Jill Lipoti)
22. December 2, 1996, Nuclear Utility Backfitting and Reform Group (NUBARG), (Daniel F. Stenger & Kathryn M. Sutton of Winston & Strawn)
23. December 2, 1996, National Mining Association (Richard L. Lawson)
24. December 2, 1996, Nuclear Information and Resource Service (Diane D'Arrigo)
25. December 3, 1996, No Name
26. December 3, 1996, The League of Women Voters of Rockford (Betty Johnson)
27. December 4, 1996, John Davidson, U.S. NRC
28. December 6, 1996, James Creed, U.S. NRC
29. December 6, 1996, Charles Haughney, U.S. NRC

ORAL COMMENTS

Colorado Springs, Co (October 24-25, 1996) page 35 - 36

1. Roger Walker, Texas Utilities

This page was intentionally left blank.

APPENDIX A

GLOSSARY OF ACRONYMS AND ABBREVIATIONS

A

ABB-CE	Asea Brown Boveri-Combustion Engineering
ACC	American College of Cardiology
ACMUI	Advisory Committee on the Medical Use of Isotopes
ACNP/SNM	American College of Nuclear Physicians/Society of Nuclear Medicine
ACNW	Advisory Committee on Nuclear Waste
ACR	American College of Radiology
ACRS	Advisory Committee on Reactor Safeguards
AEA	Atomic Energy Act of 1954, as amended
ANSTO	Australian Nuclear Science and Technology Organization
ASLBP	Atomic Safety and Licensing Board Panel
ASME	American Society of Mechanical Engineers
ASNC	American Society of Nuclear Cardiology

B

BNCS	Board on Nuclear Codes and Standards
BPR	business process reengineering

C

CA	State of California
CDPHE	Colorado Department of Public Health and Environment
CE	Combustion Engineering
CEE	Central and East European
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Acts
CFR	<u>Code of Federal Regulations</u>
CO	State of Colorado
COL	combined license
CORAR	Council on Radionuclides and Radiopharmaceuticals
CRCPD	Conference of Radiation Control Program Directors
CT	State of Connecticut

D

DE	Detroit Edison
DHHS	Department of Health and Human Services
DNFSB	Defense Nuclear Facilities Safety Board
DOE	Department of Energy
DSI	direction-setting issue

E

ECNP	Environmental Coalition on Nuclear Power
EM	Environmental Management
EPA	Environmental Protection Agency
EPRI	Electric Power Research Institute

F

FASB	Financial Accounting Studies Board
FDA	Food and Drug Administration
FERC	Federal Energy Regulatory Commission
FL	State of Florida
FTE	full-time equivalent

G

GATT	General Agreement on Tariffs and Trade
GE	General Electric
GPRA	Government Performance and Results Act of 1994
GTCC	greater than Class C

H

HHS	Department of Health and Human Services
HLW	high-level waste

I

IAEA	International Atomic Energy Agency
IL	State of Illinois
IMPEP	Integrated Materials Performance Evaluation Program
IOAA	Independent Offices Appropriation Act of 1952
ISFSI	independent spent fuel storage installations
ITAAC	inspection, test, analysis, and acceptance criterion/criteria

K

KDHE	Kansas Department of Health & Environment
KE	Kennecott Energy

L

LA	State of Louisiana
LLRWPA	Low Level Radioactive Waste Policy Amendments Act
LLW	low-level waste
LSS	Licensing Support System

M

MA	State of Massachusetts
MD	State of Maryland
MHTGR	modular high-temperature gas-cooled reactor
MI	State of Michigan
MPC	multi-purpose canister
MS	State of Mississippi

N

NARM	naturally occurring and accelerator produced radioactive materials
NDTMA	Non-Destructive Testing Management Association
NE	State of Nebraska
NEA	Nuclear Energy Agency
NEI	Nuclear Energy Institute
NGO	non-government organization
NH	State of New Hampshire
NJ	State of New Jersey
NM	State of New Mexico
NMA	National Mining Association
NMSS	Office of Nuclear Material Safety and Safeguards
NPR	National Performance Review
NRC	Nuclear Regulatory Commission
NRR	Office of Nuclear Reactor Regulation
NV	State of Nevada
NY	State of New York
NYDOL	New York Department of Labor

O

OAS	Organization of Agreement States
OBRA-90	Omnibus Budget Reconciliation Act of 1990
OCRWM	Office of Civilian Radioactive Waste Management
OE	Office of Enforcement
OH	State of Ohio
OPA	Office of Public Affairs
OR	State of Oregon
ORC	Organization Resources Counselors
OSHA	Occupational Safety and Health Administration

P

PA	State of Pennsylvania
PDR	public document room
PGEC	Portland General Electric Company
PL	public law
PNL	Pacific Northwest National Laboratory
PRA	probabilistic risk assessment
PSC	Public Service Company of Colorado
PV	preliminary view

Q

QM	Quality Management
----	--------------------

R

R&D	research and development
RES	Office of Nuclear Regulatory Research
RIRP	Regulatory Issue Resolution Plan
RRG	Regulatory Review Group
RSO	Radiation Safety Officer

S

SAIC	Science Applications International Corporation
SC	State of South Carolina
SCE&G	South Carolina Electric and Gas Company
SDMP	Site Decommissioning Management Plan
SEC	Securities and Exchange Commission

T

TN	State of Tennessee
TX	State of Texas

U

U.S.C.	<u>U.S. Code</u>
USEC	United States Enrichment Corporation
UT	State of Utah

W

<u>W</u>	Westinghouse
WA	State of Washington
WANO	World Association of Nuclear Operators
WMA	Wyoming Mining Association

Y

YAEC	Yankee Atomic Electric Company
------	--------------------------------

This page was intentionally left blank.

DSIs

Date	Name/Affiliation	Gen	2	4	5	6	7	9	10	11	12	13	14	20	21	22	23	24
07/24	Paul Pomeroy, ACNW				X													
08/01	Gary E. Johnson, Governor-NM						X											
09/06	William H. Spell, St. of LA			X														
09/12	Thomas Ortziger, St. of IL			X														
09/16	David R. Brill, ACNP/SNM Michael D. Devous						X											
09/19	Michael McNeil, NRC															X		
09/23	Stephen Dwyer, Southwest Research Foundation	X																
09/24	Stephen Maloney, Devonrue LTD										X							
09/27	Joe Skeen, U.S. Congress			X														
09/30	Marvin Lewis	X																
10/04	Thomas Thompson, NRC			X														
10/04	Ken Clark, NRC												X					
10/08	Breck Henderson, NRC												X					
10/09	Steven H. Schiff, U.S. Congress, transmittal of ltr fm Mark E. Weidler, Secretary, Office of the Governor, State of New Mexico Environment Department			X														
10/11	Eric W. Hartmann												X					
10/16	Carol S. Marcus, ACNP-CA						X											

APPENDIX B - WRITTEN COMMENTS TABLE

Date	Name/Affiliation	Gen	2	4	5	6	7	9	10	11	12	13	14	20	21	22	23	24
10/17	Jeff Bingaman, U.S. Senate, transmittal of Mark E. Weidler ltr			X														
10/18	Carol S. Marcus, ACNP-CA						X											
10/18	Dade W. Moeller, Dade Moeller & Associates, Inc.							X										X
10/21	Robert Quillin, OAS, CRCPD														X			
10/21	Robert Quillin, OAS Attached to Quillen letter - Comments fm some states -- CO, IL, TN, TX, UT, WA, NY		X		X	X	X	X	X	X	X	X	X	X	X	X	X	
10/23	Rita Aldrich, St. of NY	X		X			X								X			
10/23	Eric J. Benner, NRC									X								
10/23	Agreement State/NRC Regulators' Meeting Summary		X	X			X				X			X	X			
10/24	Robert Quillin, OAS													X				
10/24	Anonymous	X																
10/24	Lisa Jarriel, US Enrich Corp		X															
10/24	Steven Collins, OAS			X										X				
10/24	Richard Ratliff, St. of TX			X										X				
10/24	Ruth E. McBurney, CRCPD			X														
10/24	Rich Janati, St. of PA				X								X					
10/25	John Randall, NRC				X													
10/25	Barry Mendelsohn, NRC																X	

Date	Name/Affiliation	Gen	2	4	5	6	7	9	10	11	12	13	14	20	21	22	23	24
10/25	Thomas E. Hill, OAS/CRCPD														X			
10/28	James E. Foster, NRC	X																
10/28	John Randall, NRC					X								X		X		
10/28	Terry Frazee, st. of WA		X	X	X	X	X	X			X		X	X	X		X	
10/29	James Lieberman, NRC										X							
10/29	Richard Barkley, NRC		X		X	X		X	X	X	X				X		X	X
10/30	Barry Mendelsohn, NRC										X							
10/30	Bill Richardson, Chief Deputy Whip, U.S. Congress, transmittal of Mark E. Weidler ltr.			X														
10/31	William A. Passetti, st of FL			X			X											
11/01	David H. Leroy				X													
11/01	William Burton, NRC									X								
11/03	Marvin Lewis	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X
11/04	David Wigginton, NRC									X								
11/04	Diane E. Tefft, st. of NH		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
11/04	Robert Quillin, OAS							X										
11/05	M. Rose Byrne, NRC					X												
11/05	Phil Stoffey, CDPHE												X					
11/05	Bill Floyd, st of NM	X	X															
11/05	Anonymous												X					

Date	Name/Affiliation	Gen	2	4	5	6	7	9	10	11	12	13	14	20	21	22	23	24
11/05	Judy Treichel, NV Nuclear Waste Task Force, Inc.	X				X												
11/05	Flint C. Watt, st. of MI				X	X	X	X			X							X
11/05	Serguei Routchkine, Sciencetech Moscow													X				
11/06	Mario S. Verani, ASNC						X											
11/06	Judith H. Johnsrud, Environmental Coalition on Nuclear Power	X	X	X	X	X	X											
11/07	Robert W. Goff, st. of MS		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
11/07	John Thompson, et al., NRC									X								
11/07	Richard P. Lewis, ACC						X											
11/07	Robert M. Quillin, OAS amended comments			X									X		X	X	X	X
11/08	Timothy J. McCartin, NRC					X												
11/08	Michael H. Mobley, st. of TN	X			X		X	X			X							
11/11	Wang Liren, NNSA of China													X				
11/11	Miguel Medina Vaillard, Comision Nacional De Seguridad													X				
11/11	Miroslav Hrehor, State Office for Nuclear Safety Czech Republic													X				
11/12	Cheryl Culver Schultz, William Beaumont Hospital			X			X											
11/12	Unknown											X						

Date	Name/Affiliation	Gen	2	4	5	6	7	9	10	11	12	13	14	20	21	22	23	24
11/12	Glenn Kelly, NRC									X	X							
11/12	Ronald G. Fraass, KDHE		X	X			X					X						
11/12	Jozef Zlatnansky, Nuclear Regulatory Authority of the Slovak Republic													X				
11/12	Carl Lischeske, St. of CA				X													
11/13	David Stewart-Smith, St of OR		X	X	X	X	X	X			X		X					X
11/13	Roxanne Summers, Subcommittee on Managing Diversity, NRC																X	
11/13	Glenn Kelly, NRC										X							
11/13	Bob Christie, Performance Technology										X							
11/13	James A. Perry, ASME, BNCS											X						
11/14	Robert Loux, St. of NV					X												
11/14	Betty Johnson, League of Women Voters of Rockford, IL	X	X		X	X				X	X							
11/14	Ray D. Paris, St. of OR		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
11/14	Paul Wyszowski, NJ LLRW Disposal Facility Siting Board				X													
11/14	M.K. Batavia, SC Dept of Health & Environmental Control		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
11/15	Steven J. Moeller, NE Governor's Office				X													
11/15	Betty Johnson, League of Women Voters of Rockford, IL				X													

Date	Name/Affiliation	Gen	2	4	5	6	7	9	10	11	12	13	14	20	21	22	23	24
11/18	L.J. Maas, SIEMENS				X													
11/18	G. D. McPherson, NRC													X		X		
11/18	Robert Godfrey, ANSTO													X				
11/19	T.S. Kress, ACRS															X		
11/20	Joseph P. Ring, MA LLRW Mgmt Board				X													
11/20	Moni Dey, NRC										X	X		X		X	X	
11/20	Daniel A. Dreyfus, U.S. DOE					X					X							
11/20	William A. Passeti, FL Dept of Health & Rehabilitative Services																	X
11/21	Barry Mendelsohn		X															
11/21	B. Paul Cotter, Jr., ASLBP	X																
11/21	Ronald Wascom, St of LA Dept. Of Environmental Quality		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
11/21	Thomas E. Hill, St of GA Dept of Natural Resources		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
11/21	William J. Sinclair, Utah Dept of Environmental Quality		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
11/21	L.J. Maas, SIEMENS						X											
11/22	Gary J. Taylor, South Carolina Electric & Gas Company		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
11/22	Steve McDuffie, NRC					X												

Date	Name/Affiliation	Gen	2	4	5	6	7	9	10	11	12	13	14	20	21	22	23	24
11/22	Z. Domaratzki, IAEA													X				
11/22	L.J. Maas, SIEMENS							X										
11/24	N.P. Kadambi, NRC										X							
11/25	N.J. Liparulo, Westinghouse			X	X	X		X			X	X		X	X			X
11/25	John R. Bohart, Framatome Technologies, Inc.										X			X		X		
11/26	Oscar Paulson, Kennecott Uranium Company			X								X					X	
11/26	Judith Anne Stitt, ACMUI						X				X							
11/27	Melanie T. Young, American College of Radiology						X											
11/27	John T. Larkins, ACRS		X							X		X						
11/27	Thomas D. Ryan, NEI	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
11/27	Richard Ratliff, TX Dept. of Health		X	X	X		X	X		X	X	X	X	X	X	X	X	X
11/27	William P. Dornsife, CRCPD		X	X	X	X	X	X			X	X	X		X	X	X	X
11/27	Dyle Acker, et al., NRC	X	X											X				
11/27	Roy W. Brown, CORAR	X		X	X		X	X			X	X	X		X			
11/27	John J. Coupal, Dept of Veterans Affairs, Medical Center						X											
11/27	A. N. Tschaeché						X											
11/27	Steven M. Quennoz, Portland General Electric Company					X												X

Date	Name/Affiliation	Gen	2	4	5	6	7	9	10	11	12	13	14	20	21	22	23	24
11/27	Douglas R. Gipson, Detroit Edison				X	X												X
11/29	Phillip R. Reed, NRC															X		
11/30	Gerald L. Troup, NRC	X																
12/01	Judith H. Johnsrud, Environmental Coalition on Nuclear Power							X	X	X	X	X	X	X	X	X	X	X
12/02	Steven M. Garry, Florida Power Corporation																	X
12/02	Lars Hogberg, Swedish Nuclear Power Inspectorate	X				X								X			X	
12/02	Kate Roughan, SENTINEL, Amersham Corporation											X						
12/02	Kate Roughan, SENTINEL, Amersham Corporation														X			
12/02	David R. Brill & Michael D. Devous, ACNP/SNM						X											
12/02	Phillip R. Reed, NRC					X												
12/02	Barry Mendelsohn, NRC					X											X	
12/02	Stacy Jarboe, ASME International				X													
12/02	Phillip R. Reed, NRC				X													
12/02	Chris Roman & Frank White, Organization Resources Counselors, Inc.			X														
12/02	Thomas Dragoun, NRC															X		

Date	Name/Affiliation	Gen	2	4	5	6	7	9	10	11	12	13	14	20	21	22	23	24
12/02	Thomas Dragoun, NRC		X															
12/02	James Noggle, NRC									X								
12/02	Steven Garry, Florida Power Corporation				X													
12/02	Charles A. Judd, Envirocare of Utah	X		X	X													
12/02	Mel Silberberg, Mel Silberberg & Associates	X		X	X	X										X		
12/02	Robert E. Owen, Ohio Dept of Health		X	X	X	X	X		X	X								
12/02	Michael Weber, NRC	X						X					X					
12/02	Marion Loomis, Wyoming Mining Association			X				X				X					X	
12/02	Jill Lipoti, St of NJ	X	X	X	X	X	X	X			X	X	X		X	X	X	X
12/02	Jane M. Grant, Yankee Atomic Electric Company				X	X				X	X		X		X	X	X	X
12/02	Roland G. Fletcher, MD Dept of the Environment		X	X	X		X	X			X		X	X	X			
12/02	Michael J. Meisner, Entergy			X	X	X					X	X			X		X	
12/02	Ronald E. Gingerich, CT Hazardous Waste Management Service				X													
12/02	Ashok Dhar, Mallinckrodt Medical Inc.			X	X		X	X			X	X	X		X			

Date	Name/Affiliation	Gen	2	4	5	6	7	9	10	11	12	13	14	20	21	22	23	24
12/02	Daniel F. Stenger & Kathryn M. Sutton, (Winston & Strawn) NUBARG	X																
12/02	Charles B. Brinkman, ABB Combustion Engineering Nuclear Systems		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
12/02	Dennis Bechtel		X			X					X		X					
12/02	Richard L. Lawson, National Mining Association	X	X	X	X			X			X	X	X		X			
12/02	R. D. Dicharry, Non-Destructive Testing Management Association										X	X					X	
12/02	Thomas W. Ortziger, Illinois Department of Nuclear Safety		X	X	X	X	X	X		X	X		X	X	X	X		X
12/02	Robert M. Hallesey, Commonwealth of Massachusetts Radiation Control Program			X														
12/02	Diane D'Arrigo, Nuclear Information and Resource Service	X																
12/03	Steven A. Hucik, General Electric								X									
12/03	No Name	X	X	X	X	X	X	X	X					X	X	X		X
12/03	Public Citizen's Critical Mass Energy Project									X	X	X					X	
12/03	L. J. Maas, SIEMENS										X	X						
12/03	Howard J. Bruschi, Westinghouse Electric Corporation								X									

Date	Name/Affiliation	Gen	2	4	5	6	7	9	10	11	12	13	14	20	21	22	23	24
12/03	Betty Johnson, The League of Women Voters of Rockford	X	X															
12/04	John Davidson, NRC	X	X						X								X	
12/04	William P. Dornsife, PA Department of Environmental Protection										X							
12/04	Thomas McNamara, U.S. Department of State													X				
12/05	Henry W. Morton, Morton Associates							X			X							
12/06	James Creed, NRC	X				X					X						X	
12/09	Charles Haughney, NRC	X																
12/12	*Paul J. Merges, NY State Dept. of Environmental Conservation		X					X			X							
	TOTALs	29	37	48	49	41	42	35	19	26	50	31	34	37	33	29	32	28

*This letter was not received in time to be included in the actual Summary Analysis for DSIs 2, 9, and 12. The letter has been included in Volume II, Book 2 for the Commissioners review.

This page was intentionally left blank.