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NOMINATION OF ALBERT CARNESALE

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HEARING

BEFORE THE

COMMITTEE ON

ENVIRONMENT AND PUBLIC WORKS

UNITED STATES SENATE

NINETY-SIXTH CONGRESS

SECOND SESSION

ON

THE NOMINATION OF ALBERT CARNESALE TO BE A MEMBER
OF THE NUCLEAR REGULATORY COMMISSION

AUGUST 5, 1980

SERIAL NO. 96-H54

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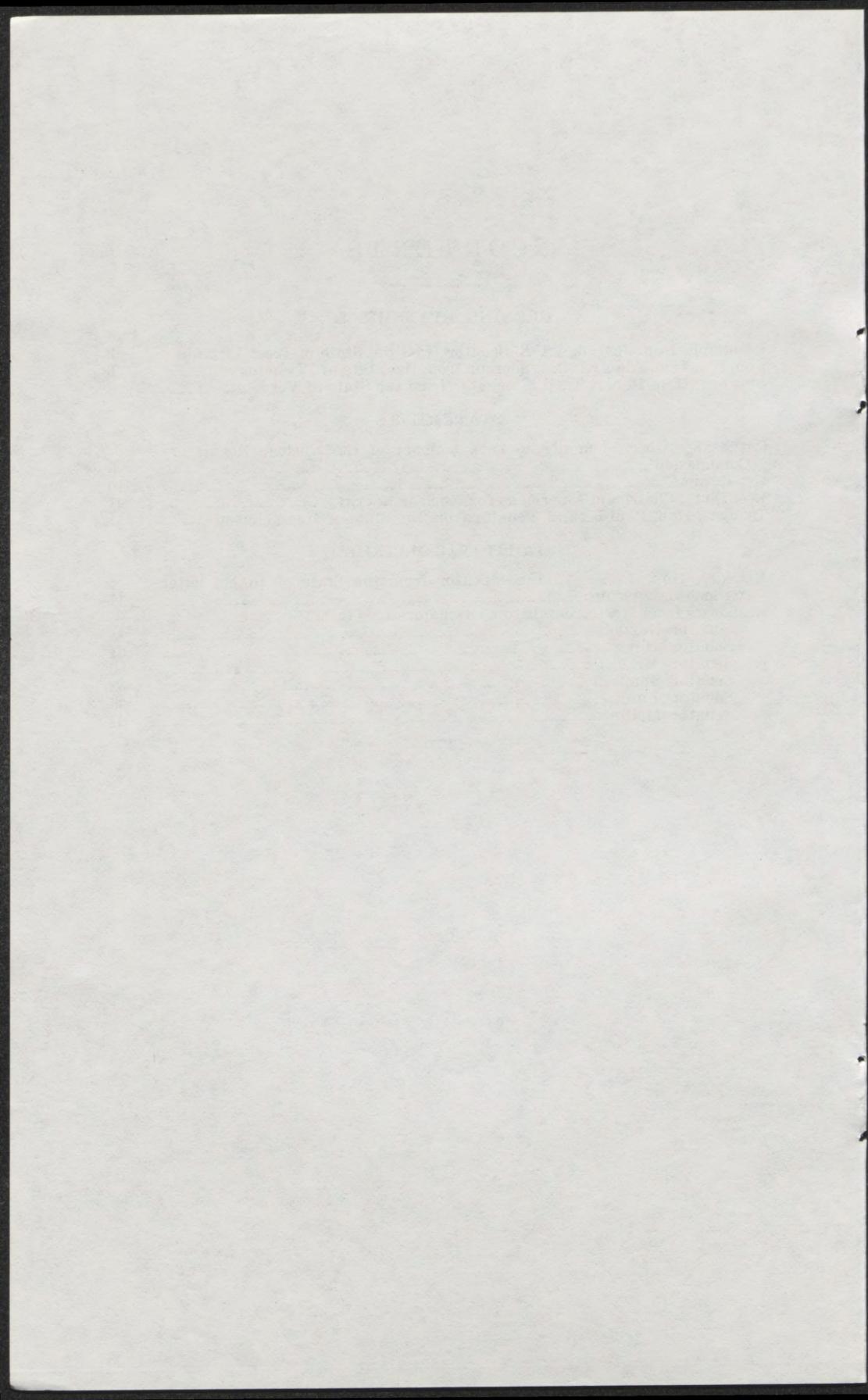
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NOMINATION OF ALBERT CARNESALE

TUESDAY, AUGUST 5, 1980

U.S. SENATE,
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS,
Washington, D.C.

The committee met at 10:05 a.m., 4200 Dirksen Senate Office Building, Hon. Jennings Randolph, presiding.

Present: Senators Hart, Stafford, Domenici, Chafee, and Simpson.

Senator STAFFORD. The Committee on Environment and Public Works will come to order in connection with the hearing on the nomination of Dr. Carnesale to the NRC, and I am sure there will be opening statements by others. I will withhold my own.

Do you have an opening statement, Senator Hart, or should we let Senator Tsongas, since he is here to introduce the doctor, go first and then go to opening statements?

Senator HART. Let's go forward with the introduction. That will be fine.

Senator STAFFORD. We are very pleased this morning to be able to welcome our colleague, Senator Tsongas, who is here to introduce the nominee.

Senator, we welcome your introduction.

STATEMENT OF HON. PAUL E. TSONGAS, U.S. SENATOR FROM THE STATE OF MASSACHUSETTS

Senator TSONGAS. Thank you very much, Senator Stafford. I appreciate the courtesy extended by the members of the committee. I am pleased to introduce Dr. Albert Carnesale who has been nominated to serve on the Nuclear Regulatory Commission. I believe his background and talents make him uniquely qualified for this critical role.

I might say that when I was in the House side that I served on the committee that had jurisdiction over the NRC and feel very strongly about the need for qualified people on that Commission.

If the nuclear option is to remain viable, we must redouble our efforts to make nuclear plants safer and through that process reestablish the credibility of the NRC and restore public confidence. The NRC's agenda is a long one and the Chairman's job is a difficult one. I believe, as Chairman, Dr. Carnesale will provide the necessary objectivity, sensitivity, and leadership. His nuclear engineering background will permit him to exercise that leadership with a minimal transition period. This is essential if we are to avoid another year of drift.

The NRC and the nuclear industry must undergo fundamental changes in organization, procedure, and attitudes. The longer we wait

the less viable the nuclear option becomes. Dr. Carnesale's appointment is an important step in assuring the availability of a safe, environmentally acceptable nuclear option. I hope this committee and the full Senate will expeditiously approve this nomination.

Let me add a personal note. I came to Dr. Carnesale when I came to the Senate and put together an advisory committee in Massachusetts on the SALT issue. Given the enormous talent available in the Boston Cambridge area, he was, if you will, the most equal among equals and was chairman of that SALT II advisory committee and was able to bring in diverse theological opinions in a committee that turned out not to have a function as events turned out. But I observed him firsthand during that process, and I think if there is anyone who has the capacity to bring in divergent views in a way that has no question as to credibility and confidence that he is that person. And I think the President made an excellent choice and I think it is in everyone's interest to see that that choice be confirmed.

The final point I would make: I don't happen to be an enthusiast of nuclear power but I accept it as part of the energy mix. But it has to be done in such a way that it remains credible. It seems to me that if I were an advocate of nuclear power, the one thing I would want would be a Chairman of the NRC who is credible, and I would hope that people on both sides of the aisle would share that view.

I would hope we maintain that objective and Dr. Carnesale fits the bill by anybody's definition.

I very much thank the committee for the courtesy.

Senator STAFFORD. Thank you very much, Senator.

Acting for Chairman Randolph, I note that a rollcall vote now has started, and I would suggest to Senator Hart and Senator Chafee that we recess until we can vote, at which time Senator Randolph will probably be here to preside; and, if he isn't, Senator Hart will be.

Senator CHAFEE. Mr. Chairman, this isn't the cloture vote, is it?

Senator STAFFORD. It may be.

Senator TSONGAS. It may be a motion to instruct the Sergeant at Arms.

Senator CHAFEE. We will probably be gone for awhile.

Senator STAFFORD. It may be a few minutes but no opening statements have been made yet. We are accepting the introduction of the nominee by Senator Tsongas. This is a good time to get the votes over with and come back. Is that agreeable?

The committee will stand in recess until we complete these votes, and we will return immediately.

[Brief recess.]

OPENING STATEMENT OF HON. JENNINGS RANDOLPH, U.S. SENATOR FROM THE STATE OF WEST VIRGINIA

Senator RANDOLPH. I welcome Mr. Carnesale this morning, and I welcome the distinguished Senator from Massachusetts, Mr. Tsongas. At a time when we are assessing how to better assure protection of the health and safety of the public in connection with reactor operation, it is essential that the Nuclear Regulatory Commission not be impaired by a prolonged vacancy. It is equally essential that the Commission have strong and informed leadership.

Such leadership must be even-handed. Too often debate on nuclear power is marred by doctrinaire declarations, both for and against. It is therefore worth noting that Mr. Carnesale was associated with a thoughtful and balanced study, Nuclear Power Issues and Choices, conducted for the Ford Foundation by the Mitre Corp.

Since the release of that study in January 1977, circumstances have been considerably altered. This change has been principally a function of the Three Mile Island accident. Such other factors as inflation and the leveling off of demand for electricity have also played a part.

My own belief is that the decision on the future of nuclear power in this country will ultimately be made by market forces. This is as it should be. For its part, the Federal Government should content itself with better assuring safe reactor operation and with implementing a fiscally and environmentally sound program of radioactive waste management.

This requires a careful Federal neutrality on the advisability of the nuclear option.

A few days ago a Member of the Senate said to me, "It is evident that you are against nuclear power and are only for coal." I guess that is a natural statement for him to make except he is wrong. He forgot my history through the years. The Hanford installation, which no one from West Virginia was for, as you can understand, I voted for its and supported it. Marches on Washington were considered, not only by miners, but the operators themselves. They were worried about what might be happening to the coal markets. When the Tennessee Valley Authority came into being, they felt that purchases of coal were going to stop. So, these matters shift and change, but I am not against nuclear power, neither am I, enthusiastic for nuclear power. I would say that mine is a cautious approach but in no way negative. Both can exist.

Past policies that promoted the benefits of nuclear power have not been too successful. I am not attempting to downgrade the results.

The chairman of the Virginia Electric Power has said, "It was oversold by the military to industry. The reactor makers oversold it to us to a certain extent, and utility executives, myself included, oversold it to the public."

By following a more neutral even-handed posture, the Federal Government will inspire public confidence instead of public concern. Only through the restoration of public confidence can nuclear power assume a major role in meeting national energy requirements.

I believe, Senator Stafford, that you have comments to make.

OPENING STATEMENT OF HON. ROBERT T. STAFFORD, U.S. SENATOR FROM THE STATE OF VERMONT

Senator STAFFORD. I do, Mr. Chairman. Thank you. I will try to get mine done before second bell since we are into another rollcall.

Mr. Chairman, the Senator from Vermont is pleased to be here this morning and as ranking minority member of the Environment and Public Works Committee want to extend my personal welcome again to Dr. Carnesale at this hearing to consider his nomination as Chairman of the Nuclear Regulatory Commission.

The Commission came under intense scrutiny during the past year as a result of the accident at Three Mile Island. The ensuing investigation and inquiries including one recently completed by the Subcommittee on Nuclear Regulation of this committee, found significant weaknesses with regard to NRC's regulations of commercial nuclear power.

It has become evident that if nuclear power is to play a continuing role in providing a portion of this Nation's energy needs, changes will have to be made to improve the regulation of commercial nuclear powerplants. Perhaps even more importantly, changes will have to be made to restore the public confidence, both in the technology and in the NRC's ability to adequately regulate this technology. The NRC is unique in that it is an independent regulatory agency and that independence must be maintained. However, this Senator believes that the next Chairman of the Commission will be a key person in determining what role nuclear power will have in the future. There has been an avalanche of recommendations as a result of Three Mile Island and the NRC has already begun to implement those it believes have the highest priority. The most difficult task, however, is still to come. It will take extraordinary skills to sift through the new requirements which have been suggested to determine which ones will in fact contribute to the increased safety of nuclear powerplants.

It will also take perseverance to insure that recommendations are followed through to full implementation and to insure that neither the Commission nor the nuclear industry is allowed to become complacent regarding the responsibility of protecting the public health and the environment.

I look forward, Mr. Chairman, to hearing Dr. Carnesale's thoughts on a variety of issuances as soon as we get through the next vote.

Senator RANDOLPH. Thank you, Senator Stafford.

Senator Hart and Senator Simpson, the Chairman and ranking member of the Subcommittee on Nuclear Regulation, are here. We have approximately 5 or 6 minutes to get to the floor, but I shall return.

Gary, any comment?

Senator HART. Only, Mr. Chairman, I think this is one of the most important nominations facing any administration. You can't divorce nuclear power from the entire energy mix. The NRC plays the key role in regulating that source of power, and the Chairman of that Commission is, of course, in the driver's seat. So, I hope the people of the country will treat this nomination seriously as I know this committee will, and I look forward to Dr. Carnesale's statement.

Senator RANDOLPH. Thank you.

Senator SIMPSON. I would have a very brief statement when I return, 2 minutes or so, but I think I had better catch this rollcall vote. Thank you.

Senator RANDOLPH. John?

Senator CHAFEE. I have no statement, Mr. Chairman. I voted.

I did want to ask Dr. Carnesale a couple of questions. Has he made his statement yet?

Senator RANDOLPH. No. We have said there will be many questions and he is prepared for that. I have no problems with having you go ahead.

Senator CHAFEE. With my questions? Now?

Senator RANDOLPH. Yes. That will be all right. There is no problem.

Senator CHAFEE. Doctor, my questions are very parochial. We have a problem in Rhode Island involving the United Nuclear Plant, and I am not sure that you are familiar with that situation at all. Do you have any familiarity with it?

Mr. CARNESALE. Not on a professional basis, Senator Chafee, but by newspaper accounts.

Senator CHAFEE. It was a uranium reprocessing plant that is closing down. In June of this year a study was conducted by the U.S. Geological Survey which indicated that there had been some radioactivity liquid seeping from the plant's storage pool into the underground reservoir of the area, into the ground water in the area.

There have been local groups, local government and citizen groups, and the Rhode Island State Department of Environmental Management, that have worked together with the NRC, and the NRC has been very helpful. They have cooperated and the NRC is going to open the decontamination and decommissioning process as fully as possible to the public and is going to cooperate with the State agencies.

My thrust here is to say how important that is to us, that cooperation. We are working with a matter which is of deep concern to our public and about which we don't know much. We don't have expertise in that area and that is where we are quite dependent upon what the NRC can do. They have been helpful and we are grateful for that, and we would very much urge that they continue to extend their assistance in this particular situation.

I would ask your comments on that.

Mr. CARNESALE. Certainly, Senator. I know of no reason why cooperation of that kind should not be continued or for that matter amplified. It is apparent that that is in the best interests not only of the people in the region, but of the Nation as a whole, both for the experience that can be gained through this process and for the assistance itself.

Senator CHAFEE. We have got a further problem and that is that the plant itself is going to be taken down, and the site is going to be cleaned up and the plant, as I understand it, is going to be transported to, and its parts, to some disposal site. Would that be normal in such a situation?

In fairness, it is not a gigantic plant. It is rather modest. I think, at the peak employment it had something like 30 people. So, it is a modest establishment.

Mr. CARNESALE. The Nation really has very little experience in decommissioning nuclear facilities. It is something that we have to do a great deal of work on. To describe such situations as normal or abnormal just doesn't have much of a basis. Every situation at this time is treated on a case-by-case basis as we learn more about the decommissioning process.

Senator CHAFEE. I don't even know where—where would they take such sections of such a plant to?

Mr. CARNESALE. Again, Senator, I am speaking not from professional knowledge but only from newspaper accounts of this case. It seems there is no strict rule stating where parts of such a plant must be taken. It would depend upon the level of radioactivity in the in-

dividual components. If they contained materials that could be adequately handled in a low-level waste facility, then such components and materials could go to such a facility if it were available. If there were materials that were of a high-level waste nature, of course, then we are really looking ahead as to what is going to be the permanent repository for such a material.

Senator CHAFFEE. I suspect it is not that large in nature. I suspect it is relatively moderate. But what I would urge is that, if you could give this your personal attention in your new capacity. I would appreciate that and would remain in touch with you and feel free to call upon you if we seem to be having any problems, not only with the disposal of the building but probably even more important is the continuation of the cleanup process that is going on and the concerns about the water.

I am not being in the least critical. As a matter of fact, I am here to praise what the NRC has done to date. They have been very helpful and we look to them to continue that.

Mr. CARNESALE. Thank you, Senator. I would be pleased to maintain such communication and I would appreciate receiving your thoughts on how you view the matter and how the people of the region view it.

Senator CHAFFEE. Fine. Thank you very much. I think we will remain in recess now for a few minutes until the others return.

[Brief recess.]

Senator STAFFORD. We will ask the Committee on Environment and Public Works to come to order, continuing the hearing on Dr. Carnesale's nomination, and recognizing the ranking minority member of the Subcommittee on Nuclear Regulation, the Senator from Wyoming, Senator Simpson.

OPENING STATEMENT OF HON. ALAN K. SIMPSON, U.S. SENATOR FROM THE STATE OF WYOMING

Senator SIMPSON. Thank you very much, Senator Stafford.

Mr. Chairman, I wish to join in welcoming Dr. Carnesale today for this hearing on his nomination to be the next Chairman of the Nuclear Regulatory Commission.

Mr. Chairman, I had the opportunity, as I believe most of us have had, to visit personally with Dr. Carnesale, and during that brief visit. I found him to be intelligent and articulate and personable and with, I think, a sense of commonsense of where we are. Certainly he possesses a very rich and varied background in the international nuclear arena. Although we do, and may always, come out differently on some nuclear policy issues, I found his approach to be balanced and objective.

I look forward to the hearing today as an opportunity to come to know Dr. Carnesale even better and to discuss with him some of the exceedingly difficult questions that the Commission faces during the next few years.

Mr. Chairman, the tasks that face the Commission, and particularly its new Chairman, are indeed formidable. The Three Mile Island accident damaged the credibility not only of the nuclear industry but also the agency that regulates it. The report of the Nuclear Regulation Subcommittee and the full committee report, as was the case

with the other investigations of the accident, was justifiably critical of the many aspects of the NRC's regulatory program for nuclear powerplants. I think as evidenced by the ongoing cleanup operations of the TMI site, public confidence in the NRC's ability to protect the public remains quite shaken even today.

Mr. Chairman, the NRC has begun the slow process of rebuilding its regulatory program since the accident, and I really believe it has made significant and considerable progress. A detailed action plan has been developed, and it is being applied to operating plants and to new license applications. Improvements have been made to the operator training programs, to the emergency response programs, to the programs to identify and detect the operating problems before they escalate into a serious accident such as Three Mile Island. A reorganization plan has been submitted by the President, has been reviewed by the Congress, and will soon take effect. I think that plan holds the promise for at least some very important management improvement in the agency. You are going to be right in the center of that.

All of those signs are encouraging, and I think they indicate a growing certainty that the NRC will be a fully functioning and effective regulatory agency, and that is what we all want, and that is what we are all actually demanding. At the same moment I think there are times of caution. Since the President's announcement last January that he would appoint the new Chairman from outside the agency, NRC has been headed by a chairman without long-term authority to plan the agency's revitalization, and I think he has given us a very good effort in that interim. But since the departure of Commissioner Kennedy, there is a real possibility of deadlocks, 2-to-2 deadlocks among the remaining Commissioners on important policy issues including the licensing of new nuclear powerplants. We don't have the luxury of that in these times.

So, Mr. Chairman, I believe it is essential now that the Commission have a full complement of members and a strong Chairman with a mandate to plan for the revitalization of the agency over the next several years. Now is a particularly critical time, in my judgment, in rebuilding the agency and in vigorously pursuing the regulatory changes dictated by Three Mile Island. Any lengthy delay, I feel, Mr. Chairman, in filling the vacancy on this Commission, therefore leaving the agency without its Chairman, could well jeopardize the progress that we have already made and must make.

So, Mr. Chairman, for those and other reasons I will be supporting Dr. Carnesale's nomination, and I believe he has all of the capabilities to fill what will be a very difficult public government position, but also a very important and essential position. He and I do not agree on all issues in this area, but I do believe that he will approach—I am willing to put my chips on the line—that he will approach those issues and all issues with a sense of fairness and objectivity, and I believe he will listen.

I look forward to exploring all of the issues in greater depth with him today. Thank you very much, Mr. Chairman.

Senator STAFFORD. Thank you very much, Senator Simpson.

Since Senator Hart is the senior Democrat present and the chairman of the subcommittee in question, I suggest, Senator, you take over the chair, pending arrival of the chairman of the full committee.

Senator HART. I thank the Senator from Vermont. I gather that we have not heard from the nominee. Is that correct?

Senator STAFFORD. That is true.

Senator HART. Doctor, why don't you proceed with your statement, and we will, following that, we will get to our questions as quickly as we can.

Thank you for your indulgence.

STATEMENT OF ALBERT CARNESALE, NOMINEE TO BE A MEMBER OF THE NUCLEAR REGULATORY COMMISSION

Mr. CARNESALE. Thank you, Mr. Chairman.

I am honored to appear before you and other members of the Committee on Environment and Public Works. My name is Albert Carnesale and I have been nominated by the President to be a member of the Nuclear Regulatory Commission. The President has also expressed his intention to appoint me as Chairman of the Commission.

Because my education and experience are particularly relevant to this appointment, it may be useful to describe them briefly. My formal education was in mechanical engineering and in nuclear engineering. My professional career has included service in the private sector, universities, and Government. It began with 5 years in industry, designing nuclear power systems. The university experience consists of 15 years of research, teaching, and administration in nuclear engineering in environmental studies, and in the public policy aspects of science and international affairs. The Government service includes 3 years as an advisor to the head of the U.S. delegation to SALT I, and almost a decade as a part-time consultant to several Government agencies. It was in this consulting capacity that I served recently for 2 years as head of the U.S. delegation to the Technical Coordinating Committee of the International Nuclear Fuel Cycle Evaluation, INFCE.

The accident at Three Mile Island, and the several subsequent inquiries into that accident, have heightened our Nation's—and indeed the world's—awareness of the challenges which must be met if nuclear energy is to make an important contribution to meeting our energy needs. Industry and Government both have essential roles to play in insuring that nuclear power is provided with adequate protection of the public health and safety and of the environment.

Perhaps the most difficult and comprehensive challenge facing the industry and the commission is to establish—if not reestablish—their credibility. Credibility must be earned. Moreover, the Commission must be open, open to participation in its processes by all interested parties, open to diverse perspectives, and open to constructive suggestions from all quarters. Reputations for sensitivity, objectivity, and effectiveness are awarded only to those who are sensitive, objective, and effective.

The report of the President's Commission on the Accident at Three Mile Island contains a number of constructive recommendations, and the process of implementation is well under way. This effort must be continued. Valuable insights are provided also by other investigations of the accident and of the NRC. Prominent among these are the reports of the NRC Special Inquiry Group, the Comptroller General, and the Subcommittee on Nuclear Regulation of this committee.

Strong leadership is needed at the NRC. While all members of the Commission need not—indeed should not—have the same views on all matters related to the regulation of nuclear energy, they should share a commonsense of purpose. The objectives of each individual Commissioner and the objectives of the Commission as a body need not be identical, but they should and can be mutually supportive. The Commission's goals should be formulated and stated explicitly and unambiguously, and progress toward meeting them should be monitored systematically.

The plan for reorganization of the NRC, when implemented, will facilitate the work of the Commission. By clarifying the role of the Chairman as the principal executive officer and spokesman for the Commission, the plan will enable the five-member Commission to focus its energies on the essential collegial tasks of policy formulation, rule-making, and adjudication.

Mr. Chairman, I believe that nuclear energy can make an important contribution to meeting our energy needs and that this can be achieved with adequate protection of our people, our environment, and our Nation's security. I recognize the magnitude and significance of the tasks that lie before the Nuclear Regulatory Commission, and I would welcome the opportunity to contribute to their accomplishment.

Thank you for letting me appear before you and make this opening statement.

[Mr. Carnesale's résumé follows:]

May 1980

ALBERT CARNESALE

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Personal

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Education

B.M.E. (Mechanical Engineering), The Cooper Union, 1957
M.S. (Mechanical Engineering), Drexel Institute, 1962
Ph.D. (Nuclear Engineering), North Carolina State
University, 1966
A.M. (Honorary), Harvard University, 1979

Present Position

October 1, 1974 - present. Harvard University, Cambridge, Massachusetts. Professor of Public Policy in the John F. Kennedy School of Government and Associate Director of the Center for Science and International Affairs. Research and teaching areas include the impact of new technologies on arms control and defense policy, and the political, military, economic, and social implications of nuclear energy. Responsible for administration of academic center at which scholars and professionals examine the interaction of science and technology with specific international problems.

Previous Positions

July 1, 1972 - September 30, 1974. North Carolina State University; Raleigh, N.C. Professor and Head, Division of University Studies, and University Coordinator for Environmental Studies. Responsible for the development and administration of university-wide interdisciplinary programs dealing with contemporary issues and problems and for coordination of university activities (including teaching, research, and extension) dealing with environmental matters. Participated in teaching of interdisciplinary courses on the "energy crisis," the "arms race," and "arms control and national defense."

September 1969 - June 1972. U.S. Arms Control and Disarmament Agency; Washington, D.C. Chief, Defensive Weapons Systems Division; Science and Technology Bureau. Responsible for formulation and evaluation of arms control policies and measures, primarily in area of strategic defensive weapons systems. Member of U.S. Delegation of Strategic Arms Limitation Talks (SALT) with the Soviet Union, serving as senior advisor to the Head of the Delegation.

July 1962 - August 1969. North Carolina State University; Raleigh, N.C. Instructor (1962-1965), Assistant Professor (1965-1967), and Associate Professor (1967-1969) of Nuclear Engineering. Served as Undergraduate Administrator for Department of Nuclear Engineering, and taught and performed research in nuclear reactor analysis, energy conversion, radiation shielding, analytical and numerical methods, and state planning.

June 1957 - June 1962. Martin Marietta Corporation; Baltimore, Md. Senior Engineer; Nuclear Division. Performed engineering analysis and design of nuclear power systems for terrestrial and space application.

Honors and Awards

Member, Council on Foreign Relations

Exceptional Achievement Award, U.S. Arms Control and Disarmament Agency (1970, 1971, and 1972).

Alumni Award for Outstanding Teaching, NCSU (1968).

Member, Academy of Outstanding Teachers, NCSU.

Phi Kappa Phi

Sigma Pi Sigma

Sigma Xi

Professional Societies

American Nuclear Society. Education Division Secretary (1967-78) and Executive Committee (1968-71). National Membership Committee (1966-73).

American Society for Engineering Education. Nuclear Engineering Division Board of Directors (1966-67), Secretary (1967-68), Vice Chairman (1968-69), and Chairman (1969-70).

American Association for the Advancement of Science.

International Institute for Strategic Studies.

Other Professional Activities

Editor, International Security, a quarterly journal, (1976-present).

Member, Committee on Radioactive Waste Management, National Academy of Sciences (1980-present).

U.S. member of (and head of U.S. delegation to) the Technical Coordinating Committee of the International Nuclear Fuel Cycle Evaluation (1978-1980).

Consultant to U.S. Arms Control and Disarmament Agency; Departments of Defense, Energy and State; and the General Accounting Office of the U.S. Congress.

Member of Nuclear Regulatory Commission's special hearing board conducting hearings on safety, health, environment, and safeguards aspects of widescale use of plutonium as nuclear reactor fuel (1976-77).

Publications

Nuclear Nonproliferation: The Spent Fuel Problem, Pergamon Press, 1979. (As a member of a research working group).

"U.S. Nonproliferation Policy," Nuclear Energy and Alternatives, Kadiroglu et. al. (eds.), pp. 333-346, Ballinger Publishing Co., 1978.

"Nuclear power and nuclear proliferation." Options for U.S. Energy Policy. San Francisco: Institute for Contemporary Studies, 1977.

Nuclear Power Issues and Choices (Report of the Nuclear Energy Policy Study Group). Cambridge: Ballinger Publishing Co., 1977.

"The nuclear fuel cycle and nuclear proliferation." International Arrangements for the Nuclear Fuel Cycle, eds. Abram Chayes and Bennett Lewis. Cambridge: Ballinger Publishing Co., 1977. (With G. Rathjens.)

"The race to control nuclear arms." Foreign Affairs, 55 (1) 119-132 (October 1976). (With P. Doty and M. Nacht.)

"The implications of the growth of nuclear power for the proliferation of nuclear weapons." Bulletin of the American Academy of Arts and Sciences, 29 (6) 4-10 (March 1976).

"The Devil's Advocates." The Energy Question: An International Failure of Policy. Volume 1: The World, eds. Edward W. Erickson and Leonard Waverman. Toronto: University of Toronto Press, 1974. (With T. S. Elleman.)

"Semi-empirical formulas for gamma ray dose rates through two-layer slab shields." Nuclear Technology, 12, 375-380 (1971). (With D. A. Sharp.)

"The solid angle subtended at a point by a circular disk." Nuclear Instruments and Methods, 73, 228-230 (1969). (With R. P. Gardner.)

"Monte Carlo simulation of a neutron soil density gauge." Nuclear Engineering and Design, 10, 373 (1969). (With J. Lippold and R. P. Gardner.)

"Operating characteristics of a capillarity-limited heat pipe." Journal of Nuclear Energy, 21 (7) 548-558 (1967). (With J. Cosgrove and J. K. Ferrell.)

"Hydraulic stability in heated parallel channels." Transactions of the American Nuclear Society, 7 (2) 508-509 (1964).

Senator HART. Thank you, Dr. Carnesale.

I would like to open the questioning briefly with just one or two questions, and then I will come back to the others after my colleagues have had a chance to raise issues themselves.

Doctor, during the course of any recent meetings with Members of Congress and officials of the executive branch, have you had any discussions particularly with members of the executive branch regarding any rulemaking, licensing, matters now before the Commission or specific issues?

Mr. CARNESALE. No, other than identification of these matters.

Senator HART. As you know, one of the more difficult issues facing the Commission and the Government these days is export policy, nonproliferation issues. Your work in the nonproliferation area, particularly as head of the U.S. technical delegation to the International Nuclear Fuel Cycle Evaluation, has brought you in close contact with Master Gerald Smith and officials of the State Department and the Arms Control Disarmament Agency and the Department of Energy, and you have also worked closely with these agencies in the Department of Defense in connection with your advisory role on SALT I earlier.

I would like to establish how your work for these agencies might affect your role as Chairman of the NRC. Obviously, a regulatory agency is intended to be independent of and in some instances to serve as a check on the executive branch. Some representatives of the State Department have been pressing for usurping the NRC of its independent authority to license commercial nuclear exports. What is your position on that issue?

I might also add that this is a question that Congressman Jonnathan Bingham has requested that this committee inquire into.

Mr. CARNESALE. Senator Hart, you addressed two questions. On the more general one about the independence of the NRC, I believe strongly that the Nuclear Regulatory Commission should be an independent agency as it is statutorily established. As a member of the Commission and as Chairman I would behave in a manner consistent with that independence.

As to the second and more specific question on the role of the NRC and licensing exports, I went on the record several years ago, in testimony before a Senate committee, that the NRC should do an independent evaluation of safeguards and physical security related to exports, and that that evaluation should be available to the public.

I have recognized the expertise that was available and the value of the agency's independence. The process by which the independent evaluation is to be accomplished is spelled out by the Congress in the Nonproliferation Act of 1978 and, of course, I would be entirely prepared to carry out the mandate through the process thus specified.

Senator HART. So that I think the answer to the question I have asked is that in spite of the fact that you have been involved in not only the SALT process, but also have been active in the international nonproliferation issue, that your own view is that the NRC ought to maintain its independent licensing authority on that?

Mr. CARNESALE. Certainly it ought to maintain its independent role. There is no question in my mind about that.

Senator HART. In this connection representatives of the State Department have also been seeking modifications of the Nonproliferation Act, particularly the linkage that act requires between continued U.S. civilian nuclear assistance to other nations and commitments from those nations, first to accept full-scope international safeguards on all their nuclear activities, and, second, to pledge not to set off nuclear explosions.

What is your position on that question?

Mr. CARNESALE. Clearly, those are admirable goals that we would like to see accepted worldwide, and I believe there is a substantial chance for achieving them on very nearly a global basis. Full-scope safeguards now apply to well more than 100 nations through the NPT, and to some other nations as well.

As to the question of whether or not these should be requirements, needless to say, the law makes them requirements. But it also provides that, where it is decided that it would be inimical to the common defense and security of the United States, these need not be absolute requirements. It seems to me that that is a reasonable way to address the matter and that only in very unusual circumstances, where it is deemed to be essential to the interests of the United States, should exceptions be made.

Senator HART. With regard to your views about the priorities of running the NRC at the present time, how would you describe your views with regard to the agency's relative order of priorities, in effect efforts devoted to licensing of new powerplants and those devoted to assuring safety of the plants now operating?

Mr. CARNESALE. Of course, those need not be mutually exclusive. The answer has to be that attention must be paid to the safety of the plants now operating, no matter what else is done in the future. Those plants are now operating. It is important that the public health and safety be protected. This must be the first priority. But I do not view the two efforts as mutually exclusive. Giving first priority to plants now operating doesn't mean that one cannot move forward on a case-by-case basis with new licensing.

Senator HART. Thank you, Dr. Carnesale.

Mr. Chairman?

Senator RANDOLPH. Thank you.

Senator HART. I have some other questions I would like to come back to when we have a chance.

Senator RANDOLPH. Thank you very much. I believe you have given your opening statement. Had you completed it?

Senator SIMPSON. I did, Mr. Chairman, in your absence. I completed that. Thank you.

Senator RANDOLPH. Do you have questions that you want to ask now, Senator Stafford? I think it would be appropriate. I want to accommodate you.

Senator STAFFORD. I have to leave this hearing in about 20 minutes.

Senator RANDOLPH. I think it would be better for you to go ahead.

Senator STAFFORD. Mr. Chairman, I have a series of questions on behalf of Senator McClure, who in former years was a valuable member of this committee. I have submitted those questions to Dr. Carnesale

for response in writing, rather than attempting to do it here, to save the committee's time.

Senator RANDOLPH. Without objection.

[Senator McClure's questions referred to by Senator Stafford together with Mr. Carnesale's responses may be found at p. 67.]

Senator STAFFORD. I have additional questions, Mr. Chairman, on behalf of Senator McClure, which I would request we deal with at the present time, and to the extent that I can't, maybe Senator Simpson would carry on with the questions that I have here.

Mr. Chairman, before beginning the questions, I have a letter directed to me by Senator McClure in connection with this nomination, and I would ask unanimous consent that at this point it be made a part of the record.

Senator RANDOLPH. Yes. That will be done.

[The letter follows:]

JAMES A. MCCLURE
IDAHO

United States Senate

WASHINGTON, D.C. 20510

August 4, 1980

The Honorable Robert T. Stafford
Ranking Minority Member
Committee on Environment and Public Works
United States Senate
Washington, D. C. 20510

Dear Senator Stafford:

I am writing in regard to the Committee's hearing on August 5, 1980, to consider the nomination of Dr. Albert Carnesale to be a member of the Nuclear Regulatory Commission, who, if confirmed, the President intends to designate as Chairman. After considerable research and reflection about Dr. Carnesale's nomination, including a lengthy meeting with the nominee, I am forced to express serious reservations about the nomination at this time. While I have not made a final judgement yet, my reservations now would be serious enough to require me to oppose the nomination if we were voting today. Fortunately, we have the opportunity through the hearing process to assess and evaluate more completely Dr. Carnesale's positions and qualifications before a final judgement must be made. I, therefore, request your assistance and that of our Republican colleagues on the Committee in addressing my reservations in the hearing process, in order to ensure that the Senate will have all necessary information on the nomination to make a fully informed judgement.

My reservations regarding the Carnesale nomination at this time are several-fold. Of particular seriousness and significance to me is that Dr. Carnesale appears to have given differing answers to the same question dealing with his position on the Clinch River Breeder Reactor and the Liquid Metal Fast Breeder Reactor Program in separate interviews with several Senators and staff members. I am anxious to obtain under oath a straight answer about his position on CRBR and the LMFBR program, and also an explanation for the apparently differing answers given to others. I also want to ensure that the record is clear about his position on a number of other controversial issues discussed with Dr. Carnesale during the interviews.

As you know, pursuant to Sec. 201(b)(2) of the Energy Reorganization Act of 1974, "not more than three members of the NRC Commission shall be members of the same political party." In light of the Commission's existing membership, the current vacancy must be filled by a Republican or independent. Dr. Carnesale has been nominated as an independent for the vacancy. I believe that Dr. Carnesale's independent status must be carefully reviewed to satisfy the applicable law, as well as to discharge the responsibilities to Minority Members of the Senate. Dr. Carnesale has acknowledged in a staff interview that he provided

"inputs" for Democratic candidate Jimmy Carter's October, 1976 campaign speech to the United Nations. He claimed, however, that he did not function as an "advisor" to the campaign, and that statements to that effect given to the press at that time by Richard Gardner (now U.S. Ambassador to Italy), were erroneous and were made without Dr. Carnesale's approval. Consequently, I believe the hearing record must establish the exact circumstances surrounding Dr. Carnesale's "inputs" to the U.N. speech and the Carter campaign, as well as categorically address any other affiliation or association with activities of the Democratic party.

Section 201(c) of the Energy Reorganization Act of 1974 specifies the term of a member of the Commission as five years and Section 201(a) (1) grants the President authority to "designate one member of the Commission as Chairman thereof to serve as such during the pleasure of the President." Dr. Carnesale, despite the five year term and the President's stated intent to designate him Chairman, reportedly would only take a two year leave of absence from Harvard and apparently has told others that he should not be required to commit himself for more than two years. The Chairmanship of the NRC at this time, particularly in the aftermath of Three Mile Island and under the approved Reorganization Plan No. 1 of 1980, effective on October 1st, is a critical position for nuclear safety, the NRC, the nuclear industry, and especially the nation. I believe the Senate, on behalf of the nation should expect a complete and sincere commitment to the position. Consequently, I believe that the hearings must establish Dr. Carnesale's position on this matter.

My next concern involves the activities of Dr. Carnesale while serving as a member of the NRC's Generic Environmental Statement on Mixed Oxide (GESMO) Hearing Board during 1976 and 1977. The Hearing Board, for the NRC, conducted proceedings on GESMO "to determine whether and under what conditions uranium and plutonium might be recycled from spent light water reactor fuel and fabricated into fresh mixed oxide fuel on a wide scale," including specific consideration of health, safety, environmental and safeguards aspects of reprocessing and recycling such fuels. The proceedings were pursuant to a November, 1975 NRC policy statement and also were intended to satisfy the ruling of the U.S. Court of Appeals for the Second Circuit in NRDC v. NRC 539 F.2d 824 (1976).

As noted earlier, Dr. Carnesale provided "inputs" to Candidate Jimmy Carter in the fall of 1976 for Carter's October 1976 speech on nonproliferation, which addressed the general subject included in GESMO. At the same time, Dr. Carnesale was a member of the Nuclear Energy Policy Study Group, sponsored by the Ford Foundation and administered by The MITRE Corporation, which issued its report Nuclear Power: Issues and Choices in the spring of 1977. Dr. Carnesale has indicated that he was a principal author of the chapter on "Plutonium Reprocessing and Recycle", Chapter Eleven, of the report, which strongly opposed any commercial reprocessing in the United States because of nonproliferation considerations. After the general election, the Carter transition

team focused on nonproliferation and reportedly considered actively the efforts of the Study Group and the evolving Ford-MITRE report.

In the same time frame, February through April, 1977, the new Carter White House was engaged in the preparation of Presidential Review Memorandum No. 15 (PRM-15), which led to the Carter April 7, 1977, Nuclear Power and Nonproliferation Policy Statement. PRM-15 and the April 7 Policy Statement included the indefinite deferral of domestic commercial reprocessing and recycling of plutonium and the commencement of domestic and international studies of alternative fuel cycles. A colleague of Dr. Carnesale at Harvard and on the Nuclear Energy Policy Study Group was Dr. Joseph S. Nye, Jr., who also is widely acknowledged as having been the architect of the Carter April 7th nuclear power and nonproliferation policy while serving as Deputy to the Under Secretary of State in the Carter Administration. Interestingly, press reports at the time reported President Carter as giving a copy of the Ford-MITRE report to Japanese Prime Minister Fukuda, with an indication that it was the basis for his new April 7th policy.

Subsequently, the GESMO proceedings were indefinitely postponed by the GESMO Hearing Board; and the Commission on May 3, 1977, announced a reassessment of the future scope of GESMO and related licensing actions. Ultimately, the Commission on December 23, 1977, terminated GESMO proceedings and all consideration of reprocessing licenses after receiving a request to do so in a letter of October 4, 1977, from Stuart Eizenstat, Assistant to the President for Domestic Affairs and Policy on behalf of the President. During 1977, Dr. Carnesale became an active participant in the Administration's nonproliferation policy efforts and later was named and served from 1978 to 1980 as a U.S. member of (and head of the U.S. delegation to) the Technical Coordinating Committee of the International Nuclear Fuel Cycle Evaluation, which was initiated by the President as part of the April 7, 1977 policy.

I do not intend that the preceding four paragraphs be interpreted as any form of implied or express allegation that Dr. Carnesale, as a member of the GESMO Hearing Board, necessarily acted improperly, illegally or unethically during the conduct of the GESMO proceedings in 1976 and 1977. I have no specific evidence or information to support any such allegation of such action on his part. At the same time, however, it is quite clear that there was a swirl of activity, at least some of which included Dr. Carnesale, centered around the Carter campaign, the Ford-MITRE study and the Carter White House, related to the reprocessing issue which was the specific subject of the GESMO Hearing Board proceedings.

Dr. Carnesale has acknowledged making inputs to the Carter U.N. speech. He also has acknowledged being a principal author of Chapter Eleven in the Ford-MITRE report. At the same time, Dr. Carnesale has indicated that he opposed termination of the GESMO proceedings. He also has stated to staff that he had no involvement in PRM-15, because he

was a member of the GESMO Hearing Board. Subsequently, he was given increasingly significant participation in the nonproliferation area, and eventually was appointed head of the U.S. delegation to the T.C.C. in INFCE.

I believe that all of Dr. Carnesale's activities in 1976 and 1977 while serving as a member of the NRC GESMO Hearing Board should be reviewed carefully in the context of the NRC's legal and ethical principles applicable to his membership and participation on the Hearing Board. I would hope that the hearings would establish with specificity those legal and ethical principles that did apply to Dr. Carnesale under NRC regulations. I also would hope that the hearings would establish the exact nature of any and all relevant activities by Dr. Carnesale during his tenure on the Hearing Board in the Carter campaign, the Carter transition team, the Ford-MITRE study, PRM-15, the April 7, 1977 Policy Statement, and the Administration's initiatives to implement the April 7th policy, and the Hearing Board.

The Committee thereby should be able to address thoroughly any questions related to those activities and his responsibilities as a member of the Hearing Board. As the nominated member of the Commission who would be designated Chairman if confirmed, there can be no unresolved questions about such activities. The Chairman of an independent regulatory commission simply must be free of any such questions, and the confirmation hearing process should seek that objective in this nomination.

I also am seriously concerned about Dr. Carnesale's qualifications for Chairmanship of the NRC. I do not question his intellectual capabilities, his technical background, nor his skills as a member of a collegial body. I do have reservations about his experience and capability as a manager of an organization such as the NRC. The Reorganization Plan, which is effective on October 1st, places significantly increased authority in the NRC Chairman. The Chairman will be in direct command in the event of any nuclear power plant accident. The Chairman will run the NRC through a strengthened Executive Director for Operations. The Chairman will develop the internal reorganization of the agency. For all practical purposes, the Chairman will be the administrator of the agency, subject to the policies of the Commission, as well as Chairman of the Commission.

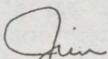
I believe the hearings should review closely Dr. Carnesale's capability to implement the reorganization and decisively turn the agency around, as Kemeny, Rogovin, GAO and Hart reports all demand. I also believe that the hearings must address Dr. Carnesale's current knowledge and positions on NRC's domestic licensing authorities, functions and organization. The country deserves, and the Senate has the obligation to ensure that, the NRC Chairman has the requisite experience and knowledge to take charge immediately and run the agency in the critical months ahead.

Finally, I remain concerned that we do not have a precise enough understanding of Dr. Carnesale's positions on the many issues of immediate relevance and significance to nuclear power licensing and operations in the United States and to nuclear export and nonproliferation policies. As I discussed at the outset, it appears that Dr. Carnesale may have stated varying positions on the CRBR issue to different Senators and staff. I don't expect to agree with Dr. Carnesale on each of those controversial issues, but I'm sure every Senator at least wants to know whether or not Dr. Carnesale agrees with his position on a particular issue. Once the positions are clear, each Senator can make his or her own judgement on the nominee. To date, Dr. Carnesale's positions on several issues remain unclear, and I believe the hearings should establish and review those positions.

In order to address the concerns and reservations I have noted, I request that the Minority Members of the Committee submit the enclosed questions and requests to Dr. Carnesale. To facilitate the hearing process, I request that the few questions included in Enclosure 1 be asked of Dr. Carnesale orally while he is under oath and those included in Enclosure 2 be submitted for the record. I further request that statements or oral testimony, as appropriate, be obtained from other witnesses as indicated in the enclosures. Also, you should know that I informed senior officials at the White House on August 1, 1980, about my concerns and reservations and received assurances of the Administration's complete cooperation in the consideration of the enclosed questions and requests. Consequently, I am convinced that the use of the enclosed questions and requests will address constructively the merits of the Carnesale nomination in the Committee's hearings.

Thank you for your assistance in the Senate's consideration of the Carnesale nomination. Please contact Charles Trabandt of the Energy and Natural Resources Committee staff, if there are any questions related to this letter or the enclosures. Hopefully, we will develop all of the necessary information on which to base a fully informed decision.

Sincerely,



James A. McClure
United States Senator

Enclosures

cc: Honorable Howard H. Baker
Honorable Pete V. Domenici
Honorable John H. Chafee
Honorable Alan K. Simpson
Honorable Larry Pressler

Senator STAFFORD. These questions, Doctor, are not the questions of the Senator from Vermont. I want to emphasize they are questions from Senator McClure and that I am asking them for him.

Doctor, you told Senator McClure that you were not necessarily opposed to continuing the Clinch River breeder reactor, yet other Senators have said you stated that you were inalterably opposed to Clinch River breeder reactor. What is your position on Clinch River breeder reactor? How do you explain the apparent differences in position on Clinch River breeder reactor that you stated several times, if that is so?

Mr. CARNESALE. Senator, I believe the source of confusion might be some people's equating the Clinch River breeder reactor with breeder programs in general. Another source might be related to my position on the Clinch River breeder reactor in 1977 as a part of the Ford-Mitre study. Of course, it is understood that the role of the Nuclear Regulatory Commission with regard to breeder reactors and Clinch River breeder reactor is not one of deciding need or timing; rather, it is one of assuring that provisions are made for the public health and safety.

As to my personal views in 1977, reference has already been made to the Ford-Mitre study. I share the view that the United States should not move forward with the Clinch River breeder reactor at that time, but should move forward aggressively with an active R. & D. program on breeders, including the fast flux test facility. The reasons were several. I won't try to describe them all, but they related primarily to the fact that the time scale for the Clinch River breeder reactor had been a very rapid one. People thought that rapid commercialization would be essential because of the consumption of uranium with the growing use of nuclear power in this country. Nuclear power did not grow that rapidly. There was more time before we needed a breeder, and therefore it was felt there was time to obtain some results from the fast flux test facility and also to look at alternative breeder concepts that had perhaps more attractive technologies and perhaps also more proliferation resistance.

Several things have happened over the past 3½ years. First, the world has conducted an extensive study that I was in the middle of: INFCE. We looked for more attractive breeder alternatives and did not find any, although there were measures identified which could improve fast breeder reactors of the Clinch River type. Also, it has become clear that other industrialized nations are moving forward with the breeder.

As an engineer, I have always supported active breeder R. & D. and I recognize that before you can get to commercialization a demonstration plant is essential. If there are differences in views between me and some others, they are not over whether a demonstration plant is needed, but when.

Also, over the last 3½ years, although I have not examined it firsthand recently, I assume that Clinch River breeder reactor design has changed.

So, if one were to ask me my position on whether we should build that Clinch River reactor design today, I would say I am open-minded on that question. I would have to know what it is precisely that someone wants to build. If you were to ask me my position in 1977, I can say that I was opposed to building it. I would like to end with the

notion that, as an NRC commissioner, my role will be to accept the mandate on timing that might come from the Congress and the President, provided that the public health and safety, the environment, and the national security could be adequately protected.

Senator STAFFORD. Thank you, Doctor.

You have been submitted as an independent for a Republican seat. Have you ever registered as a Democrat or had any other affiliation or association with Democratic Party activities or candidates? Please explain in specific detail your participation in the preparation of Democratic candidate Jimmy Carter's speech to the United Nations in October 1976, including the subsequent statements of Richard Gardner to the press regarding your role as an advisor to the campaign.

Mr. CARNESALE. Excuse me. I think my role was characterized as contributor to the speech, rather than as an advisor in the campaign.

Senator STAFFORD. Whatever characterizations there are here are not those of the Senator from Vermont.

Mr. CARNESALE. You asked two questions, one about registration. I come from the Bronx. My father was a taxi driver; my mother, a clerk. They were Democrats. I am sure I initially registered as a Democrat. I believe it has been at least 10 years—and, although I am not positive, I think it is more than that—that I have been registered as an Independent.

There are others, including a prominent Presidential candidate, who have switched from Democrat to Republican possibly a little longer ago than that.

Senator STAFFORD. We hope that trend may continue.

Mr. CARNESALE. Insofar as the speech is concerned, let me say that I have always considered it both a privilege and a responsibility to express my views and share what expertise I might have with any holder or seeker of high office, regardless of party affiliation.

Let me turn to the specifics of the speech. It was in about—I don't have correspondence because it was done by phone call—March 1976, when Richard Gardner, who was then a professor of law at Columbia University, contacted me to ask if I would be willing to contribute to a speech that then-candidate Carter, who I had never met, would be making to a meeting at the U.N. on nuclear energy and world order. Professor Gardner knew that I had been working on nonproliferation matters. My response was I would be pleased to write down what I would like to see someone say—my own views. I did that. I was one of at least five who did so, and then parts of what I submitted were indeed included in the speech. That was my only participation, if you can call it that, in that campaign, and I did not endorse any candidate. Indeed, I never have endorsed a candidate, but I have met with Congressmen and Senators and office holders and office seekers of both parties.

I might also mention that my only full-time service in the Government was in SALT I during president Nixon's administration.

Senator STAFFORD. Thank you.

You were a member of the NRC's GESMO Hearing Board in 1976 and 1977. What legal and ethical principles, under NRC procedures and regulations applicable to the hearing board, governed your other activities during your service on the hearing board? How did those principles apply to your participation in the Ford Foundation's Nu-

clear Energy Policy Study Group and its report, "Nuclear Power: Issues and Choices," particularly your authorship of chapter 11 on "Plutonium Reprocessing and Recycle"?

Mr. CARNESALE. Senator GESMO was a legislative hearing for establishing a record and not an adjudicatory hearing. The decision was to be made by the commission. There were no limitations imposed upon my outside activities. I have checked this recently with the General Counsel of the NRC just to be certain that that was the case, and not simply my understanding. He assures me that that is so.

I might also note that, because I felt that it would be inappropriate for me to express views on the question before the hearing board, namely the questions related to plutonium reprocessing and recycling, there is a footnote on the very first page of the preface of the Ford-Mitre study. The sentence in the text, I will submit this for the record, says: "These findings which are the product of a long and challenging process are the agreed views of the entire group," asterisk for footnote. It is the only footnote:

During the course of this study, Albert Carnesale, was appointed to membership on the Nuclear Regulatory Commission Hearing Board looking into the matter of wide-scale use of recycle plutonium in mixed oxide fuel in light water reactors. Accordingly, he has refrained from expressing personal views on the matter and he should not be associated with the group's findings related to plutonium reprocessing and recycle.

I think that ought to answer any questions about my own personal ethical standards in that regard.

Senator STAFFORD. Did you contribute to or participate in directly or indirectly, the Carter transition team, the preparation of Presidential Review Memorandum 15 on Nuclear Power and Nonproliferation, or the preparation of President Carter's April 7, 1977, Policy Statement on Nuclear Power and Nonproliferation? If so, please provide full details on such contributions or participation and indicate how the hearing board principles applied to such actions. What was your role in the decision of the hearing board after the April 7, 1977, policy statement to indefinitely postpone the GESMO proceedings and the subsequent NRC decision to terminate GESMO proceedings?

Mr. CARNESALE. The answer to the first part of your question—namely my role in the transition team, or the Presidential review memorandum study of nonproliferation, or the April 7, 1977, speech—the answer in all three cases is none.

The only clarifying statement I might make is that it is obvious that the April 7 statement and the policy therein was to some extent, if not a large extent, based upon the Ford-Mitre study and had ended in January, and I was 1 of the 21 people who participated in that study. But that was a public document, certainly not part of the transition team activities.

With regard to the decision to terminate GESMO, I was not involved in that at all. The Nuclear Regulatory Commission asked the administration's views on GESMO on May 5. That was not a request from the hearing board; it was a request from the then Chairman of the Commission. I was not involved. The response came back in a letter from Stuart Eizenstat on October 4, 1977. I had already resigned from the GESMO hearing board by July 7 of that year. I was also not at all involved in the determination of the administration's position. I had never met with Mr. Eizenstat.

Senator DOMENICI. Mr. Chairman, would you yield for a clarification?

Senator STAFFORD. Certainly.

Senator DOMENICI. Doctor, the question, and I know you don't have the detailed question in front of you, but the first part of the last question was, did you contribute to or participate in, directly or indirectly, the Carter transition team, the preparation of the review memorandum 15 on nuclear power and nonproliferation, or the preparation of President Carter's April 7, 1977, policy statement on nuclear power and nonproliferation?

If I understand your answer, you said none. I assume you meant no.

Mr. CARNESALE. I meant no. That is correct. No.

I tried also to explain that some of these matters related to the Ford-Mitre study which had been done a year before, and I had been a participant in that study.

Senator DOMENICI. So you weren't part of this transition team in any way or the preparation of that policy statement unless they used the Ford-Mitre report which you have explained? Is that what you are saying?

Mr. CARNESALE. That is correct. I did not become a consultant to the State Department until June 1977, and I believe all of the actions that you are discussing happened at least 2 months prior to that.

Senator DOMENICI. Thank you, Mr. Chairman.

Senator STAFFORD. Doctor, as I said to my colleagues, I realize I am violating the 5-minute rule that I believe in, but I have two more questions, if you would indulge me, and then I will subside.

These are a continuation of the questions of Senator McClure.

If confirmed, your term under the Energy Reorganization Act of 1974 is 5 years. Is it true that you only have a 2-year leave of absence from Harvard? It is also true that you have indicated in meetings that you should only be required to make a 2-year commitment at this time? What is the nature of your commitment to the position, if confirmed?

Mr. CARNESALE. Mr. Chairman, I have no commitment, explicit or implicit, of any kind to anybody or any institution, that would preclude by service of a full 5-year term.

As to the leave from Harvard, the standing practice at Harvard is a 2-year leave. It might be extended, but it is very much a one-way contract. Harvard University is required to take me back within 2 years, if I choose to go back. I am under no obligation to go back.

Senator STAFFORD. Thank you, Doctor.

Just one last question. President Carter has stated his intent to appoint you Chairman of the NRC if you are confirmed as a member of the Commission. How would you characterize and defend your qualifications for the chairmanship in terms of: (a) a thorough substantive knowledge of the NRC's licensing and regulation of domestic nuclear powerplants; (b) a demonstrated capability in the administration and management of a large organization, as will be required under Reorganization Plan No. 1 of 1980; and (c) a demonstrated capability to take direct command of any major domestic nuclear incident or accident, as will be required under the reorganization plan?

I can repeat any of those you want me to since it is unfair to throw so many questions at once.

Mr. CARNESALE. Let me start by saying no one, and certainly not I, knows everything about what the Nuclear Regulatory Commission does unless one has been there. Those that come closer are those who have been parties to proceedings there, which I have not been. I suspect that is more of an advantage than a disadvantage.

In terms of substantive knowledge, I hold a doctor of philosophy degree in nuclear engineering from North Carolina State University. I taught nuclear engineering for 7 years at the university level. For 2 years I was university coordinator for environmental studies at that university. I have been involved in the international aspects of nuclear energy and nonproliferation for at least 5 years, the last 2 years as head of the U.S. delegation to the Technical Coordinating Committee of INFCE. I believe my qualifications in the broad area of nuclear energy and the policies associated with it are reasonable ones to expect.

As to taking command in an emergency, I would note by training in nuclear engineering, my 5 years in industry designing nuclear powerplants, and in particular the fact that my doctoral dissertation dealt with heat transfer and fluid flow in nuclear power systems. I think this background should stand me in good stead.

On the matter of a large organization, I would like to divide management into two parts: administration and leadership. As to administration, the day-to-day running of the agency, I share the view expressed explicitly in the Reorganization Act that the Chairman should not be doing that. That function should be delegated to the executive director for operations under the Chairman's direction.

If I were a candidate for executive director for operations, we might have a different discussion, but I am not. I am the nominee for the Chairman. The Chairman's role is one of leadership. I do have substantial and successful experience in dealing with complex issues and with strongly held, widely disparate views. This was the case in SALT I, when I was the senior adviser to the head of the delegation responsible for forging the delegation's positions and, most recently, in INFCE. Within the Department of Energy or the Department of State or the Arms Control and Disarmament Agency or the White House, one is likely to find very different views on nonproliferation and nuclear energy; and, if that wasn't enough, there were 21 other countries to deal with on the technical coordinating committee. Yet, we produced a final report without dissent.

Senator STAFFORD. Thank you, Doctor. Those questions, as I have indicated, were for Senator McClure. I am going to close with one brief question in my own behalf.

You have already commented somewhat on the matter of the fast breeder reactors. Looking at what they may evolve into, not just what the Clinch River breeder reactor of 3 years ago may have been, what would your assessment of the future of the fast breeder reactor be?

Mr. CARNESALE. My view at this time is that it is an option which must be kept open, and keeping it open requires work on our part. Unless some of the other advanced sources of energy become available—on a wide-scale, economically, and safely—in the early part of the next century, I don't know of an alternative available to us other than breeders.

Senator STAFFORD. Thank you very much, Doctor, and I thank my colleagues for their indulgence.

Senator HART. Senator Simpson?

Senator SIMPSON. Thank you very much, Mr. Chairman. I have very few questions, and I have two conflicts and must go on to another meeting.

I wanted to ask Dr. Carnesale for one clarification on his role as a member of the hearing board in 1976 and 1977.

Am I correct that in hearing your testimony and the questions, that the role of the GESMO hearing board was limited to building a record of the factual issues and forwarding that record to the Commission for decision on the policy issues?

Mr. CARNESALE. That is correct, Senator. It had not yet been decided clearly at the time I left the hearing board whether or not the hearing board was authorized to make a recommendation to the Commission, but there was no doubt that the Commission was the adjudicative body, not the hearing board.

Senator SIMPSON. So, you and the other members of the board did not really have any responsibility for making an initial decision on the policy or on the factual issues involved?

Mr. CARNESALE. We did not have a responsibility to do that. It was still open as to whether or not we were authorized to make a recommendation. We certainly did not have a responsibility to make it.

Senator SIMPSON. That responsibility was to serve exclusively and presently for the Commission; was it not?

Mr. CARNESALE. That is correct.

Senator SIMPSON. Doctor, the President's reorganization plan—I am sure you spent a little time dabbling around in it in recent days—for the NRC takes effect in October of this year. In what way do you believe that the duties of the Chairman of the Commission have been enhanced as a result of the President's reorganization, and would you expect the reorganization to lead to a more effective operating agency; and, if so, what areas are involved?

Mr. CARNESALE. Yes; I believe firmly that the reorganization plan will not only enable the Chairman better to do his job, but will also enable the Commission better to do its job in several ways.

First, there is a mandate for change. There is a mandate for efficient organization. There is a mandate for one commission rather than five commissions. There is a mandate for one staff rather than five staffs. There is a mandate for one NRC rather than five.

People will expect, and it will be the Chairman's responsibility to produce, a team at the NRC with a commonsense of purpose.

One specific measure to that end is clarifying the role of the Chairman as the principal executive officer and the principal spokesman for the agency. Often we overlook the importance of a spokesman, and I believe it is because the NRC in recent years really hasn't had one, through no fault of the people that were in the Chairman position. But an effective spokesman is essential both for morale and for the public's understanding of what it is the NRC is trying to do.

Clarification of the way by which the staff is to be tasked is particularly helpful. Members of the staff should not feel that there are

five bosses to which they must respond and somehow be loyal; rather, that there is one NRC.

The reorganization plan may be most important in making clear that when it comes to crises management, decisions must be made by one person. That is not a time for committee meetings to decide what is to be done in the next 10 seconds.

The strengthening of the role of the executive director for operations will help very much. In the past, it was unclear what his responsibility and authority were. Now, they are much clearer. Now, somebody can turn strongly and with the support of the Chairman to the day-to-day running of the agency. That will then free the Commission under the Chairman's leadership to turn to the things that the Commission best does, namely, policymaking, adjudicating, and rule-making.

The Commission has not been devoting its attention to these functions to the extent it should because it has been doing too many of the things that should be done by the executive director for operations.

Senator SIMPSON. Doctor, what is your position on the need for and advisability of proceeding with commercial reprocessing in this country within the next 10 years? What do you base that observation on? What impact, if any, do the results of the international fuel cycle evaluation have on that judgment?

Several organizations have stated that the resumption of the GESMO proceedings will permit us to develop an adequate and complete record of the economics of reprocessing and develop the safety and safeguards aspects of the process so that we can be prepared to undertake reprocessing when and if the Government decides, and this Congress decides that it is in the public interest to do so. What is your view of that analysis, and again what impact do the results of that study have on your judgment? I realize that is kind of a scatter gun, but you are doing all right so far, so fire away.

Mr. CARNESALE. I am not sure I will touch upon every piece of it. Let me start with the GESMO, at least let me approach the question chronologically. Maybe that will help me give you a relatively complete answer.

I did not support the termination of GESMO in 1977, and I particularly did not support the way in which it was terminated. The termination action was taken not by the hearing board, but by the Commission. I am telling you what my personal views were, rather than my actions. It was not my action to take.

I felt that the NRC was an independent agency, and that that independence must be guarded at all times. Asking the administration or indeed the President whether or not the NRC should terminate the hearing was not the appropriate path to take. Indeed, the executive branch had two agencies that were party to that hearing: the Arm Control and Disarmament Agency and the Environmental Protection Agency. If the executive branch wished to terminate the hearing, the place to present the evidence for that would have been in the hearing through those parties.

I also had a substantive reason why I did not favor termination of GESMO at that time. I felt that GESMO was a very long lead time process. It was a generic hearing. If the administration's policy was to defer commercial reprocessing, I saw no reason why a long lead

time item should be canceled. It was not my understanding that the administration's policy was to forgo reprocessing forever, in which case it might have made sense to cancel GESMO. That was my feeling in 1977, and I think that is enough to indicate that I have no ideological bent that would have me for or against resumption of GESMO at a future time. I was opposed to its cancellation then, and I would be willing to consider the matter on its merits.

A lot has changed in the last 5 years. In your question, Senator, you referred only to reprocessing. You did not mention the word recycle nor did you mention breeders, but only reprocessing. That was only part of the subject of GESMO. GESMO was a generic environmental statement on mixed oxide fuel, but it was specifically aimed at the wide-scale use of recycle plutonium fuel in light water reactors. It was very carefully divorced completely from the breeder.

One should look at what has happened over the last several years, including the results of INFCE. In INFCE, the support for the breeder in industrialized nations is very strong. The support for recycling in light water reactors is marginal to nonexistent. Looking ahead to the question of reprocessing, it seems to me that the right question is this: When do we have to move forward on the fuel cycle so that, when we will need breeder reactors, we will also have the rest of the fuel cycle that has to accompany them? I would make clear that that was not the question asked in GESMO. Looking at the long lead time item of using plutonium in breeders seems sensible to me, but that was not the question in GESMO.

Senator SIMPSON. That is, I think, a helpful distinction. The reason I didn't inquire with regard to the breeder reactor and that theme is that you have addressed that already very carefully, and, certainly, the distinction and the discussion on recycling versus reprocessing is helpful for me as it came out of the GESMO and the INFCE study.

Well, just one other question, Mr. Chairman.

You are familiar at least more so now with the workings of the NRC, or at least observing the workings. I know you have addressed this somewhat, but what do you see as the area of the greatest potential for improvement in the functioning of that agency? You are going to be it. Given the new powers that are given to the Chairman by the reorganization plan, what do you intend to do to improve the functioning of the agency—not what should be done, but what do you intend to do?

Mr. CARNESALE. I believe that the most important challenge, and one that must be addressed rapidly, is the one of credibility and morale within the agency. Over the last several weeks, I have spent a great deal of time in Washington, but I have not spent a great deal of time at the Nuclear Regulatory Commission. Most of my time has been spent on Capitol Hill, and I appreciate the privilege of having been able to do that.

On personnel matters, which I consider to be very important, it would be my intention to do at least two things: First, to get to know the territory firsthand and to speak to the people who are now there, but making no commitments for the future; second, to tap the enormous resource that has been created by the investigations made of the agency in recent months. While the reports tend to deal primarily with organization charts, the people who prepared those re-

ports interviewed people, not boxes. I would meet with those interviewers and solicit their views on personnel within the agency, and then make changes as necessary, but not until I know the territory myself.

Most importantly, I would seek to establish procedures on the tasking of the staff. I mentioned that before in connection with the reorganization plan. I feel this is essential for the effectiveness of the agency as a whole, because it not only would free the Commissioners to do the work that they must do on policymaking, but also because there must be one NRC staff rather than five.

Let me turn to the business of the Commission, which is licensing. Consideration must be given not only to the case-by-case evaluation of applications, but also to the process and, in particular, to trying to make it more predictable. I know people have been struggling for years to make it simpler and faster, as well as more predictable. I would change those priorities. I think predictability is more important than the other dimensions. All parties, whether their primary focus be on providing nuclear energy or on protecting the public health and safety and the environment, share a common interest in a predictable process that enables both of those goals to be met.

People don't object so much to having to jump through nine hoops and seven hurdles if that is what has to be done to get to the other end; that is, to assure that their goals are met. But, an unknown number of hoops and an unknown number of hurdles upset all interested parties. One cannot produce absolute certainty in the process, because new knowledge gained during the process may lead to new ideas and new requirements that must be made.

Another area in need of attention is the establishment of priorities, a sense of what is most important and must be done first. It is not at all clear that simply flooding the industry with a mass of requirements without making clear which are most important best serves the safety of the public.

Senator SIMPSON. Mr. Chairman, I thank you very much for your courtesy. I do have some further questions. I would like to submit those in writing and ask you to respond in a like manner. (See p. 58.)

I will say to you that I have the impression that you will have to watch out for those unknown hoops and hurdles as you are dragged out through this one, and I hope you are given that opportunity.

Thank you very much.

Senator RANDOLPH. Thank you very much, Senator Simpson.

I have had to be in and out of the room so I want to make certain whether you, Senator Domenici, have questioned the witness.

Senator DOMENICI. No. I haven't, Mr. Chairman.

Senator RANDOLPH. Gary, have you finished, or do you want to continue? I am trying to give all the members an opportunity to ask questions as they have other commitments.

Senator HART. Mr. Chairman, I may have one or two more. I had an opportunity to ask some questions earlier. I will submit the balance of my questions. (See p. 51.) Would it be appropriate just to make one comment?

Senator RANDOLPH. Yes.

Senator HART. I think Dr. Carnesale, speaking for myself, has conducted himself very well today. I think the responses to some difficult and often quite complicated questions have been excellent. I think the

administration is to be commended for being able to attract Dr. Carnesale, a person of his background and stature, for what I have already described in my mind to be one of the key positions in any administration. I am very impressed by my personal contact as well as by the nominee's performance here this morning, and I feel that the Nuclear Regulatory Commission and the Government will be well served by this nominee's confirmation.

I may also say that if those are your children behind you they are extremely handsome and well behaved.

Mr. CARNESALE. Especially my wife.

Senator RANDOLPH. The chairman had intended at the proper place, and the proper place is always, to ask your wife to stand. Janet, would you do that, please? And the daughter, Kimberly, would you also stand? And the son, Keith?

Thank you. We welcome you to this hearing. This is something we do always with the nominees who are before us, and I know that you come as a united group.

Just before you ask questions, Senator, if I may. In connection with a question from Senator Simpson, you spoke about personnel and your feeling that there is a responsibility within your leadership to know who the personnel are and what they are doing. Is that correct?

Mr. CARNESALE. Yes.

Senator RANDOLPH. How many persons are you speaking of, when you speak of the personnel, that you would directly have an influence on in this matter?

Mr. CARNESALE. Influence is indeed the right word, Senator. The reorganization plan establishes mechanisms for hiring of personnel and, below the level of executive director for operations, by and large that responsibility is delegated to the executive director. The Chairman has direct responsibility, as I understand it, for his personal staff, for the Office of Public Affairs, and for the Office of Congressional Affairs.

In addition, he may initiate appointments of the directors of all of the staff offices to the Commission. But those appointments, of course, would be subject to confirmation by the Commission.

Senator RANDOLPH. I thank you for the further explanation.

Senator Domenici, we appreciate you questions.

Senator DOMENICI. Mr. Chairman, I have a scheduling problem. I only have about 10 minutes and I must leave. Might I inquire: Did we intend to continue this hearing this afternoon?

Senator RANDOLPH. It is my hope that we can conclude our hearing, accommodating all the members present. I am going to be prepared, if it is agreeable, to run through the noon hour myself, if we can, so that we might not have to come back later.

I didn't realize it was quite as late as it is. What is your suggestion?

Senator DOMENICI. I was going to ask questions for about 10 minutes and then I would ask the chairman even at the completion of my questions if he might reconvene at 2. I have an hour from 2 to 3 when I can be here.

Senator RANDOLPH. I cannot make it today at 2, but I could do it at 2:15.

Senator DOMENICI. That would be fine, Mr. Chairman.

Senator RANDOLPH. Would that be agreeable? Let's understand because there are members who are not here. John, we will contact other

members to see if they wish to participate and tell them we will be beginning at 2:15.

I will have questions that I will want to ask you. I will defer to the others. We want to do it as expeditiously and as thoroughly as you would want it to be done.

If you will go ahead, then, with the time you indicated?

Senator DOMENICI. Thank you, Mr. Chairman.

I think the Chair understands that I sit down here at the end because I have a propensity to smoke too many cigarettes, and it is for that reason that I get called on last. I don't mind at all.

I learn from all the others.

Doctor, are you pro-nuclear energy or against it?

Mr. CARNESALE. I am afraid one of the problems that tends to characterize nuclear issues is that most people fit in one category or the other. I have difficulty answering the question because there are so many symbols associated with it. I do believe that it would benefit our Nation substantially if nuclear energy continued to be not only part of our energy mix, but a growing part of our energy mix. To that extent, I am certainly pro-nuclear. On the other hand, there are some things that have the word nuclear in them to which I would certainly be opposed.

Senator DOMENICI. I understand the complexity of the issue and I understand that my question is too simple, but I asked it because that is generally the way people perceive it. I just wanted to make sure that you understood that is the way some people are going to look at you and this nomination, and some people are going to look at your activities afterward in light of what you have said here.

The question was asked about Clinch River breeder reactor on behalf of Senator McClure, and I was here for your answer. Forgive me if it was just my inability to grasp that answer which causes me to be confused. So, might I just ask you very persistently: Are you in favor of the Clinch River breeder reactor continuing or not? I don't want an answer about breeder technology. You have told me about that. The President has talked about that. I just want to know about the Clinch River breeder reactor.

Mr. CARNESALE. I did not express a position on that specific question because I don't have one. I am not intimately familiar with the Clinch River breeder reactor design as it now stands or what it is that is proposed to be built. What I did say is that I have no ideological view on the matter and that the question of whether or not to move forward with the Clinch River breeder reactor is not something to be determined by the Nuclear Regulatory Commission.

Senator DOMENICI. I understand that also. And I understand your answer to the extent that you have said what your views are with reference to NRC's role, but here again, I don't want to appear to be argumentative at all. I merely want to make sure that the record is appropriately made for those who consider this to be a very vital issue.

You are telling this committee that even with all of your background and your engineering expertise that you don't presently have a view, pro or con, on whether the Clinch River breeder reactor should be continued on or not? Is that what you are saying?

Mr. CARNESALE. That is correct.

Senator DOMENICI. Is that really based on the fact that you don't know enough about it?

Mr. CARNESALE. Yes.

Senator DOMENICI. How is it that a man of your experience and exposure—how is it that you don't know enough about it? Could you explain that to me?

Mr. CARNESALE. Yes. The field of nuclear energy and nuclear energy policy is a very broad one. I have been spending the last 2 years primarily in the international dimension of nuclear power, and particularly on INFCE. I have not been a consultant to industry on the Clinch River breeder reactor. So, I have had no exposure to the Clinch River breeder reactor design.

Senator DOMENICI. Would you state the last part of your statement again?

Mr. CARNESALE. I have not in the past several years been involved professionally in an area that required or indeed that involved detailed knowledge of the Clinch River breeder reactor project. I have not been a consultant to industry in that period. I have been working in the International Nuclear Fuel Cycle Evaluation, which did not deal with specific designs but rather with policy issues.

Senator DOMENICI. You talked about predictability in the licensure process as being a very significant, if not the most significant, quality or characteristic that you would hope to promote. Let me ask you, Doctor, presently, as I understand it, it takes 12 years or more for the United States of America's licensing process to move the cycle. Japan has a process, and it is taking half the time or less for the same basic episode to occur. If urgency is something that is part of this energy alternative, being part of the mix, will your predictability goal in any way address that 12-year time frame or is that not important?

Mr. CARNESALE. It is important, Senator. Indeed, when I spoke of predictability I also mentioned simplicity and timing. I said that I felt that predictability was the most important dimension, but the others were important as well. If reductions of the time can be accomplished by increases in efficiency, then clearly they would be desirable. If they are made at some sacrifice to either credibility or public health and safety, I am sure that none of us would be in favor of them. But to the extent that shortening can be accomplished through efficiency and predictability, I would do my best to achieve it.

Senator DOMENICI. Doctor, based on your expert knowledge and experience, is the 12-year process for licensing a necessity to protect the public health and welfare and to build credibility?

Mr. CARNESALE. Senator, I suspect not, but I am aware that people for years have promised to shorten it. Indeed, I don't believe licensing reform has ever become legislated; it is a very difficult problem. I don't want to promise something I can't deliver, but it does seem to me that to the extent that you can improve efficiency and predictability, you ought to be able to reduce the time. I find it difficult to say to what shorter time it might be reduced.

Senator DOMENICI. Obviously, if I wanted to ask you to promise something, I would ask you to promise something. I didn't ask that. I just wanted to know so we will know if you become Chairman. You don't see anything inherent in the licensing process of nuclear light water reactors that should require 12 years for licensing, just as an expert; that is all I am asking. I am not asking you to propose a new law. Would you just answer it in that light?

Mr. CARNESALE. Yes. I know of no reason why the minimum time should be 12 years.

Senator DOMENICI. With reference to the involvement of the Nuclear Regulatory Commission in matters that concern our national defense, we can talk about that for a while.

At this point I think you know that when the NRC was created that there was some serious congressional debate on how much should they be involved in the production of nuclear weapons, and to my knowledge the area that the Nuclear Regulatory Commission retained jurisdiction—in terms of licensing or what—I should say was in permanent storage of high-level military wastes, wherein they retained, they were given authority to license. Is that how you understand it to this point?

Mr. CARNESALE. Yes.

Senator DOMENICI. There are some who think that the Nuclear Regulatory Commission should involve itself in either regulating or licensing of defense wastes that are involved in the production cycle, either as part of research or development, that are up the chain from that ultimate high-level permanent disposal which is at the tail end of the chain.

Knowing what you know about the way the Nuclear Regulatory Commission was created, its basic credibility and public participation, confrontation, including litigation as part of its atmosphere, would you tell this committee what your thoughts are about whether or not it should be expanded to involve itself in the production chain for nuclear weapons?

Mr. CARNESALE. As you know, I have also worked in the national security area, so I am sensitive to the issues involved in that area.

Clearly, a blanket policy that would involve the NRC, for example, in the complete production chain would be unacceptable to me on its face if the open processes of the NRC had to apply. Much of military value can be learned from the facilities and the materials in them.

So, for national security reasons, it would seem to me that one could not answer in the affirmative that the NRC should expand to include the full production chain.

As to the other extreme—that is: Should the NRC not be involved at all?—I find that a more difficult question. There is a tension between providing for the public health and safety and for the national security. What I can express is my sensitivity to the national security issues and my recognition of the slippery slope. It is hard to do just a little bit more without expanding still further.

If such expansion were ever to be considered, it would have to be not only on a case-by-case basis, but also bearing in mind the full context of the national security issue.

Senator DOMENICI. So, you are fully aware and telling us that you understand that there is a significant difference between the tail end of licensure when the process of nuclear weaponry is basically completed and episodes up and down the chain in terms of wastes that are produced? There is a difference in terms of the effect of delay, the effect of open confrontation and the like? Is that what you are saying?

Mr. CARNESALE. Yes.

Senator DOMENICI. With reference to safety studies that are under the jurisdiction of the NRC, OMB has recommended significant cuts in advanced safety research, including research on the breeder, ad-

vanced safety research on the breeder reactors. Could you tell the committee what your views would be on whether or not we should curtail or cut back on those kinds of advanced safety studies, or are they significant to future development of advanced reactors?

Mr. CARNESALE. With your permission, Senator, I would prefer to answer that question in writing later, as I become more familiar not only with the NRC programs, but also other programs that might relate to them.

Senator DOMENICI. I would only hope that you would give us your answer to that without placing any significant credibility on what OMB thinks about it. Could you do that? You don't work for them yet, you understand?

Mr. CARNESALE. I will make an independent judgment.

Senator DOMENICI. That is what I want you to do.

[Mr. Carnesale supplied the following:]

LEXINGTON, MASS., August 20, 1980.

HON. PETE V. DOMENICI,
U.S. Senate,
Washington, D.C.

DEAR SENATOR DOMENICI: During the course of the hearing before the Committee on Environment and Public Works on my nomination to be a member of the Nuclear Regulatory Commission, I indicated that I would respond later in writing to one of the questions you asked of me. That question and my response appear below.

Question. With reference to safety studies that are under the jurisdiction of the NRC, OMB has recommended significant cuts in advanced safety research, including advanced safety research on breeder reactors. Could you tell the committee what your views would be on whether or not we should curtail or cut back on those kinds of advanced safety studies, or are they significant to future development of advanced reactors?

Response. The schedule for advanced safety research on breeders or other advanced reactors should be consistent with the schedules for research, development, design, and construction of the reactors themselves. Where there is uncertainty in the reactor schedule the presumption should be in favor of a more intensive program of safety R. & D. Performing such R. & D. earlier than turns out to have been necessary might incur some financial penalty, but the unavailability of safety study results when needed could be far more costly, financially and in other ways.

Please let me know if further information would be helpful.

Sincerely,

ALBERT CARNESALE.

Senator DOMENICI. Is there some way in your opinion for management experts to measure the effectiveness of the Commission's licensing procedure? That goes back to your notion of predictability and my questions about 12 years. My intuition tells me that we are doing a lot of things just because they have been done. We are going through the hoops that you have spoken of just because they have been developed either through the process of litigation or rules and regulations.

I wonder if you might share with me your thoughts on whether there might be some way to measure whether that process is effective? Could you give us your thoughts on that?

Mr. CARNESALE. That is a difficult question, Senator. The NRC has a responsibility to license nuclear facilities in a way which adequately protects the public health and safety and the environment. One might jump to the conclusion that what we should do is simply count the number of licenses in which that is the case as the only measure of effectiveness, and to some extent that might be warranted. But if there

were no licenses, there could be many reasons, either beyond the purview of the NRC or because the NRC is doing what it ought to do. If there are many licenses issued, it may be because the NRC is not doing its job. So, I know no simple measure. What you can deal with, though, is the efficiency of operation. How many times is the same thing being done over and over again to no avail? How many times is the process being abused and by whom, and can that be protected against with no substantive loss? How many offices and individuals within the NRC are doing not only the same things but often things at cross purposes because of ineffective management processes and ineffective leadership?

Senator DOMENICI. Would you include in that how many times the same issue can be raised throughout a process?

Mr. CARNESALE. I would to the extent that there isn't some new dimension of the issue that is apparent.

Senator DOMENICI. Could I just move over a little bit now to nuclear waste disposal?

While I understand that the Commission and you as Chairman would involve yourselves in carrying out the substantive law of the land with reference to health and safety and licensing of nuclear waste disposal facilities, could I just ask you a couple of questions about your philosophy?

You have indicated already that—in my question of whether you were for nuclear energy or against it—you have indicated that you think it is an essential ingredient in the energy mix. With reference to the disposal of nuclear waste, do you believe that there is a technical and technically safe way to dispose of nuclear waste, both short term and long term; not that we have accomplished it, but as a scientist do you have an opinion as to whether or not it is technically and scientifically achievable?

Mr. CARNESALE. Yes. I believe it is technically and scientifically achievable, provided that the standard set is not an absolute one.

Senator DOMENICI. Is an absolute standard necessary in your opinion?

Mr. CARNESALE. No.

Senator DOMENICI. No more necessary there than it is in other risks that we take in the development of energy and in an industrial society? Is that not correct?

Mr. CARNESALE. As you know, there are individuals who do insist upon an absolute standard in this area.

Senator DOMENICI. If we are going to have a zero risk, your answer would be different; is that correct?

Mr. CARNESALE. Correct. You have it exactly, Senator.

Senator DOMENICI. If you feel that it is scientifically and technically achievable, do you believe there is any reason at this point in time or in the foreseeable future, 10 years, to curtail the development of nuclear energy unless and until we have found that ultimate, permanent disposal process and establish it with more certainty than your previous answer indicates as a scientific fact or truism?

Mr. CARNESALE. Based upon what I know now, I do not believe that the waste disposal matter should be a reason for not moving forward with nuclear energy.

Senator DOMENICI. I assume you are aware that the disposal issue is not a one-faceted issue, that is, with regard to the scientific and tech-

nical achievability, but rather one of perception of people as to whether it is safe, and in that regard, since the site or sites for nuclear waste have to be somewhere, the notion of State participation in aspects of siting is a very important issue to the United States today. I assume you are aware of that?

Mr. CARNESALE. Yes; Senator.

Senator DOMENICI. Would you give us your view of how the Nuclear Regulatory Commission might interact with the States in the licensing process?

Mr. CARNESALE. Yes. Let me go back. While I agree that the problem is primarily one of perception, you asked me before for a technical judgment, which I gave, but I can't predict the future. So, it was not meant as an absolute statement about safety.

Senator DOMENICI. I understand.

Mr. CARNESALE. As to State participation, I understand that the precise role of the States is under some dispute in this location as well as in others, and until I study that matter more carefully I would not want to express a view on precisely what the role should be. As a matter of principle, however, I note that locating a facility of this kind is a sensitive matter, and it is important not only that institutions in the region participate in a meaningful way, but also that individual citizens and interested groups participate.

Senator DOMENICI. I have time for only one more question, and then I will be here at 2:15.

I have two or three more that Senator McClure wanted to ask, and I have a few of my own.

Let's back up to the licensing process, your notion of predictability and my expressed concern about the 12 years or more that it is taking. What are your views with reference to some kind of advanced approval or rulemaking with reference to standardized plant designs which is inherent in that discussion? I should have asked it immediately following that.

Mr. CARNESALE. The Commission has taken some action on the use of standardized plant designs, and the Commissioners have before them a number of generic questions on which they hope to have a rulemaking, so that these matters need not be considered again for each plant that comes up. Clearly, standardization has a role.

I would caution against pushing that role too far, however. We probably should all be very thankful that Three Mile Island was not a standardized design, and that not all of the nuclear powerplants in the country were of precisely that design. I wouldn't push standardization to the extreme, but there are components that could be and ought to be standardized. Such action could aid in the licensing process.

Senator DOMENICI. You see some advantage, nonetheless, to us not having standardized exclusivity for the whole works so to speak?

Mr. CARNESALE. Yes, Senator.

Senator DOMENICI. Could you tell me aside from the Three Mile Island example, if you have any other reasons for not promulgating standardized designs? It is an example that you wouldn't want them all to have that shortcoming you spoke of. I assume that is what you are saying. Are there any others?

Mr. CARNESALE. Yes. Another reason is that I wouldn't want to stifle incentive for improvement. If we come up with better safety systems, I

would not want to inhibit their introduction by making the licensing process more difficult for plants not of the standard design, Innovation is something that you want to be sure can still occur.

Senator DOMENICI. As I understand it, the chairman authorized me to recess until quarter past 2, and if that is not too inconvenient, we will see you back here then.

Thank you very much.

[Whereupon, at 12:40 p.m., the committee was recessed to reconvene at 2:15 p.m., this day.]

AFTER RECESS

[The committee reconvened at 2:28 p.m., Senator Pete Domenici presiding.]

Senator DOMENICI. We will call the session back to order.

This morning when Senator Stafford asked questions on behalf of Senator McClure, he indicated that he was submitting a detailed list of questions to be answered in writing that had been submitted by Senator McClure and that there were two additional questions that he wanted asked. So let me do those right now.

Section 131 (b) of the Atomic Energy Act, which was added to that act with the Nuclear Nonproliferation Act of 1978, governs the approval of the United States of requests from foreign governments to reprocess fuel provided that foreign government by the United States. Section 131 (d) states in part that, "nothing in this section is intended to prohibit permanently or unconditionally the reprocessing of spent fuel owned by a foreign nation which fuel has been supplied by the United States * * *." The NRC must be consulted on each such approval decision.

In view of your acknowledged long-term and internationally known opposition to reprocessing as a member of the Ford Foundation Nuclear Energy Policy Study Group and head of the U.S. delegation to the Technical Coordinating Committee of the International Fuel Cycle Evaluation, would you be in a position to objectively review such reprocessing requests? Would you feel compelled to disqualify yourself in any such NRC proceedings? Similarly, would you be in a position to objectively review export license applications, or would you feel compelled to disqualify yourself?

Mr. CARNESALE. Senator, without accepting the characterization of myself in the question, let me respond to the last part.

I am confident that I could be objective. I have never been in opposition to reprocessing on ideological grounds. It is not that I have any particular emotional feeling about reprocessing. I felt in 1977 that, at the time, reprocessing was neither economical nor necessary, and that it was inappropriate for the United States to move forward with commercial reprocessing using Government funds while we were asking other governments to delay. It was not a matter of feeling that something was fundamentally wrong with reprocessing. I am certainly prepared to be objective on those questions, and I do not at all feel it would be necessary for me to disqualify myself.

Similarly, on the export matter, I have never taken a position in favor or against a particular export that I can recall, nor have I been involved in formulating policies with respect to exports. So I see no reason why I would have to disqualify myself there.

Senator DOMENICI. Well, then, I take it—this is Senator McClure's question and the next one will be just mine as an interpretation of it. In that question Senator McClure stated, "in view of your long-term and internationally known opposition to reprocessing as a member of the Ford Foundation Nuclear Energy Policy Study Group and the

U.S. delegation to the Technical Coordinating Committee of the International Nuclear Fuel Cycle Evaluations." I take it that you do not agree that you have acknowledged your position and that you are an opponent; you don't agree with that part of this question.

Mr. CARNESALE. No, I do not agree. In particular, I don't understand how one can be in favor of a breeder reactor and all that goes with it, which I believe is an option we need, but at the same time be opposed to an essential part of its fuel cycle, which is reprocessing. I believe that the characterization in the question is an inaccurate extension of my earlier opposition to using Government funds for reprocessing for recycling in light water reactors.

Senator DOMENICI. And that was principally predicated upon the fact we were asking others not to?

Mr. CARNESALE. There were several reasons. I have written on this subject, and I have listed both advantages and disadvantages and said where I came out. I thought the disadvantages outweighed the advantages. There were arguments with merit on both sides, but I felt that the small economic advantage was insufficient for us to move forward at a time when we had not yet looked at alternatives and at ways to make reprocessing more proliferation resistant. By going ahead then, we would have provided a rationale for every country in the world that had a light water reactor to maintain a stockpile of plutonium. It seemed to me it was worth waiting before we charged ahead with that technology. When I said defer, I meant defer.

Senator DOMENICI. Senator McClure had one additional question.

The President's 6-month administrative moratorium on licensing, imposed in the President's response to the Kemeny Commission, ended on June 7, 1980. You have apparently indicated to others that you as chairman would resume licensing expeditiously. You indicated to me that while there was no generic reason now to continue the moratorium, you would have to reserve judgment on licensing to a case-by-case basis. Please clarify your exact position on resuming licensing and in doing so explain how you would propose to address the State emergency plan requirements and relationship of NRC with the Federal Emergency Management Agency.

Mr. CARNESALE. I doubt that I ever said precisely that I would resume licensing expeditiously, because that would be presuming the outcome of the consideration of the licensing applications. I doubt that I said that, and if I did I certainly misspoke.

What I have indicated was that I knew of no generic reason why one could not consider each of the applications for either construction permits or operating licenses on its own merits at this time, and to move forward with that consideration expeditiously, but not with the conclusion expeditiously. This is not an unusual position. It is my understanding that the Commission has determined that it could examine each of the applications on a case-by-case basis. I understand also that this past week, as recently as Friday, there was some discussion at the Commission of the role of FEMA, and I prefer not to express a view on that matter at this time. I am just not well enough informed.

Senator DOMENICI. Well, I take it that you do agree that there is no reason to continue the moratorium.

Mr. CARNESALE. Yes. I would consider a moratorium a reflection of a generic reason.

Senator DOMENICI. Senator Baker asked if I would ask this question :

Could you suggest any specific approaches, vehicles or new avenues by which licensing might be expedited? For example, the concept of a centralized nuclear power park or parks with the attendant institutional advantages has been much discussed. Have you any view on that idea and whether it might form the basis for an expedited licensing procedure for new plants on existing sites?

Mr. CARNESALE. There are two parts to your question.

Senator DOMENICI. Yes.

Mr. CARNESALE. First, it appears to me that the Commission should be moving forward with something that it has set aside after Three Mile Island, primarily, as I understand it, for lack of resources, and that is the generic actions related to licensing. I believe that about 10 have been identified. They deal with the economics of coal versus nuclear power and other things that could apply in large measure to almost any license. I would pursue that generic avenue more strongly than any particular mechanism like a nuclear power park.

Second would be—and this is something, of course, that the industry has given careful consideration to—to investigate further the banking of sites. By that I mean the selection early on of potential sites for a particular nuclear reactor powerplant and doing much of the analysis of the site—environmental impact and the like—early in the game so that it needn't slow things up.

As to the nuclear power park most of the things I have seen in that regard relate to fuel cycle facilities at the same place as the reactors. Others simply talk about multiple reactors at the same site. Of course, the latter is already a common practice: many of our sites have more than one unit. And I would hope that the parts of the analysis that could apply to multiple units would not have to be repeated each time.

As to the matter of fuel cycle facilities, that really doesn't relate very strongly to the kind of reactors we are currently using. I don't think this is as much a question of licensing speed-up as it is of looking more broadly at the questions of safety and physical safeguards and the like.

Senator DOMENICI. Doctor, I had no additional questions. I don't know whether the chairman wants me to proceed with the next witness. We have about 20 minutes or so.

I wonder, in light of the fact that the chair is not here, if you would consider just remaining until he returns in the event he had any questions, then we will proceed to call the next witness in your presence. Thank you very much. I appreciate your forthright answers.

Is Mr. Douglas Lee here?

Mr. LEE. Yes, sir.

Senator DOMENICI. I understand you represent a group that is called the Americans For Nuclear Energy, Inc.

Mr. LEE. That is correct.

Senator DOMENICI. I have been asked to read for purposes of clarification this statement from the American Nuclear Energy Council, testimony by Doug Lee :

We would like the record to show that Americans for Nuclear Energy does not represent the nuclear industry. Our organization, American Nuclear Energy Council, which does represent them has not taken a position on the nomination.

This statement which I have read is authorized by John Conway, president of ANEC.

Mr. LEE. I would agree with Mr. Conway.

Senator DOMENICI. Thank you very much. You may proceed.

STATEMENT OF DOUG LEE, CHAIRMAN, AMERICANS FOR NUCLEAR ENERGY

Mr. LEE. As you pointed out, I am chairman of Americans for Nuclear Energy. Our organization is the largest pro-energy citizens' group in the Nation. We are not a technical organization, but a group of people dedicated to the advancement of nuclear energy and all energy production as a whole. We are wholly funded by our membership, accepting no donations from utilities or government.

AFNE is here today to oppose the nomination of Albert Carnesale as Chairman of the Nuclear Regulatory Commission, or the NRC.

Seven months ago, AFNE organized a careful assessment of the qualities we believe absolutely are necessary for the person who will serve as our next NRC Chairman. This person must have both ability and experience, be uniquely qualified as a strong leader and must have a managerial history in the technical aspects of nuclear energy. The new Chairman must be able to demonstrate the capacity to successfully oversee a growing regulatory agency with sharply divided viewpoints within its ranks, while simultaneously providing the citizens of the Nation with the safest possible operation of our nuclear energy facilities. Unlike any other energy leader in America, the new NRC Chairman must possess exemplary expertise in nuclear energy production and management. This should certainly include an operations-level history within commercial power generation. Perhaps, though, the most important qualification required is the professional background and reputation to inspire public confidence with reasonable security that our nuclear energy source is under the best possible leadership.

Unfortunately, in our view, Mr. Carnesale fails to meet these demanding standards, and we are compelled to oppose this confirmation.

AFNE is pronuclear. We strongly advocate the full development of America's vast nuclear energy potential.

With such rigid stand, we recognize our obligation to the public, our membership and future generations to guarantee our nuclear program meets the highest standards of excellence for safety and dedicated professionalism.

Like you, we have seen the accident at Three Mile Island threaten the future of nuclear energy, and generate serious misgivings within the public mind. As you may not be aware, however, there is a good chance that this worst of all nuclear energy plant accidents could have been avoided if the NRC Commissioner on duty at the time had understood the workings of the nuclear reactors in an operational manner. Early in the event at TMI, the Commissioner on duty was informed of the strange behavior of the reactor core, but, having no experience, he failed to take any commanding actions that could possibly have made the worst accident in history just another minor incident.

I bring this topic to light because the Kemeny Commission's recommendations, and the NRC reorganization which followed, assign the control of all operations in future accidents to the NRC Chairman. If this individual is inexperienced in reactor operations, there is little chance he or she could perform the required actions to assure maximum public safety and contain the extent of the damage to the facility.

Mr. Carnesale's only contact with nuclear energy on a commercial level was from 1957 to 1962 when he was only 21 to 26 years of age, and then only working in "engineering analysis and design of nuclear power systems for terrestrial and space applications" for the Martin Marietta Corp. This was no direct nuclear energy production experience in any way, and even if it had been, the state of the art has changed as drastically as has air travel from those prop-jet days to the Space Shuttle.

Since that brief period of research in a nuclear propulsion-type system environment, Mr. Carnesale's career has centered within the isolated world of academic, research, and weapons limitation policy. None of these posts provide even the minimum required experience for the NRC chairmanship.

If there were no other reasons, this clear lack of experience would disqualify the nominee. But, we do have other objections.

No part of Albert Carnesale's past indicates a real world understanding of nuclear reactor operations and the many varied situations which could be associated with their functions and regulation. In fact, Mr. Carnesale has been much closer to nuclear weapons and their limitations than to the peaceful use of nuclear energy.

One of the major concerns AFNE has found among the general public is the totally fallacious belief that a nuclear reactor can explode like a bomb. The association of nuclear weapons with nuclear energy is false, but until there is more widespread public understanding on this fact, AFNE believes all possible must be done to keep the two fields properly separated. Confirmation of Albert Carnesale would have precisely the opposite effect as the two would be again joined within the public mind.

His teaching post at North Carolina State University centered around "developing interdisciplinary programs on contemporary issues." Among the courses taught were "The Energy Crisis," "The Arms Race" and "Arms Control and National Defense." This scarcely demonstrates any concentration on the peaceful use of nuclear energy.

Since moving to Harvard, he has continued his arms control and defense policy interests, while also dealing with such theoretical questions as the political, military, economic, and social implications of nuclear energy. If anything, he has gone backward from understanding the real world of producing electrical power from nuclear energy for the needs of an energy-hungry nation in the safest possible manner.

If the post we are discussing here today was related to arms control or disarmament, or even arms policy, Mr. Carnesale would be a likely choice, but I submit to this committee that such a weapons-related background would further confuse an already clouded public issue.

Another major objection AFNE has to this nominee is his participation in the authorship of the Ford-Mitre study of 1977 where Mr. Carnesale was part of the policy bias of the report's strongly anti-breeder reactor position, and its rejection of spent fuel reprocessing

based on the theoretical view that such technology could be stopped and potential weapons-proliferation could be averted.

No one on this committee is unaware of the fierce battle over the future of the breeder in Congress. I would point out to you, therefore, that it was the Ford-Mitre study, coauthored by Dr. Carnesale, that was used by President Carter to justify his stringent antibreeder stance and his virtual shutdown of our Nation's reprocessing facilities.

The line of thinking put forward by Dr. Carnesale and his co-authors has been catastrophic for the United States. It has worked the exact opposite way from their theoretical view, as Third World nations previously dependent on the United States to reprocess their spent fuel have now turned to other willing nations as reliable partners in the reprocessing of spent fuel. The United States has thus essentially lost its control and accounting of nuclear materials by refusing to fulfill its international obligations to provide this service.

If participating in an ill-fated study can be excused for adventures in theoryland, continued espousal of thoroughly discredited claims by real world experience cannot.

The Carter/Carnesale policy of halting breeders for nonproliferation reasons was roundly rejected by the world's scientific community early this year at the International Nuclear Fuel Cycle Evaluation Conference in Vienna. The Conference was established from the precipitous decision in 1977 by President Carter to withdraw our Nation from the breeder reactor program and reprocessing of our spent fuel supplies. The chairman of the U.S. delegation which presented this much-ridiculed and thoroughly discredited policy was none other than Albert Carnesale. Having a man known to the world's nuclear scientific community for his failure to recognize reality in such an important phase of nuclear energy policy as Chairman of the Nuclear Regulatory Commission would surely only further reduce our already damaged worldwide nuclear credibility.

Mr. Chairman, AFNE supports the breeder reactor and the reprocessing of spent fuel from our nuclear plants. We feel that continuing to stick our heads in the sand like ostriches is inexcusable. Therefore, we thoroughly agree with Dr. John R. LaMarch, head of the department of nuclear engineering of the New York Polytechnic Institute, a critic of the Carter/Carnesale nonproliferation policy, and himself an expert on nonproliferation questions, in a statement from which I quote:

The other major industrial nations in the world, especially France and the Soviet Union, all have substantial breeder programs, and we are falling rapidly behind in this technology. DOE administrators express the view that the United States can always buy breeders from France. Breeders were first developed in the United States * * * and we already import too much technology which had its origins in this country.

If the United States is to regain the respect of the world, a leadership role in world affairs and a share of the vital world market for energy-producing and opportunity-creating technology, we must assert ourselves with real leadership in this field. The Carnesale nomination is yet another step away from those goals to which we feel our Nation must aspire if we are to recover our economic and technical strength in the world community. A careful assessment of the demerits of this choice has brought our organization to oppose Mr.

Carnesale, and I stress not for any personal reasons, but for the facts I have outlined for you today.

I am confident that your scrutiny into this vital and highly critical position being filled by this unfortunately misqualified man will convince you that the nomination was made without a realistic grasp of the critical nature of the job and the implications it holds for nuclear safety, public understanding and the respect of the rest of the world.

I hope your review of Mr. Carnesale's nomination will show a far-sighted and safety conscious understanding of these important questions.

Thank you for providing our organization the opportunity to testify today. Any questions?

Senator DOMENICI. Well, Mr. Lee, if I had any questions, I wouldn't have time to ask them because I have about 30 seconds to make the vote. But I think your position is eminently clear, and I don't have any questions. I don't know whether the committee intends to reconvene on this issue, but certainly your testimony was available and will be made available to all members as a result of your testimony. So I thank you very much.

Mr. LEE. I will be willing to answer any questions.

Senator DOMENICI. Doctor, we need you back for just a second, then we will be finished for the day.

I want you to know, for the record, Senator Ford intends to submit written questions. (See p. 65.) It is a practice of this committee they will be considered as if submitted by the members, and they should be answered appropriately.

Doctor, do you have any financial holdings or interests that could be considered a conflict of interest with your official duties?

Mr. CARNESALE. I believe I do not now have. I believe I did at the time the financial statement was submitted, and I have since divested myself of them.

Senator DOMENICI. And the financial statement has been submitted in accordance with the rules and regulations?

Mr. CARNESALE. Yes, sir.

Senator DOMENICI. Now, if confirmed as a member of the NRC, will you appear before the committee of Congress, when requested, to discuss matters relating to your official duties?

Mr. CARNESALE. Yes, Senator.

Senator DOMENICI. Unless staff members from the majority and minority have anything further, thank you very much, Doctor, and we stand in recess until the call of the Chair.

Mr. CARNESALE. Thank you.

[Whereupon, at 2:55 p.m., the committee recessed, to reconvene subject to call of the Chair.]

[Responses from Mr. Carnesale to written questions from Senators Randolph, Hart, Simpson, Ford, and McClure and responses to letters sent to various people by Senator Stafford on behalf of Senator McClure follow:]

15 Ingleside Road
Lexington, Massachusetts 02173
August 13, 1980

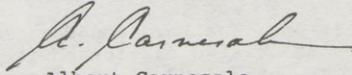
The Honorable Jennings Randolph
Chairman, Committee on Environment
and Public Works
United States Senate
Washington, D.C. 20510

Dear Mr. Chairman:

I am pleased to submit my responses to the questions addressed to me by Members of the Senate in connection with the Committee's consideration of my nomination to be a member of the Nuclear Regulatory Commission.

I hope that these responses will be of use to the Committee.

Sincerely,



Albert Carnesale

Enclosure

RESPONSES TO QUESTIONS FROM SENATOR JENNINGS RANDOLPH

1. Question. You have said, and I quote, "The objectives of each individual Commissioner and the objectives of the Commission as a body need not be identical, but they should and can be mutually supportive." Please tell us what would be your objectives as an individual Commissioner and what you think the objectives of the Commission should be:

Response. My primary objective as a Commissioner would be to assure that the benefits of use of nuclear power and other nuclear materials and facilities licensed or regulated by the NRC are derived in ways which protect the public health and safety, preserve environmental values, and support national security. I believe that this should also be the primary objective of the Commission.

In support of this primary objective, I would aim: (1) to assure that the NRC is competent, open, objective, efficient, and effective; (2) to minimize uncertainties in the licensing process and, through improvements in efficiency, to reduce the resources and time consumed by the process; and (3) to earn and achieve public confidence in the NRC and in the quality of nuclear regulation.

2. Question. The Ford Foundation Study with which you were associated criticized the methodology of the Rasmussen Report, WASH 1400, long before portions of it were disavowed by the Nuclear Regulatory Commission. Do you feel that after Three Mile Island there is a value in another systematic risk prediction study?

Response. Yes, I feel that a risk assessment program should be pursued. Risk assessment techniques can be particularly useful in estimating the relative importance of factors which contribute to the risk of accidents.

3. Question. The various studies of the Three Mile Island accident endorsed an observation of the Ford-MITRE Study that regulatory research and development should place more emphasis on actually improving safety as opposed to proving reactors are safe enough. The Congress in recent years has provided greater funding for an NRC effort known as improved safety systems research.

Nevertheless, the Nuclear Regulatory Commission continues to have very little in-house research capability, and must therefore contract with the Department of Energy for much of its reactor research. Given the different statutory mandates of the two agencies, is this state of affairs appropriate?

Response. I recognize the need for strong, in-house NRC competency in safety system research, and as a Commissioner and Chairman I would work to strengthen that capability. Beyond meeting this need, I know of no reason why the differing statutory mandates of the NRC and the DOE must stand as a barrier to their cooperation in such research. Outside of any specific areas of research in which such cooperation would be inappropriate, the question of whether a particular NRC research program should be performed in-house, at a national laboratory, or by another contractor should be decided primarily on the bases of quality, timeliness, and cost effectiveness.

4. Question. On the subject of nuclear waste, the Ford Foundation Study expressed confidence in the feasibility of permanent disposal, while expressing greater concern about waste management prior to permanent disposal. Yet the President's Interagency Review Group stated that "The feasibility of safely disposing of high level waste in mined repositories can only be assessed on the basis of specific investigations at and determinations of suitability of particular sites."

The IRG went on to declare:

"The management of radioactive wastes for the past three decades can be characterized by inadequate integration of waste management R&D efforts with those for other parts of the nuclear fuel cycle. This has been caused in part by inadequate perceptions of the additional technological and scientific capabilities needed to develop an acceptable disposal capability (historically assumed to be achievable through isolation of wastes in mined geologic repositories) and in part by low funding levels compatible with a view that the waste management program should focus on only one geologic medium (salt) for HLW disposal and few sites.

Previously, very few earth scientists have been involved in either program management or scientific R&D for what is now recognized as a problem whose resolution will clearly require an unprecedented extension of capabilities in rock mechanics,

geochemistry, hydrogeology, and long-term predictions of seismicity, volcanism, and climate. Important groups of scientists from disciplines such as materials research and risk assessment modeling have until recently also not been incorporated into the program."

Would you comment on the difference between the Ford MITRE and IRG evaluations?

Response. The views on the feasibility of permanent disposal of high level waste expressed in the Ford/Mitre report (Nuclear Power Issues and Choices, 1977) and in the "Report to the President by the Interagency Review Group on Nuclear Waste Management" (March 1979) do not appear to me to be inconsistent. In particular, the Ford/Mitre report states (on pages 19 and 20):

" We are convinced that nuclear wastes and plutonium can be disposed of permanently in a safe manner. If properly buried deep underground in geologically stable formations, there is little chance that these materials will reenter the environment in dangerous quantities. Even if material were somehow to escape eventually in larger quantities than seems possible, it would not constitute a major catastrophe, or even a major health risk, for future civilizations."

and the IRG report states (on page 66):

"Disposing of nuclear wastes in mined repositories is a highly promising approach to long-term isolation. While there is a possibility that such a technique could not be successfully employed, there is a high degree of confidence that a repository can be sited, designed, and operated so as to provide reasonable assurance of long-term isolation of radionuclides. For this reason, a program that assumes reliance only on mined repositories for the first few disposal facilities has a high probability of technical success."

The IRG--as a government interagency group established by the President to examine only the waste issue--made the more comprehensive analysis of this matter, and its report includes a number of proposals for the implementation of policy.

5. Question. Since the release of the Ford-MITRE Study, the President has followed one of its important recommendations and ordered the deferral of reprocessing of spent reactor fuel. This decision has posed the question of how to manage spent fuel pending its ultimate disposal.

Spent fuel storage is an interim measure. For this reason, as well as to reduce the overall shipments of spent fuel around the country, there is consensus that spent fuel storage at existing reactor sites should be maximized, and Federal away-from-reactor storage should be provided only for that limited volume of spent fuel which utilities themselves cannot store.

In your view, how do we best encourage on-site storage expansion? Is unrestricted eligibility for Federal away-from-reactor storage consistent with a policy of encouraging expansion of on-site storage?

Response. One way to encourage expansion of on-site spent fuel storage capacity would be to set the price for away-from-reactor (AFR) storage at a level higher than the cost of expansion and storage on-site. This would encourage on-site expansion at those sites at which it could safely and reasonably be accomplished. Under such conditions, a policy of unrestricted eligibility for Federal AFR storage could be consistent with a policy of encouraging expansion of on-site storage.

6. Question. At the August 4 hearing you were asked whether, given your confidence concerning the feasibility of permanent disposal, the degree of progress toward resolution of the permanent waste disposal issue should bear on the future growth of the nuclear power industry in the next decade.

In reporting the National Nuclear Waste Regulation and Control Act of 1980, S. 2980, the Environment and Public Works Committee adopted a timetable leading up to a licensing determination on a mined geologic repository by January 1, 2000. Failure to meet earlier deadlines would in each instance result in a report by the President to the Congress to include, among other items, a recommendation on whether failure to meet the subject deadline warrants suspension of issuance of new construction permits and operating licenses for nuclear powerplants. Failure to meet the January 1, 2000 deadline would automatically result in such a suspension.

According to the report accompanying S. 2980,

"The committee believes this provision underscores the substantial national interest in determining whether the current projection for opening a repository can be met--a projection that has slipped by nearly a decade in the past year. Moreover, it accords with the notion that the Nation cannot continue to expand its reliance on nuclear power if, within the next 20 years, the Federal Government has not implemented a safe, reliable method for disposing of the resulting wastes. Finally, it reaffirms the belief that the Federal Government has a moral obligation not to defer to future generations the solution of nuclear waste disposal."

Please comment on this approach. Should the Nuclear Regulatory Commission be permitted to continue to issue construction permits and operating licenses for nuclear powerplants if a permanent disposal facility for wastes generated by these plants is unavailable almost fifty years after the first such plant was licensed to operate?

Response. Particularly attractive merits of this approach are: (1) making clear that the generation of nuclear power should not continue indefinitely without implementation of a safe, reliable method for disposing of the resulting wastes; and (2) providing a powerful incentive for the vigorous pursuit of such implementation. I am not yet sufficiently familiar with the details of the plan leading to a licensing determination on a mined geologic repository to comment on the specific timetable adopted by the Committee.

RESPONSES TO QUESTIONS FROM SENATOR GARY HART

1. Question. Under the new reorganization plan for the NRC, the Chairman will be responsible for directing the agency's response to a nuclear accident. Our Senate Special Investigation report on the Three mile Island accident identified "substantial uncertainty" about whether a nuclear core is covered during an accident as a "plant condition" that warrants prompt consideration of evacuation or other protective action.

--What are your own views as to the need to communicate and act upon such uncertainty during the course of a nuclear accident?

Response. I believe that significant uncertainty as to whether a nuclear core is covered during an accident warrants prompt consideration of evacuation and/or other protective measures.

Question.

--What is your view as to whether the NRC, the nuclear industry and the states are better prepared now to respond to a major accident than they were prior to Three Mile Island?

Response. I believe that the NRC, the nuclear industry, and the states are better prepared now to respond to a major accident than they were prior to the accident at Three Mile Island, but much remains to be done.

Question.

--As Chairman of the NRC, what would be your highest priorities for improving the agency's capabilities to prevent and to respond to major accidents?

Response. Improving NRC's capability to prevent major accidents requires that priority attention be given to assuring the safe operation of existing reactors. There is need for a vigorous inspection program, a prompt and strong enforcement program, and thorough analysis of operational data to identify potential problems.

If confirmed by the Senate, the first item on my personal agenda as Chairman would be emergency preparedness. I would intend as soon as possible to become familiar with the NRC's current capabilities for responding to a major accident, to identify needed improvements, and to work toward making those improvements.

2. Question. There are now several new nuclear powerplants awaiting the issuance of operating licenses from the NRC. Some of these plants have containment structures less capable of withstanding a hydrogen explosion than the containment at Three Mile Island (some are designed to withstand pressure "spikes" of 12 to 15 pounds compared with 60 pounds for TMI).

--As NRC Chairman, how would you go about determining that plants with containment structures weaker than the one at TMI are safe to operate at full power?

Response. I am not sufficiently familiar with the safety issue cited in this question to respond in specific terms. In general, I would ensure that a thorough technical analysis of the matter was performed by the NRC Staff and, based upon that analysis and other appropriate evidence, I would reach an independent judgment on whether the public safety would be adequately protected.

Question.

--What other post-TMI safety assurances would you want to see met at new nuclear powerplants before voting to issue operating licenses for them?

Response. Based upon my current knowledge, I have no reason to doubt that the Commission's current requirements, including the new TMI-related requirements, provide a satisfactory basis for the issuance of new operating licenses.

3. Question. Your recent work in the non-proliferation area, particularly as head of the U.S. technical delegation to the International Nuclear Fuel Cycle Evaluation (INFCE--pronounced "INFSEE"), has brought you in close contact with Ambassador Gerard Smith and officials of the State Department, the Arms Control Disarmament Agency and the Department of Energy. You also worked closely with these agencies and the Department of Defense in connection with your advisory role on SALT I.

I would like to establish how your work for these agencies would affect your role as Chairman of NRC--a regulatory agency intended to be independent of, and in some instances to serve as a check on, the Executive Branch.

Response. My experience working as a consultant to departments and agencies in the Executive Branch has not altered my strong belief that the independence of the NRC must be preserved in fact and in appearance.

Question.

--Representatives of State also have been seeking modifications in the Non-Proliferation Act, particularly the linkage it requires between continued U.S. civilian nuclear assistance to other nations and commitments from those nations (1) to accept full-scope international (IAEA) safeguards on all their nuclear activities and (2) to pledge not to set off nuclear explosions. What is your position?

Response. I have no knowledge of the specific modification in the Act to which this question refers. The Nuclear Non-Proliferation Act is complex and has important implications for American foreign policy and national security. I would not reach a judgment on proposals for modifications without a thorough analysis of the implications of those modifications.

Question.

--To what extent would you consult with Ambassador Smith and other Executive Branch officials, beyond the consultation required by law, on individual export licensing cases?

Limitations on the extent to which I would consult with Executive Branch officials on individual export licenses would be imposed both by the relevant statutes and by the need to preserve the independence of the NRC in fact and in appearance. I recognize the importance of, and would abide by, these limitations.

Question.

--A recent article in Science magazine (see attached) reports that Ambassador Smith is formally urging the President to modify his non-proliferation policy by (1) giving nations blanket assurances that their U.S.-supplied spent fuel can be transferred and reprocessed to permit use of plutonium in breeder research and development, (2) granting customer countries 30-to-40 year contracts for the supply of uranium fuel, and (3) supporting the start-up of an international plutonium storage and management regime. What are your positions on these issues?

Response. I believe it would be inappropriate for me, as a nominee to be a member of the NRC, to express views on a magazine report of an alleged communication between two members of the Executive Branch on matters that probably are classified.

4. Question. What do you view as the biggest problems now confronting the NRC?

Response. In my view, the most difficult and comprehensive challenge facing the NRC is the establishment, if not re-establishment, of its credibility. To achieve credibility, the NRC must be competent, open, objective, efficient, and effective; yet, there have been reports of problems of varying importance in each of these areas.

Question.

--How do you view the agency's morale?

Response. I do not have first-hand knowledge of the agency's morale, but the evidence available to me indicates strongly that morale is low. As Chairman, I would address the factors identified in the recent inquiries into the operation of the NRC as contributors to a lowering of morale of the NRC Staff. I believe that much can be accomplished through strong and decisive leadership and unified and consistent management.

Question.

--Should the 5-member Commission be playing a role any different than the one it is now playing?

Response. The Commission should focus its energies more strongly on the essential collegial tasks of policy formulation, rulemaking, and adjudication. This would provide the best guidance for the NRC Staff, the public, and the utilities.

5. Question. Please elaborate on your positions as to the need for development of a breeder reactor and for the recycling of plutonium to fuel these reactors. Specifically:

--Do you believe that the United States needs a breeder now? Please elaborate.

Response. In my view, the energy programs of the United States should be directed toward a transition to renewable and inexhaustible energy sources and reduced dependence on imports. Because the breeder reactor holds promise as a virtually inexhaustible source of energy for large-scale generation of electricity, I believe strongly that the United States should take the steps necessary to assure that commercial breeders can be made available if and when they are needed. This requires the maintenance of a vigorous and extensive breeder research and development program, and the construction and operation of one or more demonstration breeder power plants. The

timing of the demonstrations should be related to the anticipated need and timing for commercial breeders. In my view, commercial breeders are likely to be needed in the United States at some time early in the next century.

Question.

--Do you believe it advisable to continue with the Clinch River breeder or to plan for a more advanced demonstration reactor based on the latest progress made in our breeder R&D work?

Response. I am not sufficiently familiar with the Clinch River Breeder Reactor and the status of breeder R&D to make an informed judgment on this question. I note also that this is not a matter to be determined by the NRC.

Question.

--At what point would it be advisable for the United States to begin reconsidering the reprocessing of spent fuel to provide plutonium as a reactor fuel? Should such fuel be considered for Light Water Reactors or only for breeders?

Response. I share the view on reprocessing expressed in the "INFCE Summary Volume" (page 18); viz.,

"The economic arguments for reprocessing depend on the price of uranium and on the subsequent use that is made of the separated plutonium and uranium. If it is recycled in light water reactors, then the economic advantage is not likely to be large."

Because the economic incentive for reprocessing for light water reactor recycle is not likely to be large, I expect that the need for plutonium to fuel breeder reactors will be a more important factor in determining the need and timing for reprocessing.

Question.

--What is your assessment of the adequacy of safeguards, both domestic and international, for the reprocessing of plutonium? Are these safeguards sufficient to give "timely warning" of a diversion of plutonium for making atomic bombs?

Response. The adequacy of safeguards applied to a reprocessing plant depends upon many factors, including the design of the plant, the safeguards techniques employed, and the quality of implementation of these techniques. Thus, a determination of "adequacy" should be made on a case-by-case basis.

RESPONSES TO QUESTIONS FROM SENATOR GEORGE J. MITCHELL

1. Question. What is your view of the future for nuclear power in this country? What percentage of electric power generation do you think will be nuclear power in the next decade?

Response. I believe that nuclear energy makes and will continue to make an important contribution to meeting our nation's energy needs, and that this can be achieved with adequate protection of our people, our environment, and our security.

The Department of Energy estimates that in the year 1990 nuclear power plants will provide 21-24 percent of the electrical generation in the United States. I recognize that forecasts of this kind have been subject to dramatic change in the past; however, I am not sufficiently familiar with the status of all nuclear and conventional power plants operational, under construction, and planned to make an independent estimate in which I would place greater confidence.

2. Question. In considering licensing applications, does the NRC consider the percentage of nuclear generated power already serving an area, to guard against a large power loss in the event that all of those nuclear powerplants would be shut down in a safety or environmental emergency? In other words, does the NRC concern itself with the mix of power sources within an area?

Response. It is my understanding that the NRC does not now consider in license applications the percentage of nuclear generated power already serving an area. The Commission does take into account the need for power, but consideration of the mix of sources of electrical power is a matter of energy policy that extends beyond the NRC's current mandate.

3. Question. The State of Maine has placed on its November ballot a referendum on nuclear power. The referendum would prohibit nuclear power generation in the State. What is your opinion of this referendum?

Response. I believe it would be inappropriate for me, as a nominee to be a member of the NRC, to express a view on a matter to appear before the voters of the State of Maine.

4. Question. The Senate recently passed nuclear waste legislation authorizing interim away-from-reactor waste facilities. The bill also requires nuclear facilities to maximize on-site storage before the Federal storage facility may be used. How would you, as NRC Chairman, implement this mandate?

Response. NRC regulations and regulatory guides, including (but not limited to) those relating to the transportation of spent fuel, could contribute meaningfully to implementation of such a mandate. A more specific response would require greater familiarity on my part with the full range of relevant mechanisms available to the NRC. I note, however, that as a Commissioner and Chairman, I would be committed to assuring constructive NRC participation in all aspects of the management of nuclear power, including the exercising of the agency's responsibilities for rulemaking and licensing in the areas of transportation and storage of spent fuel and nuclear wastes and permanent disposal of nuclear wastes.

RESPONSES TO QUESTION FROM SENATOR ALAN K. SIMPSON

1. Question. Some recent studies of the operation of the Commission (Kemeny and Rogovin) have noted problems in the relationship between the Commissioners and the NRC staff. What is your assessment of this relationship, and what improvements do you believe are possible here?

Response. My knowledge of the relationship between the Commissioners and the NRC Staff has been derived from the recent studies of the operation of the NRC and from conversations with individuals who have worked in, or dealt with, the NRC. Evidence of the need for improvement in the relationship between the Commissioners and the Staff is overwhelming. Most striking are the needs for strong and decisive leadership and for unified and consistent management. These needs can be met.

Strong and decisive leadership can be provided by the Commission in the form of policy guidance to the Staff and by the Chairman as principal executive officer and spokesman. The Commissioners need not--indeed should not--have the same views on all matters pertaining to nuclear regulation, but they should share a common sense of purpose. The Commission's goals should be formulated and stated explicitly and unambiguously. Policy guidance to the Staff must come from one Commission--not from five individual Commissioners. By clarifying the role of the Chairman as principal executive officer of the Commission, the plan for reorganization of the NRC, when implemented, will enable the Commission to focus its energies more strongly on this essential policy-making role.

Unified and consistent management can be accomplished only through a clear chain of command. This too is made possible by the reorganization plan. The Executive Director for Operations, subject to direction and supervision by the Chairman, will assume the administrative functions of the NRC and will distribute business among the personnel and administrative units of the Staff.

With strong and decisive leadership and unified and consistent management, the relationships between the Commissioners (individually and collectively) and the Staff would improve markedly.

2. Question. The NRC has developed a detailed Action Plan in response to the Three Mile Island accident. Have you had the opportunity to review that Plan, and if so, have you reached a judgment on its adequacy in responding to the deficiencies identified by the accident? To what extent, if at all, would you want to reopen the question of the adequacy of the Action Plan if you are confirmed as a member of the Commission? Assuming all of the requirements of the Action Plan are met, do you believe this is a satisfactory basis for the issuance of full power operating licenses for new nuclear powerplants in the light of Three Mile Island?

Response. I have reviewed the Action Plan and the detailed summary of the development and review process for the Action Plan ("TMI-Related Requirements for New Operating Licenses," NUREG-0694). On the basis of that review, I would share the judgment expressed by the Commission in its statement of policy of June 16, 1980 on "Further Commission Guidance for Power Reactor Operating Licenses"; viz.,

" . . . the Commission has concluded that the above-mentioned list of TMI-related requirements for new operating licenses found in NUREG-0694 is necessary and sufficient for responding to the TMI-2 accident."

Thus, based upon my current knowledge of this matter, I would not intend to reopen the question of the adequacy of the Action Plan, nor do I have any reason to doubt that the Action Plan provides a satisfactory basis for the issuance of full power operating licenses for new nuclear power plants.

3. Question. What is your assessment of the functioning of NRC's licensing process for nuclear powerplants? In particular, how effective do you believe the NRC staff, the Hearing Boards, the Appeal Boards, and the Commission itself are in discharging the agency's responsibilities to assure that the public health and safety and the environment are protected?

Response. (See response to question 6.)

4. Question. What initiatives would you recommend for improving both the efficiency and the effectiveness of the NRC licensing process? Specifically, are there ways to reduce unnecessary repetition in licensing hearings; are there responsibilities, such as environmental review responsibilities, that could be carried out by the States in lieu of the NRC?

Response. (See response to question 6.)

5. Question. The National Environmental Policy Act now requires that NRC make a determination of the need for power from a plant in passing on the license application for the plant. Should NRC be required to make such a determination, or is this a matter that can be left to the States?

Response. (See response to question 6.)

6. Are there other improvements in NRC's licensing process that could help focus NRC's attention on the health and safety aspects of the plant's construction and operation?

Response. I am not yet sufficiently familiar with the NRC licensing process to make an informed assessment of its functioning or to make specific recommendations for improvement. If I were to be confirmed by the Senate as a member of the Commission, I would strive to minimize the uncertainties in the process; and, through improvements in the clarity of rulemaking, in the conduct of licensing proceedings, and in the efficiency of policy implementation, to reduce the resources and time consumed by the licensing process.

7. Question. As you know, NRC was established as an independent regulatory agency in 1974. Within that context, what do you see as the relationship between the Administration and the Commission, and particularly its Chairman? What role, if any, should the Administration have in policy decisions before the Commission?

Response. The NRC cannot operate in a vacuum. In formulating policy, the Commission must be aware of and sensitive to the national energy policy goals established by the Congress and the President. Nevertheless, the independence of the NRC must be preserved in fact and in appearance. Members of the Commission, including the Chairman, are not and should not appear to be part of the Administration. The Administration's participation in NRC proceedings is governed by the same criteria that apply to other qualified parties.

8. Question. To what extent, if at all, should OMB make decisions affecting NRC's budget on the basis of policy judgments? For example, there have been instances in the past in which OMB has attempted to eliminate the Atomic Safety and Licensing Appeal Panel, to eliminate an NRC Improved Safety Systems Research Program begun by the Congress and recommended by the Commission, and to eliminate NRC's Advanced Reactor Safety Research Program. As Chairman, how would you deal with such actions by OMB as an exercise in policymaking through the budget process?

8. Response. The OMB should not make decisions affecting the NRC's budget on the basis of policy judgments. As Chairman, I would strenuously object to any such decisions which could compromise the NRC's independence or any other aspects of its ability to carry out its nuclear regulatory responsibilities. I would take such serious policy issues to the highest levels of the Executive Branch, including the President as necessary, and I would inform the Congress of my views.

9. Question. What is your assessment of the safety of the present generation of light water reactors now in operation in this country?

Response. It is my judgment that, if the requirements set forth in the NRC Action Plan are met, the benefits of continued operation in this country of the present generation of light water reactors exceed the risks.

10. Question. In what respect do you agree or disagree with the President's National Radioactive Waste Management Program as announced on February 12 of this year?

Response. In my view, the steps outlined in the National Radioactive Waste Management Program, as announced on February 12, 1980, will contribute substantially to resolving the nuclear waste issue. I believe that, in addition to that program, it would be useful to implement a program for retrievable storage.

11. Question. What is your assessment of the Commission's Nuclear Waste Management Regulatory Program? Are there areas here where improvements could be made?

Response. I am not yet sufficiently familiar with the Commission's nuclear waste regulatory program to make an informed assessment, but I believe strongly that the program must be such as to assure that the NRC is not the cause of delay in implementing an effective waste management system.

12. Question. One question that has been of considerable interest to this Committee is the extent to which NRC should be involved in the regulation of DOE nuclear waste activities that are part of DOE's national defense programs. To what extent should NRC be involved in regulating defense waste activities beyond those recommended by the President and the Interagency Review Group? Would you support a pilot program such as that contained in S. 2980?

12. Response. I recognize the important national security implications of extending the NRC's regulatory authority in defense-related facilities and materials. It is essential that, in any such extension, classified information not be disclosed and that the nation's defense effort not be impaired in any other way. An assessment of any specific proposal for extension beyond the areas recommended by the President and the Interagency Review Group would have to be made in this context. Should the Congress and the President judge that there is likely to be public benefit in extending NRC regulation of defense-related waste, implementation of that extended authority must be made with adequate safeguards. A pilot program could be an appropriate mechanism to test such an extension.

13. Question. Earlier this year, three NRC Commissioners recommended that the President transfer export licensing authority from the Commission to an agency of the Executive Branch. The present Commission is now equally divided on this issue. As I understand it, this recommendation was based upon the time required of the Commissioners to carry out this responsibility. Is it essential that NRC have a role in export licensing, and if so, what should that role be?

Response. I believe that the NRC can contribute constructively to the export licensing process. Of particular value is the Commission's independent analysis of safeguards and physical security. I am not yet sufficiently familiar with NRC competence in other aspects of its current role in export licensing to make an informed assessment of their utility.

Question. In your view, how does the importance of export licensing rank with the Commission's other responsibilities, especially assuring the safety of nuclear power plants and nuclear waste storage and disposal facilities?

Response. I believe that protecting the public health and safety and ensuring our national security are both extremely important responsibilities which must be met.

Question. Would you support or oppose a recommendation to transfer NRC export licensing authority, and if you support such a recommendation, what role in nuclear exports, if any, should the Commission retain?

Response. My decision to support or oppose a recommendation to transfer NRC licensing authority would rest upon my judgment of whether the specific alternative licensing process being recommended would better provide for our nation's security.

14. Question. A subject that is of great interest to me personally is intervenor funding. Do you favor or oppose the funding of intervenors in NRC licensing or rulemaking proceedings? If you favor such funding, under what conditions would you support an intervenor funding program at NRC? Do you believe the Commission should proceed with an intervenor funding program without an express authorization for such a program by the Congress?

Response. It is clear to me that, if the goals of NRC proceedings are to be met, public participation is essential, but I am not yet sufficiently familiar with NRC proceedings to make an informed judgment on whether intervenor funding is required to meet those goals. Among the factors I would consider in deciding whether to favor intervenor funding in a particular proceeding would be the material contribution to the proceeding likely to be made by the party seeking financial assistance, and the demonstrated need for the level of that assistance. Ultimately, of course, the matter of whether to make funds available to intervenors is decided by Congress. The Commission should not proceed with an intervenor funding program if such action would be contrary to the letter or intention of relevant statutes.

15. Question. Dr. Carnesale, your experience has largely been as an academic and as a consultant to the Government on international nuclear policy matters. Some have argued that this experience may not have adequately prepared you for the rigors of the NRC Chairmanship. How would you respond to these concerns?

Response. My education and experience are particularly relevant to the role of the NRC Chairman. My formal education was in mechanical engineering (B.M.E. and M.S.) and in nuclear engineering (Ph.D.) My professional career has included service in the private sector, universities, and government. It began with five years in industry, designing nuclear power systems. The university experience consists of fifteen years of research, teaching, and administration in nuclear engineering (seven years), in environmental studies (two years), and in the public policy aspects of science and international affairs (six years). The government service includes three years as an advisor to the head of the United States delegation to SALT I, and almost a decade as a part-time consultant to government on matters of defense policy, arms control, and international nuclear energy policy. It was in this consulting capacity that I served recently for two years as head of the United States delegation to the Technical Coordinating Committee of the International Nuclear Fuel Cycle Evaluation (INFCE).

The experience in SALT I, in the role of a university coordinator for environmental studies, and in INFCE is especially applicable to the leadership role of the NRC Chairman. In each of these contexts I was responsible for forging agreements on complex and important issues; the individuals and institutions represented had differing perspectives and strongly held positions; and the process reached a constructive and timely conclusion.

I believe that, if I am confirmed by the Senate as a member of the Commission, my background and experience will serve me well in meeting the challenges that will be before the NRC Chairman.

RESPONSES TO QUESTIONS FROM SENATOR WENDELL H. FORD

1. Question. Do you believe that NRC inspectors and available technical expertise on the NRC Staff have the requisite ability to assess the adequacy of construction of nuclear projects and their conformance to safety requirements?

Are you able to demonstrate the available NRC in-house construction expertise? Are you able to demonstrate its continuing future availability at Marble Hill?

Are you aware of the substantial concrete construction defects at Marble Hill? Do you believe that a continued independent examination of Marble Hill construction activities need be permitted?

Response. I support a vigorous NRC inspection and enforcement program, but I am not yet sufficiently familiar with the NRC Staff or the construction at Marble Hill to make informed judgments on these questions.

2. Question. What is your position regarding the continued building of nuclear power plants in the face of the current reserves over peak in the amount of 43%; the standard reserve is 20%?

a) Nuclear power is now 13% of all electrical generating capacity; if you subtract all the nuclear plants, you would still have a 30% over capacity at peak.

Response. The need for power is among the factors considered in the NRC licensing process. Evaluation of this need should take account of local and regional considerations as well as national ones. The primary decision on whether to make use of nuclear power rather than to rely upon other energy sources and/or conservation, is made by the people of a region and their power companies.

3. Question. Do you believe the NRC allows meaningful hearings and all relevant data to be presented concerning need for power and the actual cost of nuclear power as opposed to alternate sources of energy?

Response. I am not yet sufficiently familiar with NRC processes to make an informed judgment on this question.

Question. If the forecast for 250 nuclear power plants to be on line by the year 2000 has any validity, do you agree that the cost of building these plants will be a minimum of \$1 trillion 125 billion and that such is realistic? Is it conceivable the utilities can even raise these dollars?

Where is the economic rationality?

Response. I do not know of any industrial, governmental, or independent energy analysts who currently forecast 250 operational nuclear power plants in 20 years. Nor do I know what the cost of building 250 nuclear power plants would be; however, the \$1.125 trillion figure cited in this question is higher than other estimates of which I am aware. Regardless of the precise figure, the cost of building new power plants, nuclear or non-nuclear, is sufficiently high that the utilities probably will continue to face a substantial problem of capital formation. In my view, a judgment of the economic rationality of nuclear power plants should be based on a comparison with realistic alternatives.

4. Question. Do you believe that the NRC Commissioners should impose meaningful sanctions against utilities who blatantly violate good construction practice and NRC regulations?

Response. Yes.

Question. Do you believe the Commissioners should exert authority regarding sanctions against utilities who blatantly violate good construction practice rather than allowing the Division of Inspection and Enforcement to exert their authority?

Response. The Commissioners individually and collectively are responsible for protecting the public health and safety, and the Commission should exercise its authorities as required to meet that responsibility. In cases where particular authorities are delegated to NRC officials, the Commission retains responsibility for the proper exercising of those authorities.

5. Question. What is your position regarding intervenor funding by the federal government in NRC proceedings?

Response. It is clear to me that, if the goals of NRC proceedings are to be met, public participation is essential; but I am not yet sufficiently familiar with NRC proceedings to make an informed judgment on whether intervenor funding is required to meet those goals. Among the factors I would consider in deciding whether to favor intervenor funding in a particular proceeding would be the material contribution to the proceeding likely to be made by the party seeking financial assistance, and the demonstrated need for and level of that assistance. Ultimately, of course, the matter of whether to make funds available to intervenors is decided by the Congress.

RESPONSES TO QUESTIONS FROM SENATOR JAMES A. McCLURE

Commission Organization

1. Question. The Kemeny Commission's report, the Rogovin Special Inquiry, and the GAO have all concluded that the Commission lacks leadership and is ineffective in that the Commissioners fail to give the staff the necessary policy guidance. With this in mind, would you please answer the following questions:

- a) What is the proper role of the Chairman--vis-a-vis both his fellow Commissioners and the staff--in running the Agency outside of emergency conditions?
- b) What is the proper role of the other Commissioners--vis-a-vis both the Chairman and the staff?

Response. As principal executive officer and spokesman for the NRC, the Chairman should provide leadership to both the five-member Commission and the Staff. He should lead the Commission in focusing its energies on the essential collegial tasks of policy formulation, rulemaking, and adjudication. By executing these responsibilities, the Commission will establish goals and policy guidance for the Staff. I have confidence in the collegial process and believe that it can be an effective means for obtaining the best overall judgments on complex and controversial issues of the kind that come before the Commission. Implementation of the policies established by the Commission is to be accomplished through the Chairman, who will delegate to the Executive Director for Operations, subject to direction and supervision by the Chairman, the day-to-day administrative functions of the agency.

2. Question. Mitchell Rogovin has referred to the NRC Reorganization Plan as an extremely modest proposal given the Agency's problems. In your view, does the Reorganization Plan create a management structure which will facilitate decisionmaking? Does the current structure give the Chairman authority commensurate with his responsibility? What are your views on Mr. Rogovin's suggestion that the NRC should be headed by a single Administrator?

Response. In my view, the reorganization plan will create a management structure which facilitates decisionmaking and will provide the Chairman with sufficient authority to meet his responsibilities. While a single-administrator structure could be more efficient than a commission, I believe that the policy advantages of a commission structure warrant its retention.

Commission Organization (Cont'd.)

3. Question. The Commission has been criticized for awaiting a consensus to develop before acting rather than making decisions based on a simple majority. Would you please comment on this. When, in your mind, does the need for a decision outweigh the advantages of a collegial concept?

Response. Development of a consensus is a desirable but not a necessary condition for making decisions. In cases where the absence of a decision would jeopardize the public health and safety, would constitute the functional equivalent of a decision contrary to the wishes of the majority, or would impair unjustifiably the Commission's ability to deal effectively with other important matters requiring its attention, decisions should be made by majority vote.

4. Question. It has been argued that the way to reorient or revitalize the Commission is for the President to appoint a coherent and predictable majority that includes the Chairman. Do you think this will occur if and when you become Chairman?

Response. Each Commissioner's decisions should be based upon the relevant statutes and the records of relevant proceedings. Such decisions should not be "predictable" before the records are established.

Question. Have you received any assurances that you will have an input into the nomination of any other Commissioners which the Carter Administration might yet make to the NRC? What is the nature of these assurances?

Response. I have neither requested nor received any such assurances.

5. Question. How do you propose to measure the effectiveness of the Commission's licensing branch, inspection and enforcement branch, and the standards branch?

Response. The effectiveness of these and other offices of the NRC should be measured in terms of the degree to which nuclear regulation protects the public health and safety, the environment, and our national security; the timeliness of actions taken; and the resources consumed, directly and indirectly, in the performance of assigned functions. If confirmed by the Senate as a member of the Commission, I would work with the other Commissioners and the Staff in the development and implementation of specific mechanisms for systematic measurement and monitoring of performance throughout the agency.

6. Question. Congress has already declared that nuclear power development will proceed. The NRC's divergent views and reluctance of NRC to make decisions seems to indicate that NRC perceives a charter contrary to this national policy.

- a) How should the Chairman interpret this national policy?
- b) What is the NRC charter relative to this policy? Is the current licensing hiatus consistent with this policy?

Response. National policy is established by law and by declarations and actions consistent with law. It is the statutory responsibility of the NRC to protect the public health and safety, the environment, and the national security. This responsibility must be met. I believe that it can be met while nuclear power makes an increasing contribution to meeting our nation's energy needs. A hiatus in licensing, if it were required to satisfy the statutory mandate to the NRC, would be consistent with national policy; otherwise it would not.

Question. c) What should be the priorities of a new Chairman in the current climate?

Response. In my view, the priorities of the new Chairman should be to assure the safe operation of existing reactors and to prepare for dealing with an emergency should it occur; to consider promptly the important policy formulation, rulemaking, and adjudication matters awaiting action by the Commission; to minimize uncertainties in the licensing process and, through improvements in the clarity of rulemaking, the conduct of licensing proceedings, and efficiency in policy implementation, to reduce the resources and time consumed by the licensing process; and to earn and achieve public confidence in the NRC and in the quality of nuclear regulation.

Question. d) Should the NRC be above the call of the President who urged a return to licensing by June 7? Should NRC recognize a policy statement of this nature, if it is consistent with law?

Response. The responsibility of the NRC is to carry out its statutory mandate as an independent regulatory agency. In doing so, the Commission should be aware of and sensitive to policy statements by the President and the Congress.

7. Question. Are you in favor of intervenor funding? If so, what criteria should apply to determining who should qualify? Is it necessary to show need? Should an applicant's contribution to the proceeding be evaluated? Should payment be made before or after the fact? Should it be available in licensing, as well as rulemaking?

Response. It is clear to me that, if the goals of NRC proceedings are to be met, public participation is essential; but I am not yet sufficiently familiar with NRC proceedings to make an informed judgment on whether intervenor funding is required to meet those goals. Among the factors I would consider in deciding whether to favor intervenor funding in a particular proceeding would be the material contribution to the proceeding likely to be made by the party seeking financial assistance, and the demonstrated need for and level of that assistance. Ultimately, of course, the matter of whether to make funds available to intervenors is decided by Congress.

8. The Kemeny Commission recommended that the Advisory Committee on Reactor Safeguards (ACRS) have a strengthened role as an independent technical check on safety matters, including 1) removal of the requirement that ACRS review every license application, and 2) providing ACRS with the statutory right to intervene in licensing (including the right to raise any safety issue in licensing proceedings) and rulemaking hearings and to initiate rulemaking proceedings. What is your view of the current functioning of the ACRS? Do you agree with the Kemeny Commission recommendations? How would you propose to use the ACRS in the future?

Response. The ACRS has contributed constructively and significantly to the quality of nuclear regulation in the United States, and its functioning could be improved through mechanisms such as those recommended by the Kemeny Commission. It is likely that the ACRS could be of greater value in the early identification and analysis of important safety issues if it were freed of its current statutory responsibility to review every license application. I have not had an opportunity to work with the ACRS, but I am inclined to believe that the Committee's collegial technical capacity would be better preserved if it served actively as an advisor to the Commission and to NRC hearing boards, and as a "privileged commentator" in NRC proceedings, than if it were to intervene formally in NRC proceedings.

Commission Organization (Cont'd.)

9. Question. The general question of licensing reform involves a series of quite specific issues. What is your position on each of the following:

- a) NRC authority to "bank" sites by issuing site permits even though no application for a construction permit has been filed.

Response. I believe that "site banking" is a useful concept.

Question b.) Approval by rule or a manufacturing license of standardized plant designs outside of a particular construction permit.

Response. I favor the use of standardized plant designs as a mechanism for reducing the time and resources required in the licensing process. I note, however, that the incentives for standardization should not outweigh the incentives for improving the design of nuclear power plants.

Question c.) Limiting NRC licensing hearings to issues which could not have been raised in an earlier NRC or State proceedings unless a prima facie showing is made of significant new information on compliance with requirements.

Response. I believe that unnecessary reconsideration of issues in the licensing process should be eliminated. Rulemaking should be a particularly useful mechanism for achieving this goal.

Question d.) State certification of the "need for proposed plant," and the choice of a nuclear plant to satisfy that need, which would be banking on NRC.

Response. This question has been garbled and I do not understand it.

Question e.) Use of hybrid hearings (legislative hearing, unless adjudicatory hearing determined necessary for specific factual or legal issue essential to the decision) rather than adjudicatory hearings for licensing and elimination of mandatory hearings and reviews where there is no interested requesting party on dispute.

Response. Streamlining the licensing process is an essential element of licensing reform. The use of hybrid hearings in appropriate cases and the elimination of needless hearings appear to me to be constructive suggestions.

Commission Organization (Cont'd.)

Question f.) NRC authority to allow site preparation work prior to final decision on the "need for proposed plant."

Response. It is my understanding that such authority has been given at times in the past. I am not aware of any reason to discontinue this practice, provided that the full risk of proceeding with site preparation work is borne by the applicant.

Question g.) NRC authority to allow interim operation of fully constructed plant, pending a required hearing proceeding.

Response. I believe that such determinations should be made on a case-by-case basis. Clearly, interim operation should not be permitted if it would result in undue risk to the public health and safety.

Question h.) Provision prohibiting ratcheting and backfitting after construction permit issued, unless well established safety problem exists.

Response. Requirements for backfitting after a construction permit has been issued should not be imposed arbitrarily or capriciously. In determining whether a particular requirement should be imposed, however, the presumption should be in favor of protecting the public health and safety.

Question i.) What are now and what should be the respective roles and responsibilities of 1) the Atomic Safety and Licensing Board, 2) the Atomic Safety and Licensing Appeal Board, and 3) the Commission in processing license applications? How should the Advisory Committee on Reactor Safeguards be included in the procedures of any or all of the aforementioned groups?

Response. The Atomic Safety and Licensing Boards (ASLB) conduct public hearings and make intermediate decisions to grant, suspend, revoke, or amend NRC licenses. The Atomic Safety and Licensing Appeal Boards (ASLABs) perform the review functions which would otherwise be carried out by the Commission in licensing proceedings. ASLB decisions are reviewable by an ASLAB, either in response to an appeal or at the initiative of the ASLAB. The Commission, at its discretion, may review ASLAB rulings. Since the accident at Three Mile Island, new licenses are being issued only with Commission approval. The Advisory Committee on Reactor Safeguards (ACRS) advises the Commission on the safety aspects of proposed

Commission Organization (Cont'd.)

and existing nuclear facilities and the adequacy of proposed reactor safety standards, and performs such other special duties as the Commission may request. The ACRS is not a party in any proceedings before ASLBS, ASLABs, or the Commission.

With the exception of the ASLABs, the responsibilities of these entities are determined by statute, and any changes would be a matter for Congressional action. I am not yet sufficiently familiar with the functioning of these entities to make informed recommendations for changes in their roles or responsibilities.

10. Question. What are your views on the EPA's classification under the Clean Air Act Amendments of 1977 of radionuclides as pollutants last November, and the preparation of regulations governing radioactive releases from NRC licensed facilities? Do you agree with the classification? Would you distinguish between "ambient" standards and "emission" standards? How would you propose to address this issue with the EPA? How would you address this issue with a State (such as Minnesota), which proposes to establish standards under the Clean Air Act more stringent than applicable Federal standards?

Response. I am not yet sufficiently familiar with the intricacies of interpretation and implementation of the Clean Air Act to have made judgments on these issues.

11. Question. Public Law 96-295 requires NRC to conduct a rulemaking on siting of nuclear power plants, including demographic criteria for facility siting with maximum population density and population distribution for zones surrounding the facility. How would you propose to address this issue? Should standards exclude siting of nuclear plants in certain areas of the country, particularly the East and West coasts? Should there be a requirement for minimizing population density around plants for their 40 year life?

Response. An NRC rulemaking proceeding on this matter is underway. My views would be shaped by the record of that proceeding.

12. Question. Nuclear safety R&D bills pending in both Houses of Congress call for comparative risk studies of alternative energy sources. What is your position on such studies? How do you believe nuclear power would compare to coal plants? Should the NRC consider such studies in the licensing process?

Commission Organization (Cont'd.)

12. Response. I believe that comparative risk studies of alternative energy sources could be useful and should be considered in the rulemaking or licensing processes. As to the relative risks of nuclear and coal plants, my experience in the Ford/Mitre study leads me to expect the risks to the public health and safety associated with nuclear plants to be less than or within the range of uncertainty of the risks associated with coal plants.
13. Question. What is your position on the current and various proposed authorities for the NRC and DOT in the licensing and regulation of transportation of spent fuel and other nuclear wastes? What should be the role of states and political subdivisions in such regulation?

Response. I am not sufficiently familiar with the licensing and regulation of transportation of spent fuel and nuclear wastes to have formulated informed positions on these matters. I note, however, that as a Commissioner and Chairman of the NRC, I would be committed to assuring constructive NRC participation in all aspects of the management of nuclear power, including the exercising of the agency's responsibilities for rulemaking and licensing in the areas of transportation and storage of spent fuel and nuclear wastes and permanent disposal of nuclear wastes.

14. Question. What is your position on NRC licensing of DOE military nuclear waste facilities? What is your view on the current approach to the WIPP facility and the Senate Environment and Public Works Committee's proposed pilot program?

Response. I recognize the important national security implications of extending the NRC's regulatory authority in defense-related facilities and materials. It is essential that, in any such extension, classified information not be disclosed and that the Nation's defense effort not be impaired in any other way. An assessment of any specific proposal for extension beyond the areas recommended by the President and the Interagency Review Group would have to be made in this context. Should the Congress and the President judge that there is likely to be public benefit in extending NRC regulation of defense-related waste, implementation of that extended authority must be made with adequate safeguards. A pilot program could be an appropriate mechanism to test such an extension.

Commission Organization (Cont'd.)

15. Question. What should be the role of NRC in formulating or implementing national energy policy regarding nuclear power or international nuclear nonproliferation policy?

Response. The role of the NRC in formulating or implementing national energy policy or international nuclear nonproliferation is determined by statute. The NRC is an independent regulatory agency, but it cannot operate in a vacuum. In formulating its policies, the Commission must be aware of and sensitive to the national energy policy and international nonproliferation policy goals established by the Congress and the President. At the same time, the independence of the NRC must be maintained in fact and in appearance.

Question. If Administration policy supported proceeding with domestic reprocessing, LWR recycle, Clinch River Breeder Reactor or other LMFBR demonstration reactor, would you be prepared to support re-initiation of NRC licensing and expeditious proceedings?

Response. Yes, provided that these actions could be taken with adequate protection of the public health and safety, the environment, and our nation's security.

Question. How "activist" should the NRC be in advancing domestic policy positions or in exercising its authorities under the Nuclear Nonproliferation Act of 1978?

Response. The NRC's "activism" should be in the form of efficient and effective implementation of its statutory mandate in nuclear regulation.

16. Question. Should the cost-effectiveness of proposed regulatory and licensing actions be considered by the NRC?

Response. Adequate levels of protection of the public health and safety, the environment, and our nation's security must be provided regardless of the cost-effectiveness of the regulations and licensing actions required to achieve these levels of protection. In considering proposals for further requirements aimed at achieving levels of protection higher than those judged to be at the threshold of adequacy, the NRC should take cost-effectiveness into account.

Question. Should the NRC be subject to reviews of cost-effectiveness by the Regulatory Analysis Review Group in the Executive Office of the President? Would you consider the views of RARG in the licensing process?

Commission Organization (Cont'd.)

16. Response. In light of the independence of the NRC, reviews of cost effectiveness by the Regulatory Analysis Review Group (RARG) in the Executive Office of the President would be inappropriate in the absence of statutory authorization. If the views of the RARG and other such review groups become part of the record in a formal licensing proceeding, they should be given due consideration by the Commission.
17. Question. What should be the role of the States in the signing and licensing of nuclear waste facilities for low level transuranic and high level wastes and spent fuel? How would you propose to address this issue in the formal licensing by NRC of such facilities?

Response. It is my understanding that this issue is under consideration in a number of forums. I have no pre-determined position on the matter.

General Policy

1. Question. There are some people who believe we should close down all nuclear power plants and not license new nuclear power plants in the United States. However, P.L. 83-703--The Atomic Energy Act of 1954, as Amended--states the following:

Atomic energy is capable of application for peaceful as well as military purposes. It is therefore declared to be the policy of the United States that--

- a. the development, use, and control of atomic energy shall be directed so as to make the maximum contribution to the general welfare, subject at all times to the paramount objective of making the maximum contribution to the common defense and security; and
- b. the development, use, and control of atomic energy shall be directed so as to promote world peace, improve the general welfare, increase the standard of living, and strengthen free competition in private enterprise.

Do you have any mental reservations contrary to that established policy of the United States Government that would prevent you from fully complying with that policy?

Response. No.

General Policy (Cont'd.)

2. Question. President Carter and the other leaders of the Western World signed a communique at the completion of the Bonn economic summit meeting in July 1978 which stated:

The further development of nuclear energy is indispensable and the slippage in the execution of nuclear power programs must be reversed.

Do you have any disagreement or reservations with that policy?

Response. No, provided that the policy can be implemented with adequate protection of the public health and safety, the environment, and our national security.

3. Question. President Carter and the other leaders of the Western World at the conclusion of their meeting in Venice, Italy, on June 23, 1980, issued a communique which included the following statement:

We underline the vital contribution of nuclear power to a more secure energy supply. The role of nuclear energy has to be increased if world energy needs are to be met.

Are you in agreement with that policy statement?

Response. Yes.

4. Question. American designed light water reactors are being built in Japan and other foreign countries in 6 years from start to finish. It is taking twice as long for those same plants to be built in the United States. Much of the delay is due to the regulatory process at NRC. President Carter in the past has called attention to this fact and has asked for a speed-up in the licensing process. The Republican platform this year states:

Coal and nuclear fission offer the best intermediate solutions to America's energy needs. We support accelerated use of nuclear energy through technologies that have been proven efficient and safe. The design and operation of these plants can be guaranteed without the present 10 to 12 year lead time now required to license and build them. We believe that the licensing process can and should be streamlined through consolidation of the present process and the use of standardized reactor designs.

General Policy (Cont'd.)

- a.) With your background and knowledge of nuclear engineering, do you believe that nuclear power plants can be built and put into operation in a 6-year period rather than the current 12 years it takes without undue risk to the public?

Response. I am not sufficiently familiar with the experience in Japan and other foreign countries to make an informed judgment on whether nuclear power plants can be built and put into operation in a 6-year period without undue risk to the public. I believe, however, that improvements could and should be made in the licensing and construction processes to shorten the construction period in the United States.

Question b.) As a Commissioner, and particularly if you are designated Chairman of the NRC, would you be willing to help streamline the present process and eliminate unnecessary delays?

Response. Yes.

Ford Foundation Study

1. Question. The following are all quotations from the Ford Foundation Study administered by the MITRE Corp., that you participated in (Ballinger ed. 1977). With three years hindsight now, would you agree or disagree with each of the following statements. Where appropriate, please give comments.

Response. I assume in my responses below that each of the quotations provided in this question are to be interpreted in the context in which they appear in the Ford/Mitre study (Nuclear Power Issues and Choices, 1977).

- a. Statement. "(H)igher energy costs, which are probably inevitable, are largely independent of the rate at which nuclear power is developed and deployed over the next twenty-five years." (p. 3)

Response. I agree (because nuclear power will provide a relatively small part of the nation's total energy needs through the end of this century, and the cost of energy from fossil fuels is likely to continue to increase).

Ford Foundation Study (Cont'd.)

- b. Statement. "At present, the range of uncertainties in the comparative costs of coal and nuclear power is such that a mix provides a useful hedge against uncertainties Despite these large uncertainties, our analysis leads us to the conclusion that nuclear power will on the average probably be somewhat less costly than coal-generated power in the United States." (p. 4, par. 7)

Response. I agree.

- c. Statement. ". . . abandonment of nuclear power by the United States would increase the likelihood of proliferation, since the United States would lose influence over the nature of nuclear power development abroad." (p. 5)

Response. I agree.

- d. Statement. "It is frequently argued that solar, geothermal, or thermal energy would be viable alternatives to nuclear power if they received a fair share of the research and development funds. It is our judgment that these forms of energy cannot compete with nuclear, coal, or other fossil fuels as major sources of electric power until well into the next century." (p. 12)

Response. I agree.

- e. Statement. ". . . (I)n a comparison of normal operations, nuclear power has smaller adverse health costs than coal. . . (e)ven when the possibility of reactor accidents is included, the adverse health effects of nuclear power are less than or within the range of health effects from coal." (p. 17, par. 19)

Response. I agree.

- f. Statement. "The motivations and responses to States seeking nuclear weapons capability underscore the essentially political nature of the nuclear proliferation problem." (p. 23)

Response. I agree.

- g. Statement. "Such a system (IAEA safeguards system), while not foolproof, is a valuable deterrent. It would not be an attractive choice, for most states, to base a nuclear weapons program on clandestine diversions in violation of a formal international treaty." (p. 23)

Ford Foundation Study (Cont'd.)

g. Response. I agree.

h. Statement. "It is in the interest of a sound U.S. energy economy to let the market establish the rate of nuclear power growth." (p. 28)

Response. I agree.

i. Statement. "Although a detailed safety assessment of the LMFBR is several years in the future since the design has not been completed, there do not appear to be any fundamental physical barriers to the development of a commercial LMFBR as safe as the LWR." (p. 242)

Response. I agree.

j. Statement. "We are convinced that nuclear wastes and plutonium can be disposed of permanently in a safe manner. If properly buried deep underground in geologically stable formations, there is little chance that these materials will reenter the environment in dangerous quantities. Even if material were somehow to escape eventually in larger quantities than seems possible, it would not constitute a major catastrophe, or even a major health risk, for future civilizations." (pp. 19-20)

Response. I agree.

k. Statement. "On the basis of our analysis of plutonium reprocessing and recycle, we have concluded that the international and social costs far outweigh economic benefits, which are very small even under optimistic assumptions. We believe therefore that a clear-cut decision should be made by the U.S. Government to defer indefinitely commercial reprocessing of plutonium." (p. 31)

Response. I was not associated with this finding of the Ford/Mitre study. It is noted in the study (pages xv-xvi) that,

"During the course of this study, Albert Carnesale was appointed to membership on the Nuclear Regulatory Commission Hearing Board looking into the matter of wide-scale use of recycle

Ford Foundation Study (Cont'd.)

plutonium in mixed oxide fuel in light-water reactors. Accordingly, he has refrained from expressing personal views on this matter and he should not be associated with the group's findings related to plutonium reprocessing and recycle."

Earlier this year, the International Nuclear Fuel Cycle Evaluation (INFCE) was completed. I share the view expressed in the "INFCE Summary Volume" (page 18); viz.,

"The economic arguments for reprocessing depend on the price of uranium and on the subsequent use that is made of the separated plutonium and uranium. If it is recycled in light water reactors, then the economic advantage is not likely to be large."

Because the economic incentive for reprocessing for light water reactor recycle is not likely to be large, I expect that the need for plutonium to fuel breeder reactors will be a more important factor in determining the need and timing for commercial reprocessing.

1. Statement. "Although long lead times are required for a project as complex as the breeder, we believe that the decision on commercialization now set for 1986, can safely be postponed beyond the end of the century." (p. 33)

Response: I agree (subject to the understanding that the phrase "could safely be postponed" is not to be interpreted as "should be postponed").

In responses to questions asked by other Members of the Senate, I have expressed my view that the energy programs of the United States should be directed toward a transition to renewable and inexhaustible energy sources and reduced dependence on imports. Because the breeder reactor holds promise as a virtually inexhaustible source of energy for large-scale generation of electricity, I believe strongly that the United States should take the steps necessary to assure that commercial breeders can be made available if and when they are needed. This requires the maintenance of a vigorous and extensive breeder research and development program, and the construction and operation

Ford Foundation Study (Cont'd.)

of one or more demonstration breeder power plants. The timing of the demonstrations should be related to the anticipated need and timing for commercial breeders. In my view, commercial breeders are likely to be needed in the United States at some time early in the next century.

Nuclear Waste

1. Question. The National Academy of Sciences recently concluded that it is not necessary to look upon disposal of radioactive waste as a problem to which a perfect situation must be found before any action can be taken. In fact, there is a considerable amount of radioactive waste requiring disposal even if we do not build another nuclear power plant and much of this waste does not come from commercial nuclear power plants.

How do you intend to approach the existing regulatory tendency to conduct a never-ending quest for perfect solutions on nuclear waste management?

Response. A minimum objective of nuclear regulation is to ensure that the risk to public health and safety associated with nuclear power (including all aspects of the fuel cycle) is no greater than the risk associated with realistic alternative sources of energy. This objective can be met without a perfect solution to the waste management problems. While reasonable regulation of a waste management system might well require a level of risk lower than that required to meet the objective stated above, it should not require an unattainable zero-risk system.

2. Question. According to latest Administration schedules, the first geologic repository for high level waste won't be operational before 1997. Some mechanism is required to develop the regulations for this repository in an orderly, step-wise manner during the next 15 years. There are several proposed bills in Congress which would require DOE to conduct early demonstrations of repository systems in various geologic media.

Wouldn't you consider it reasonable for the NRC to develop its regulations regarding nuclear waste in conjunction with the design, construction and operation of repository system demonstrations during the next 10 years?

Response. If early demonstrations of repository systems are required, it would be reasonable for NRC to develop

Nuclear Waste (Cont'd.)

regulations for nuclear waste in conjunction with the schedule for those demonstrations.

3. Question. Resolution of the nuclear waste issue is considered by some to be a major obstacle to the continued growth of commercial nuclear power in the United States.

What steps do you believe we should be taking to resolve the nuclear waste issue?

Response. The steps outlined in the National Radioactive Waste Management Program announced by the President on February 12, 1980, will contribute substantially to resolving the nuclear waste issue. It would be useful also to implement a program for retrievable storage. Finally, I note the necessity to provide additional storage capacity for spent fuel.

4. Question. Some utilities will require away from reactor (AFR) storage facilities starting in the period 1984-85 to prevent limited reactor shutdowns. This utility need continues to grow rapidly as the Administration continues to indefinitely defer reprocessing and its schedules for waste repositories continue to slip.

What are your views concerning proposed government plants to acquire and construct several AFR storage facilities? Do you believe there is a sense of urgency required to prevent the potential loss of needed power from these reactors?

Response. I believe there is an urgent need to provide additional spent fuel storage capacity. To meet this need, it will be necessary to expand on-site storage capacity and to provide away-from-reactor storage capacity.

5. Question. Foreign programs (France, Sweden, U.K., West Germany, and Canada) on nuclear waste management have several policy and technical characteristics which are different from current U.S. programs. For example, there is generally no linkage in these countries between nuclear power growth and progress in nuclear waste.

Based on your INFCE experience (International Nuclear Fuel Cycle Evaluation), what lessons can we learn from the foreign nuclear waste programs?

Nuclear Waste (Cont'd.)

Response: While many countries have no explicit policy linkage between nuclear power growth and progress in nuclear waste, at least six countries (Austria, Belgium, Japan, Sweden, Switzerland, and the Federal Republic of Germany) have statutory requirements linking the licensing of nuclear power plants to progress in nuclear waste.

The INFCE experience indicates that demonstrated progress toward safe, permanent disposal of nuclear waste is essential to maintaining public confidence in nuclear power; that governments believe that nuclear waste can be managed adequately; and that waste management is an appropriate and potentially fruitful area for international cooperation.

6. Question. The EPA recently testified that the total accumulated radioactive waste is only 0.1 percent of the amount of hazardous wastes being generated each year in the U.S. The toxicity from these hazardous wastes (like arsenic, chlorine, ammonia) stay at the same levels forever. In contrast the toxicity for radioactive wastes decay with time. For example, in less than 1000 years reprocessed high level waste decays to a relative toxicity equal to that of the natural ore from which it came.

How can we overcome the present double standard on regulating nuclear wastes compared to other hazardous wastes?

Response: The principles set forth in my response to question No. 1 above apply to this question as well. I am not sufficiently familiar with the regulations applying to non-nuclear wastes to comment upon them, but I recognize the need for policy-makers and the public to make informed judgments based upon comparative benefits and risks.

Political

1. Question. There is a reasonable possibility that your term as Commissioner will be served under a Republican Administration. The Republican platform, among other things, calls for "accelerated use of nuclear energy," for streamlining the licensing process "through consolidation of the present process and the use of standardized reactor designs," for "decisive federal action to choose and implement solutions to nuclear waste disposal and storage and reprocessing of spent fuel," for "regional away-from-reactor storage of spent

Nuclear Waste (Cont'd.)

fuel" with "implementation of a program no later than 1984," and states that "properly designed and operated nuclear plants do not endanger public health or safety."

Are there any provisions of the Republican platform that you find objectionable or difficult to serve your term as Commissioner under, should the Republicans win in November?

Could you support the "accelerated use of nuclear energy in the United States"?

Could you support the reprocessing of spent reactor fuel?

Could you support "the rapid development of permanent storage facilities for nuclear wastes"?

Do you think that if you could not support the objectives of a Republican Administration that you should resign from the NRC and permit that Administration to appoint a new Commissioner, subject, of course, to Senate confirmation?

Response. The NRC is an independent regulatory agency, and its members are under no obligation to support the platform of any political party or candidate. But the NRC cannot operate in a vacuum. In formulating its policies, the Commission must be aware of and sensitive to the national energy policy and international nonproliferation policy goals established by the Congress and the President.

I find nothing in the provisions of the Republican platform that would make it objectionable or difficult for me to serve as an NRC Commissioner if the Republicans win in November.

In light of the independence of the NRC, I believe that differences in view that might arise between an NRC Commissioner and the Administration should not constitute a basis for the Commissioner's resignation.

2. Question. The Communique of the Venice Summit stated in part the following--

"We underline the vital contribution of nuclear power to a more secure energy supply. The role of nuclear energy has to be increased if world energy needs are to be met. We shall, therefore, have to expand our nuclear generating capacity."

Political (Cont'd.)

Do you personally agree with this statement?

If the role of nuclear energy is to be increased, what specific steps would you as the NRC Chairman take to further this commitment?

Response. I agree with the statement quoted in this question.

As a Commissioner and Chairman of the NRC, I would take steps to assure the safe operation of existing reactors and to prepare for dealing with an emergency should it occur; to consider promptly the important policy formulation, rulemaking, and adjudication matters awaiting action by the Commission; to minimize uncertainties in the licensing process and, through improvements in the clarity of rulemaking, in the conduct of licensing proceedings, and in the efficiency of policy implementation, to reduce the resources and time consumed by the licensing process; and to earn and achieve public confidence in the NRC and in the quality of nuclear regulation.

3. Question. At a news conference on April 10, 1979, President Carter stated with regard to nuclear energy that--

"I think it does not contribute to safety to have a bureaucratic nightmare or maze of red tape as licensing and siting decisions are made."

If you are confirmed as Commissioner, what steps might you consider it appropriate that the NRC to take to untangle what the President called "a bureaucratic nightmare."

Response. My response to the previous question is applicable here as well. I note also that, by clarifying the role of the Chairman as principal executive officer of the NRC, the reorganization plan will enhance the Chairman's ability to "untangle" the "bureaucratic nightmare."

4. Question. The Democratic platform calls for the closing down and phasing out of nuclear energy. In light of the current world situation, do you think this is an attainable goal in the foreseeable future?

Response. I do not believe this is an attainable goal in the foreseeable future.

Political (Cont'd.)

Question. What conditions do you think would have to exist before we as a nation could abandon nuclear energy?

Response. The United States should not abandon nuclear energy unless and until there exist realistic alternatives which could replace nuclear power with adequate protection of the public health and safety, the environment, and our nation's security. It is my judgment that such advanced alternative sources for large-scale generation of electricity are not likely to compete with nuclear, coal, or other fossil fuels before some time well into the next century.

5. Question. As you look at the alternatives available to generate significant amounts of electricity, say in the next 20 to 50 years, do you think that nuclear energy is more or less a risk than these alternatives, and do you think they are plausible alternatives over the time frame to pick up the 25% or more of electric generating capacity that nuclear will contribute by the end of this century?

Response. As indicated in my responses to previous questions, I believe that the risk associated with the use of nuclear energy is likely to be less than or within the range of risks from coal and other realistic alternatives. I know of no realistic alternative source of electrical energy which could replace nuclear power by the end of this century.

6. Question. How do you think we should execute our responsibility to the other nations of the world, who are faced with a generally worse energy situation than ours, in the sharing of nuclear know-how to meet their electric energy needs?

Response. I believe it is in our national interest and consistent with the obligations we have assumed under the Nuclear Nonproliferation Treaty to share our nuclear know-how in order to help other nations meet their needs for electrical energy. Such sharing must, of course, be consistent with our statutes and the energy and foreign policy goals enunciated by the Congress and the President.

Political (Cont'd.)

7. Question. Can we fulfill this responsibility if other nations question our reliability as a nuclear supplier nation, and see our internal nuclear program grinding down in a maze of contradictions, red tape, and uncertain leadership and commitment?

Response. The establishment, or re-establishment, of the United States as a reliable supplier is essential to the effective meeting of our responsibilities and, in my view, of our foreign policy goals. In this regard, the manner in which we are perceived is as important as the way in which we act. Consistency in the implementation of our statutes and policies related to nuclear cooperation is a key ingredient for success. Of comparable importance are the maintenance of a sound domestic nuclear power program and our active participation in international activities such as the INFCE follow-on efforts, and in the affairs of the International Atomic Energy Agency.

General

1. Question. What do you consider the role of nuclear power to be in our future energy mix, e.g., in 1990?

Response. I believe that nuclear energy makes and will continue to make an important contribution to meeting our nation's energy needs, and that this can be achieved with adequate protection of our people, our environment, and our security. I expect the role of nuclear power in our energy mix to continue to grow in the decades ahead, and to be important until at least some time well into the next century.

The Department of Energy estimates that in the year 1990 nuclear power plants will provide 21-24 percent of the electrical generation in the United States. I recognize that forecasts of this kind have been subject to dramatic change in the past, but I am unable to make an independent estimate in which I would place greater confidence.

2. Question. Do you consider nuclear power currently to provide fewer risks to the U.S. than the current alternatives, such as oil and coal?

Response. As indicated in my response to previous questions, I believe that the risk to the United States associated with the current use of nuclear energy is likely to be less than or within the range of risks from current alternatives, including oil and coal.

General (Cont'd.)

3. Question. Do you perceive the NRC's relationship with industry as one based on an adversary approach?

Response. No. Both the NRC and industry can achieve their objectives by making nuclear power available with adequate protection of the public health and safety, the environment, and our nation's security.

4. Question. What in your opinion is the proper role of the intervenor in nuclear licensing hearings?

Response. An intervenor in a nuclear licensing hearing has full participatory rights. The intervenor may raise and express views on issues that are germane to the hearing and that directly affect him or her, and he or she may cross-examine other participants.

5. Question. Do you think that the American nuclear industry has been restrained or restricted in the last few years from competing with foreign countries on the sale of its technology? Have similar restrictions been applied by the governments of other nuclear supplier nations?

Response. The American nuclear industry has been restricted from competing with foreign countries in the sale of its technology, particularly the technologies associated with uranium enrichment and chemical reprocessing. The U.S. policy to embargo the export of these technologies was continued by the current Administration. Similar restrictions have been applied in the past by the governments of some but not all nuclear supplier nations; however, to my knowledge, for the past few years no supplier has undertaken a new commitment to export enrichment or reprocessing technology.

Export Licensing

1. Question. In a 1980 letter to the House Appropriations Committee a majority of the Commissioners wrote--

"The Commission would support a transfer of NRC's export licensing authority to the Executive Branch. The nuclear export licensing process depends, in large measure, upon foreign policy judgments which are most appropriately made by those Executive Branch agencies which bear the constitutional responsibility for the conduct of United States foreign relations. We believe that it is inappropriate for an independent regulatory agency

Export Licensing (Cont'd.)

whose primary responsibility and expertise lie in the health and safety regulation of domestic nuclear power reactors to exercise responsibilities which may have a major impact on the conduct of U.S. foreign policy.

The position is not intended to either support or oppose an independent review of these matters. Rather, to point out that the NRC has neither the time nor the expertise to make the judgments required. The factor which must be considered in these decisions involve the ability of the countries involved to produce weapons, their intent, and the impact on U.S. foreign policy of the proposed sale. These have nothing to do with the primary business of the NRC and the time spent on this matter detracts from it.

Would you please comment on this?

Response. I believe that the NRC can contribute constructively to the export licensing process. Of particular value is the Commission's independent analysis of safeguards and physical security. I am not yet sufficiently familiar with NRC competence in other aspects of its current role in export licensing to make an informed assessment of their utility.

2. Question. How should export licensing decisions fit into the general rubric of U.S. nonproliferation policy?

Response. The way in which export licensing decisions fit into the general rubric of U.S. nonproliferation policy is determined by statute. As indicated in my response to the previous question, I believe that the NRC's independent analysis of safeguards and physical security contributes constructively to the licensing process and to the implementation of U.S. nonproliferation policy, but I am unable at this time to make an informed judgment on other aspects of the NRC's current role in export licensing.

Question. To what extent should the NRC be bound by Presidential and/or State Department agreements with foreign nations? What role should the Commission have in reviewing exports under agreements for cooperation renegotiated to meet the detailed requirements of the Non-Proliferation Act and which have been approved by the President and Congress? Would you contemplate a streamlined review in such instances?

Export Licensing (Cont'd.)

Response. The NRC's first obligation is to implement its statutory mandate. In doing so, it should be aware of and sensitive to the national goals reflected in Presidential and/or State Department agreements with foreign nations, and in agreements for cooperation renegotiated to meet the detailed requirements of the Non-Proliferation Act and which have been approved by the President and Congress. In the latter case, I believe that a streamlined review process would be appropriate.

3. Question. It has been said that the Tarapur case is the professor's ideal examination question. In your view, how much weight--if any--should the NRC have given the following factors--
- a) The key strategic position occupied by India in the wake of the Soviet invasion of Afghanistan;
 - b) The possibility that the Soviet Union might replace the U.S. as the supplier of fuel for the Tarapur Atomic Power Station (TAPS);
 - c) The fact that India has enough plutonium on hand, even without this shipment, or any other plutonium previously generated in TAPS, to construct a substantial nuclear arsenal;
 - d) The probability that other Third World nations would perceive this as a unilateral act of denial; and
 - e) The impact of this shipment on the Pakistani nuclear program and other U.S. relationships with Pakistan?

Response. In exercising its licensing responsibilities for reactor fuel exports under the Atomic Energy Act, the Commission is first required to find that specified licensing criteria are met and that the full-scope safeguards criterion is met. Once these findings are made, the Commission must then find that the export would be made pursuant to the terms of an appropriate agreement for cooperation and that it would not be inimical to the common defense and security of the United States. In the process of this non-inimicality finding, the Commission should consider all foreign policy and defense matters affected by or affecting nuclear cooperation between the United States and the recipient nation, including the factors listed in this question.

Export Licensing (Cont'd.)

It is my understanding that in the recent Tarapur cases, the Commission was unable to make a finding that either the specified licensing criteria or the full-scope safeguards criterion were met. Accordingly, the Commission referred the cases to the President. Thus, in these cases, the factors relevant to a non-inimicality finding were not addressed by the Commission.

4. Question. As a matter of policy, what are your views on the consideration to be given to health and safety issues in specific export licensing decisions? More specifically, should the NRC consider--
- a) The effect the proposed reactor would have on the nearby population of foreign nationals?
 - b) Its effect on nearby U.S. military bases?
 - c) Its effect on U.S. foreign relations with the recipient nation?

Response. I believe that in its consideration of health and safety issues in specific export licensing decisions, the NRC should not consider the health and safety effects of the reactor on the nearby population of foreign nations. Such consideration is the responsibility of the government of the recipient nation.

As to effects on United States interests abroad, including U.S. military bases, the Commission has decided that these effects should not be taken into account in the consideration of health and safety issues in specific export licensing decisions. I recognize that this is a controversial issue of interpretation of the jurisdiction of the NRC, and I am not sufficiently familiar with the NRC proceeding which led to the Commission's decision to express an independent judgment.

Lastly, I believe that the NRC should not consider the effect on relations between the United States and the recipient nation of the health and safety effects of the proposed reactor. Foreign policy considerations should be taken into account in determining whether the export would not be inimical to the common defense and security.

Export Licensing (Cont'd.)

5. Question. As a matter of policy should the NRC consider in its export licensing decisions--

- a) The alleged nature of the government of the recipient nation (democratic, authoritarian, etc.)?
- b) The adequacy of the regulatory regime in the proposed recipient nation?
- c) Its previous construction and operating experience with nuclear reactors--or the lack thereof?
- d) The recipient nation's plans for the disposition of spent fuel?
- e) The availability of non-nuclear sources of energy in these countries?

Response. In carrying out its current statutory responsibility for export licensing, I believe that the NRC should consider all of the factors listed in this question. Each of these factors appears to be relevant to consideration of the effect of the proposed export on the "global commons" and/or to a determination of whether the export would not be inimical to the common defense and security.

6. Question. What role do you think so called public intervenors should have in the export licensing process?

Response. As with other NRC processes, a member of the public who would be affected by the proposed export has the right to intervene in an export licensing proceeding. The appropriateness of an issue raised by an intervenor should be judged on the basis of the material contribution to the proceeding.

7. Question. From your role as an informed observer, how well has the NRC portion of the export licensing process worked since the passage of the Non-Proliferation Act? What has been its strengths? Its weaknesses? What changes do you think are advisable?

Response. I believe that the NRC has contributed constructively to the export licensing process. Of particular value has been its independent analyses of safeguards and physical security. I am not sufficiently familiar with NRC competence in other aspects of its export licensing role to make an informed assessment of their utility. Until I have had an opportunity to assess these capabilities, I have no recommendations for changes in the NRC's role in export licensing. My decision to support or oppose any specific proposal for change would rest upon my judgment of whether the alternative process would better provide for our nation's security.

REQUESTS FROM SENATOR McCLURE

Senator McClure requests that the committee obtain a detailed statement or testimony from Richard Gardner, now Ambassador to Italy, regarding Dr. Carnesale's participation in the preparation of the U.N. speech and any other campaign activities, and also the identity of any other campaign officials who can provide verification of the relevant facts.

U.S. SENATE,
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS,
Washington, D.C., August 11, 1980.

AMBASSADOR RICHARD GARDNER,
*U.S. Embassy,
Rome, Italy.*

DEAR AMBASSADOR GARDNER: The Environment and Public Works Committee is considering the President's nomination of Dr. Albert Carnesale to be a member of the Nuclear Regulatory Commission.

Senator McClure has written to the Committee requesting that certain information be obtained regarding Dr. Carnesale's past activities as part of the Committee's consideration of this nomination. I have enclosed a copy of this correspondence.

Senator McClure specifically requests that the Committee obtain a detailed statement from you regarding Dr. Carnesale's participation in the preparation of a speech given by then-candidate Jimmy Carter to the United Nations in October, 1976, and in any other activities related to the 1976 Carter Presidential campaign. Senator McClure also asks that you identify any other officials involved in that campaign who can provide verification of the relevant facts regarding any involvement by Dr. Carnesale in the preparation of the U.N. speech or in other campaign activities.

The Committee would appreciate a written statement from you in response to Senator McClure's request as soon as possible. The Committee may wish to consider action on the Carnesale nomination shortly after the present Congressional recess. Therefore, it would be most helpful to have your statement by August 18.

Thank you very much for your assistance in this matter.

Sincerely,

ROBERT T. STAFFORD,
Ranking Minority Member.

Senator ROBERT T. STAFFORD, *Environment and Public Works Committee,*
U.S. Senate

President Jimmy Carter made two speeches on the subject of nuclear non-proliferation in the 1976 Presidential campaign. The first was at a conference at the United Nations in May 1976. The second was in San Francisco in October 1976.

I had the principal responsibility for assisting President Carter with the U.N. speech. In discharging this responsibility, I consulted with approximately 12 experts, one of who was Dr. Albert Carnesale of Harvard. I took the initiative in seeking his consultation, having been impressed with Dr. Carnesale's knowledge of the subject in the course of an arms control seminar we both attended during previous summers under the auspices of the Aspen Institute in Aspen, Colo.

So far as I am aware, Dr. Carnesale was in no way connected with the Carter Presidential campaign. I was not informed about this political affiliation in 1976 any more than I am today. In short, he was consulted by me in 1976 solely because of his knowledge of this subject.

I also made a contribution to President Carter's October speech on non-proliferation in San Francisco, but I do not recall having asked Dr. Carnesale for assistance on that occasion.

Mr. Stuart Eizenstat, Assistant to the President, served in the 1976 campaign as issues coordinator for President Carter. In that connection, he is familiar with the background of the U.N. speech, but probably not with the details of my consultation with Dr. Carnesale.

I hope this information is helpful to you and your committee.

Sincerely yours,

RICHARD N. GARDNER,
U.S. Ambassador to Italy.

Senator McClure requests that the committee obtain a statement or testimony from NRC officials, past or present, responsible for the GESMO Hearing Board and other members of the board regarding the principles applicable to the Board and Dr. Carnesale's activities while a member of the Hearing Board. Senator McClure also requests that the committee obtain a statement or testimony from (1) members of the Ford Foundation Nuclear Energy Study Group, (2) Jessica Tuchman Matthews, the National Security Council staffer responsible for Presidential Review Memorandum 15, now a Washington Post editorial staff member, (3) Joseph S. Nye, Jr., the Deputy to the Under Secretary of State for Security Assistance, Science and Technology, who coordinated nuclear nonproliferation policy, now at Harvard University, (4) Kitty Schermer, the President's Domestic Council staffer for PRM-15 and the April 7 policy statement, now at the Office of Management and Budget, regarding Dr. Carnesale's activities during his service on the Hearing Board and the identity of any other officials or individuals who can provide verification of the relevant facts.

*United States Senate*COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
WASHINGTON, D.C. 20510

August 12, 1980

Commissioner Victor Gilinsky
Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Commissioner Gilinsky:

The Environment and Public Works Committee is considering the President's nomination of Dr. Albert Carnesale to be a member of the Nuclear Regulatory Commission.

Senator McClure has written to the Committee requesting that certain information be obtained regarding Dr. Carnesale's past activities as part of the Committee's consideration of this nomination. I have enclosed a copy of this correspondence.

Senator McClure requests that the Committee obtain a statement from you regarding the legal and ethical principles applicable to the members of the GESMO Hearing Board that governed their other activities, and regarding your knowledge of Dr. Carnesale's activities while a member of the GESMO Hearing Board. Enclosure 1 to Senator McClure's August 4, 1980, letter asks about Dr. Carnesale's possible involvement in a number of activities during the period of his service on the GESMO Hearing Board, and how the legal and ethical principles would apply to any such involvement. In addition, the enclosure to Senator McClure's letter asks for a description of Dr. Carnesale's role, if any, in the decision of the GESMO Hearing Board after the President's April 7, 1977, Policy Statement on Nuclear Power and Nonproliferation to postpone indefinitely the GESMO proceeding, and in the subsequent NRC decision to terminate GESMO proceedings.

I am informed by NRC that Dr. Carnesale served as a member of the GESMO Hearing Board from September 14, 1976, through June 6, 1977. I have also enclosed a copy of a memorandum from NRC's General Counsel on the subject of the standards of conduct that governed members of the GESMO Board.

The Committee would appreciate a written statement from you in response to Senator McClure's request as soon as possible. The Committee may wish to consider action on the Carnesale nomination shortly after the present Congressional recess. Therefore, it would be most helpful to have your statement by August 18.

Thank you very much for your assistance in this matter.

Sincerely,



Robert T. Stafford
Ranking Minority Member



OFFICE OF THE
COMMISSIONER

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555

August 18, 1980

The Honorable Robert T. Stafford
Committee on Environment and
Public Works
United States Senate
Washington, D. C. 20510

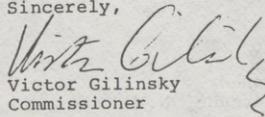
Dear Senator Stafford:

I am responding to your letter of August 12, 1980, requesting that I answer questions raised by Senator McClure regarding the legal and ethical principles applicable to the members of the Generic Environmental Statement on Mixed Oxide ("GESMO") Hearing Board. As you are aware, the members of the GESMO Hearing Board were subject to the Nuclear Regulatory Commission's regulations governing the conduct of special government employees, specifically 10 CFR Sections 0.735-50 through 0.735-55 and Sections 0.735-21, -22, -23, -24(c), -25, -26, -27, and -30. The GESMO Hearing Board was charged with conducting a legislative-type hearing to compile a record, but not with making a decision on the merits; any decision in this matter would have been made by the Commission. Although the GESMO Board was empaneled to conduct a legislative hearing, the board members would have been subject to the same ethical principles which are applicable to board members in adjudicatory proceedings: to conduct the proceeding in an objective and impartial manner.

I have no knowledge concerning Dr. Carnesale's possible involvement, during the period of his service on the GESMO Hearing Board, in the activities discussed in Enclosure 1 of Senator McClure's letter of August 4, 1980. Following the President's "Statement on Nuclear Power Policy" of April 7, 1977, the GESMO Board, on April 12, issued an order postponing until further notice the hearings scheduled in the proceeding. I do not know what role, if any, Dr. Carnesale personally played in the Board's decision to issue this order. I am informed that Dr. Carnesale left the GESMO Board on June 6, 1977. On October 28, 1977, the Commission asked the GESMO

Board for its views on whether the GESMO hearing should be terminated or postponed. On November 11, the Board recommended that the Commission defer consideration of GESMO pending completion of the ongoing national and international reviews of alternative fuel cycles and reactor systems. I do not know whether the Board consulted Dr. Carnesale in making its recommendation.

Sincerely,


Victor Gilinsky
Commissioner

*United States Senate*COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
WASHINGTON, D.C. 20510

August 12, 1980

Mr. Richard Kennedy
2510 Virginia Avenue, N.W.
Apt. 705-N
Washington, D.C. 20037.

Dear Mr. Kennedy:

The Environment and Public Works Committee is considering the President's nomination of Dr. Albert Carnesale to be a member of the Nuclear Regulatory Commission.

Senator McClure has written to the Committee requesting that certain information be obtained regarding Dr. Carnesale's past activities as part of the Committee's consideration of this nomination. I have enclosed a copy of this correspondence.

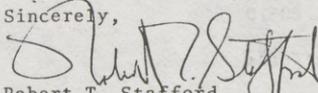
Senator McClure requests that the Committee obtain a statement from you regarding the legal and ethical principles applicable to the members of the GESMO Hearing Board that governed their other activities, and regarding your knowledge of Dr. Carnesale's activities while a member of the GESMO Hearing Board. Enclosure 1 to Senator McClure's August 4, 1980, letter asks about Dr. Carnesale's possible involvement in a number of activities during the period of his service on the GESMO Hearing Board, and how the legal and ethical principles would apply to any such involvement. In addition, the enclosure to Senator McClure's letter asks for a description of Dr. Carnesale's role, if any, in the decision of the GESMO Hearing Board after the President's April 7, 1977, Policy Statement on Nuclear Power and Nonproliferation to postpone indefinitely the GESMO proceedings, and in the subsequent NRC decision to terminate GESMO proceedings.

I am informed by NRC that Dr. Carnesale served as a member of the GESMO Hearing Board from September 14, 1976, through June 6, 1977. I have also enclosed a copy of a memorandum from NRC's General Counsel on the subject of the standards of conduct that governed members of the GESMO Board.

The Committee would appreciate a written statement from you in response to Senator McClure's request as soon as possible. The Committee may wish to consider action on the Carnesale nomination shortly after the present Congressional recess. Therefore, it would be most helpful to have your statement by August 18.

Thank you very much for your assistance in this matter.

Sincerely,



Robert T. Stafford
Ranking Minority Member

Richard T. Kennedy
2510 Virginia Avenue, N. W.
Washington, D. C. 20037
August 15, 1980

The Honorable Robert T. Stafford
Committee on Environment and Public Works
United States Senate
Washington, D.C. 20510

Dear Senator Stafford:

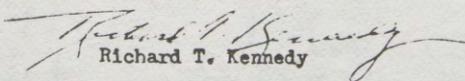
This letter is in response to your letter of August 12, 1980 requesting certain information relevant to consideration of the nomination of Dr. Albert Carnesale to the Nuclear Regulatory Commission.

The legal and ethical principles applicable to members of the GESMO Hearing Board that governed their other activities are those stated in the Commission's Regulations 10 CFR Part O furnished to you by the Commission's General Counsel and enclosed with your August 12 letter to me.

As to Dr. Carnesale's activities while a member of the GESMO Hearing Board, my knowledge is and was quite limited. I do not recall having been aware of any alleged association by Dr. Carnesale with activities pertaining to President Carter's campaign, the transition team's efforts, or the Administration's work on PRM15. I was aware of Dr. Carnesale's association with and participation in the work of the Ford-Mitre Report which had begun prior to his designation as a member of the GESMO Hearing Board. I also was aware of Dr. Carnesale's association with the various members of the extensive team involved in the Ford-Mitre Report's preparation. It is my recollection that possible conflict was discussed with Dr. Carnesale before his appointment by the Commission to the Hearing Board and that satisfactory assurances were given that he would so conduct and limit his Ford-Mitre study activities as to preclude any possible conflict. Dr. Carnesale continued his teaching at Harvard University during the period of the GESMO hearing as it was understood that he would. Subsequently Professor Harvey Brooks asked for my appraisal of Dr. Carnesale in connection with the University's consideration of him for a tenured position. I provided a favorable appraisal in part based upon my understanding and observation of his contributions to the work of the GESMO Hearing Board.

Dr. Carnesale, as a member of the Hearing Board, was made aware of the governing regulations of the Commission as they pertained to the legal and ethical principles affecting his other activities. Though as stated earlier, my knowledge of Dr. Carnesale's other activities was cursory, at best, I do not recall becoming aware of any activity which I considered then to be inconsistent with those regulations.

Sincerely yours,


Richard T. Kennedy

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United States Senate

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
 WASHINGTON, D.C. 20510

August 11, 1980

Ms. Jessica Tuchman Matthews
 Editorial Page
 The Washington Post
 1150 Fifteenth Street, N.W.
 Washington, D.C. 20071

Dear Ms. Matthews:

The Environment and Public Works Committee is considering the President's nomination of Dr. Albert Carnesale to be a member of the Nuclear Regulatory Commission.

Senator McClure has written to the Committee requesting that certain information be obtained regarding Dr. Carnesale's past activities as part of the Committee's consideration of this nomination. I have enclosed a copy of this correspondence.

Senator McClure requests that the Committee obtain a statement from you regarding your knowledge of any activities of Dr. Carnesale during the period of his participation on the Nuclear Regulatory Commission's GESMO Hearing Board that may have been related to the subject matter of the GESMO proceeding. Enclosure 1 to Senator McClure's August 4, 1980, letter makes specific reference to Dr. Carnesale's involvement with the Ford Foundation's Nuclear Energy Policy Study Group and its report Nuclear Power: Issues and Choices, and with the preparation of Jimmy Carter's October 1976 speech at the United Nations. The enclosure to Senator McClure's letter also asks about Dr. Carnesale's possible involvement with the Carter transition team, with the preparation of Presidential Review Memorandum 15 on Nuclear Power and Nonproliferation and with the preparation of President Carter's April 7, 1977, Policy Statement on Nuclear Power and Nonproliferation.

I am informed by NRC that Dr. Carnesale served as a member of the GESMO Hearing Board from September 14, 1976, through June 6, 1977. Senator McClure also asks that you identify any other individuals who can provide verification of the relevant facts regarding Dr. Carnesale's activities during this period that were related to the subject matter of the GESMO proceeding.

The Committee would appreciate a written statement from you in response to Senator McClure's request as soon as possible. The Committee may wish to consider action on the Carnesale nomination shortly after the present Congressional recess. Therefore, it would be most helpful to have your statement by August 18.

Thank you very much for your assistance in this matter.

Sincerely,



Robert T. Stafford
Ranking Minority Member

The Washington Post

1150 15TH STREET, N. W.
WASHINGTON, D. C. 20071
(202) 334-6000

WRITER'S DIRECT TELEPHONE NUMBER

334-7474

August 18, 1980

The Honorable Robert T. Stafford
Committee on Environment and
Public Works
United States Senate
Washington, D.C. 20510

Dear Senator Stafford,

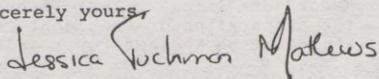
This letter is in reply to yours of August 11 in which you request a statement from me in reply to questions raised by Senator McClure concerning Dr. Carnesale's nomination for the post of Chairman of the Nuclear Regulatory Commission.

I was not in any way associated with the Carter campaign in 1976. My association began in early January of 1977 when I was hired as head of the Office of Global Issues on the National Security Council staff. Hence I cannot comment in any way on Dr. Carnesale's involvement with or contribution to any campaign speeches, the activities of the transition team, or any other of his activities in 1976.

However, as the NSC staff member responsible for non-proliferation policy, I was intimately involved in Presidential Review Memorandum 15 and in the preparation of the President's April 7 policy statement on nuclear power and nonproliferation. To the best of my knowledge Dr. Carnesale was in no way involved in either of these policy documents.

I hope this will assist you in your consideration of this matter.

Sincerely yours,



Jessica Mathews
Editorial Board

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United States Senate

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
 WASHINGTON, D.C. 20510

August 11, 1980

Mr. Joseph S. Nye, Jr.
 John F. Kennedy School of Government
 Harvard University
 79 Boylston Street
 Room P-26
 Cambridge, Massachusetts 02138

Dear Mr. Nye:

The Environment and Public Works Committee is considering the President's nomination of Dr. Albert Carnesale to be a member of the Nuclear Regulatory Commission.

Senator McClure has written to the Committee requesting that certain information be obtained regarding Dr. Carnesale's past activities as part of the Committee's consideration of this nomination. I have enclosed a copy of this correspondence.

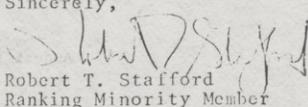
Senator McClure requests that the Committee obtain a statement from you regarding your knowledge of any activities of Dr. Carnesale during the period of his participation on the Nuclear Regulatory Commission's GESMO Hearing Board that may have been related to the subject matter of the GESMO proceeding. Enclosure 1 to Senator McClure's August 4, 1980, letter makes specific reference to Dr. Carnesale's involvement with the Ford Foundation's Nuclear Energy Policy Study Group and its report Nuclear Power: Issues and Choices, and with the preparation of Jimmy Carter's October 1976 speech at the United Nations. The enclosure to Senator McClure's letter also asks about Dr. Carnesale's possible involvement with the Carter transition team, with the preparation of Presidential Review Memorandum 15 on Nuclear Power and Nonproliferation and with the preparation of President Carter's April 7, 1977, Policy Statement on Nuclear Power and Nonproliferation.

I am informed by NRC that Dr. Carnesale served as a member of the GESMO Hearing Board from September 14, 1976, through June 6, 1977. Senator McClure also asks that you identify any other individuals who can provide verification of the relevant facts regarding Dr. Carnesale's activities during this period that were related to the subject matter of the GESMO proceeding.

The Committee would appreciate a written statement from you in response to Senator McClure's request as soon as possible. The Committee may wish to consider action on the Carnesale nomination shortly after the present Congressional recess. Therefore, it would be most helpful to have your statement by August 18.

Thank you very much for your assistance in this matter.

Sincerely,


Robert T. Stafford
Ranking Minority Member

HARVARD UNIVERSITY

JOHN F. KENNEDY SCHOOL OF GOVERNMENT
CAMBRIDGE, MASSACHUSETTS 02138JOSEPH S. NYE
Professor of Government79 BOYLSTON STREET
(617) 495-1148

August 15, 1980.

The Honorable Robert T. Stafford
United States Senate
Committee on Environment and Public Works
Washington, DC 20510

Dear Senator Stafford:

Thank you for your letter of August 11 regarding Dr. Albert Carnesale. The answer to your questions follow:

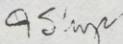
1. Ford/Mitre: The work of the Ford Foundation's Nuclear Energy Policy Study Group extended throughout calendar year 1976, and both Dr. Carnesale and I participated actively in that work. During the course of the study, he became a member of the GESMO Hearing Board and, to the best of my recollection, did not participate further in the Group's discussions of reprocessing and recycling of plutonium. Furthermore, at his request, a footnote was included in the report of the Group disassociating him from that part of the Report.

2. October 1976 Speech: I was not involved in the preparation of this speech and do not know if Dr. Carnesale was involved.

3. Carter Non-Proliferation Policy: To my knowledge, Dr. Carnesale was not involved with the Carter transition team, with the preparation of Presidential Review Memorandum 15, or with the preparation of President Carter's April 7, 1977 Policy Statement on Nuclear Power and Non-Proliferation. He did not become a consultant to my office at the Department of State until well after these activities were completed. I should note that Dr. Carnesale and I are personal friends, that we both live in Lexington, Massachusetts, and that we did have informal conversations from time to time during this period; but, to the best of my recollection, we did not discuss the preparations of PRM-15 or the April 7, 1977 policy statement.

To verify my recollections of that period, you might contact someone such as Kitty Schirmer or Jessica Matthews who were on the White House staff involved in nuclear issues. I hope these answers are of help to your committee.

Sincerely,


Joseph S. Nye

JENNINGS RANFOLPH, W. VA., CHAIRMAN
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 BAILEY GUARD, MINORITY STAFF DIRECTOR

United States Senate
 COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
 WASHINGTON, D.C. 20510

August 11, 1980

Mr. George W. Rathjens
 39 Sewall Street
 West Newton, Massachusetts 02138

Dear Mr. Rathjens:

The Environment and Public Works Committee is considering the President's nomination of Dr. Albert Carnesale to be a member of the Nuclear Regulatory Commission.

Senator McClure has written to the Committee requesting that certain information be obtained regarding Dr. Carnesale's past activities as part of the Committee's consideration of this nomination. I have enclosed a copy of this correspondence.

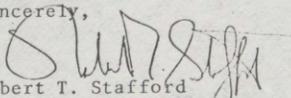
Senator McClure requests that the Committee obtain a statement from you regarding your knowledge of any activities of Dr. Carnesale during the period of his participation on the Nuclear Regulatory Commission's GESMO Hearing Board that may have been related to the subject matter of the GESMO proceeding. Enclosure 1 to Senator McClure's August 4, 1980, letter makes specific reference to Dr. Carnesale's involvement with the Ford Foundation's Nuclear Energy Policy Study Group and its report Nuclear Power: Issues and Choices, and with the preparation of Jimmy Carter's October 1976 speech at the United Nations. The enclosure to Senator McClure's letter also asks about Dr. Carnesale's possible involvement with the Carter transition team, with the preparation of Presidential Review Memorandum 15 on Nuclear Power and Nonproliferation and with the preparation of President Carter's April 7, 1977, Policy Statement on Nuclear Power and Nonproliferation.

I am informed by NRC that Dr. Carnesale served as a member of the GESMO Hearing Board from September 14, 1976, through June 6, 1977. Senator McClure also asks that you identify any other individuals who can provide verification of the relevant facts regarding Dr. Carnesale's activities during this period that were related to the subject matter of the GESMO proceeding.

The Committee would appreciate a written statement from you in response to Senator McClure's request as soon as possible. The Committee may wish to consider action on the Carnesale nomination shortly after the present Congressional recess. Therefore, it would be most helpful to have your statement by August 18.

Thank you very much for your assistance in this matter.

Sincerely,



Robert T. Stafford
Ranking Minority Member



DEPARTMENT OF STATE

Washington, D.C. 20520

August 18, 1980

Dear Senator Stafford:

I apologize for replying today rather than earlier to your letter of August 11 about the nomination of Albert Carnesale to be a member of the Nuclear Regulatory Commission, but I did not receive it until Saturday.

I have known Dr. Carnesale since he came to Cambridge and have the highest regard for him. In my opinion, he would be as fine a chairman of the Commission as can be found.

On reviewing Senator McClure's letter to you, I find that I can shed some light on three of the issues he raises.

I was a member of the Ford-Mitre Nuclear Energy Policy Study Group, along with Dr. Carnesale, and so am intimately familiar with the contents of the product, Nuclear Power: Issues and Choices, and with the role played by different members of the group in its production. Most of the chapters in the book were written by one or two authors, although the group took responsibility collectively for the book. Dr. Carnesale was an active participant in discussions within the group on many of the issues it considered, but I recollect his disqualifying himself on those relating to spent fuel reprocessing during the time he served on the GESMO hearing board, and I have no recollection of his commenting on those questions during that period. Contrary to the statement in Senator McClure's letter, Dr. Carnesale was not the principal author of the chapter on "Plutonium Reprocessing and Recycle;" Dr. Thomas Neff was. Dr. Carnesale was the principal author of the appendix to the book, which is a general primer on Nuclear Power Technology.

I was not directly involved in the preparation of the Carter speech of October 1976, but am generally familiar with Dr. Carnesale's role. He did provide some material that was used by Dick Gardner for that speech. I believe it accurate to say that his view is like that of many other academics, myself included: we are generally willing to provide expert

Honorable Robert T. Stafford
United States Senate
Washington, D. C. 20510

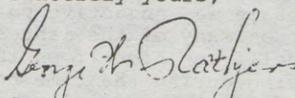
knowledge and opinions to political candidates, whether we support or oppose them, if we believe that by so doing we can inform the public policy process in useful ways.

While no particular questions are raised about it, Senator McClure's letter refers to Dr. Carnesale's participation in the T.C.C. of INFCE. I have some knowledge of this by virtue of having chaired the intergovernmental management committee responsible for U.S. participation in INFCE from January 2, 1979 until its completion. During that period, and I assume before, Dr. Carnesale participated very constructively and as actively as time would permit -- he was usually in Washington one day per week -- in the analysis and formulation of U.S. positions and responses to initiatives by other countries. He was most effective as the head of our delegation to the T.C.C. meetings.

You ask whether there are others who might comment on Dr. Carnesale's activities relating to the GESMO proceeding. George Bunn, of the University of Wisconsin, who chaired the GESMO hearings would be one person. With respect to any overlap between that activity and Dr. Carnesale's involvement in the Ford-Mitre study, the most important persons would be Spurgeon Keeny, now Deputy Director of ACDA, who chaired that effort and Thomas Neff, now with Energy Laboratory at MIT, who, as I mentioned, was most responsible for the study's treatment of GESMO-related issues.

If I can be of further help, please call on me.

Sincerely yours,



George W. Rathjens

JENNINGS RANDOLPH, W. VA., CHAIRMAN
 EDMUND S. MUSKIE, MAINE
 ROBERT T. STAFFORD, VT.
 GIFFE BRAYLEY, ALASKA
 HOWARD H. BAKER, JR., TENN.
 LLOYD BENTSEN, TEX.
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 ALAN K. SIMPSON, WYO.
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 LARRY PRESSLER, S. DAK.
 DANIEL PATRICK MOYNIHAN, N.Y.
 JOHN W. YAGO, JR., STAFF DIRECTOR
 BARLEY SWARD, MINORITY STAFF DIRECTOR

United States Senate

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
 WASHINGTON, D.C. 20510

August 12, 1980

Marcus A. Rowden
 600 New Hampshire Avenue, N.W.
 Suite 1000
 Washington, D.C. 20037

Dear Mr. Rowden:

The Environment and Public Works Committee is considering the President's nomination of Dr. Albert Carnesale to be a member of the Nuclear Regulatory Commission.

Senator McClure has written to the Committee requesting that certain information be obtained regarding Dr. Carnesale's past activities as part of the Committee's consideration of this nomination. I have enclosed a copy of this correspondence.

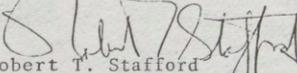
Senator McClure requests that the Committee obtain a statement from you regarding the legal and ethical principles applicable to the members of the GESMO Hearing Board that governed their other activities, and regarding your knowledge of Dr. Carnesale's activities while a member of the GESMO Hearing Board. Enclosure 1 to Senator McClure's August 4, 1980, letter asks about Dr. Carnesale's possible involvement in a number of activities during the period of his service on the GESMO Hearing Board, and how the legal and ethical principles would apply to any such involvement. In addition, the enclosure to Senator McClure's letter asks for a description of Dr. Carnesale's role, if any, in the decision of the GESMO Hearing Board after the President's April 7, 1977, Policy Statement on Nuclear Power and Nonproliferation to postpone indefinitely the GESMO proceeding, and in the subsequent NRC decision to terminate GESMO proceedings.

I am informed by NRC that Dr. Carnesale served as a member of the GESMO Hearing Board from September 14, 1976, through June 6, 1977. I have also enclosed a copy of a memorandum from NRC's General Counsel on the subject of the standards of conduct that governed members of the GESMO Board.

The Committee would appreciate a written statement from you in response to Senator McClure's request as soon as possible. The Committee may wish to consider action on the Carnesale nomination shortly after the present Congressional recess. Therefore, it would be most helpful to have your statement by August 18.

Thank you very much for your assistance in this matter.

Sincerely,



Robert T. Stafford
Ranking Minority Member

FRIED, FRANK, HARRIS, SHRIVER & KAMPELMAN

SUITE 1000

600 NEW HAMPSHIRE AVENUE, N.W.

WASHINGTON, D. C. 20037

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WRITER'S DIRECT NUMBER IS

(202) 342-3631

OUR REFERENCE

August 15, 1980

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DAVID E. BIRNENBAUM
JAMES B. BLUMENFELD
MILTON EISENBERG
JOEL R. FEIGELMAN
HAROLD P. GREEN
WILLIAM JOSEPHSON
MAX M. KAMPELMAN
KENNETH S. KRAMERALDEN F. ABBOTT
WILLIAM P. ALFORD
EDWARD JAY BECAWITH
HARVEY W. BERNSTEIN
KAREN A. BLEIWEISS
JOHN T. BOESE
KATHLEEN C. BUSH
VIRGINIA F. CRISMAN
S. BORO DEAN
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DOUGLAS J. FETZ
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JUNE MONTFORD GERTIG
WILLIAM B. HOFFMAN
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JONATHAN L. KEMPRER
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LEONARD A. ZAK
L. MARC ZELLJOSEPH BURSTEIN
PAUL SHNITZER
COUNSEL

Senator Robert T. Stafford
United States Senate
Committee on Environment and
Public Works
Washington, D.C. 20510

Dear Senator Stafford:

Your letter of August 12 requests a statement from me regarding the legal and ethical principles applicable to GESMO Hearing Board members that governed their other activities, and regarding my knowledge of Dr. Albert Carnesale's activities while a member of that Board.

The legal and ethical principles governing GESMO Board members were those which applied to special Government employees generally, i.e., those embodied in 10 C.F.R. Part 0 of the NRC regulations as they stood during the GESMO hearing period (1976-1977). My information as to Dr. Carnesale's outside activities during his GESMO Board service was, to the best of my recollection, that which be brought to the attention of the Commission in the statement of employment and financial interests required of special Government employees.

Sincerely,

Marcus A. Rowden
Marcus A. Rowden

MAR:ps

JENNINGS RANDOLPH, W. VA., CHAIRMAN
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JOHN W. YAGG, JR., STAFF DIRECTOR
 BAILEY GUARD, MINORITY STAFF DIRECTOR

United States Senate
 COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
 WASHINGTON, D.C. 20510

August 11, 1980

Ms. Katherine Schirmer
 Office of Management and Budget
 Washington, D.C.

Dear Ms. Schirmer:

The Environment and Public Works Committee is considering the President's nomination of Dr. Albert Carnesale to be a member of the Nuclear Regulatory Commission.

Senator McClure has written to the Committee requesting that certain information be obtained regarding Dr. Carnesale's past activities as part of the Committee's consideration of this nomination. I have enclosed a copy of this correspondence.

Senator McClure requests that the Committee obtain a statement from you regarding your knowledge of any activities of Dr. Carnesale during the period of his participation on the Nuclear Regulatory Commission's GESMO Hearing Board that may have been related to the subject matter of the GESMO proceeding. Enclosure 1 to Senator McClure's August 4, 1980, letter makes specific reference to Dr. Carnesale's involvement with the Ford Foundation's Nuclear Energy Policy Study Group and its report *Nuclear Power: Issues and Choices*, and with the preparation of Jimmy Carter's October 1976 speech at the United Nations. The enclosure to Senator McClure's letter also asks about Dr. Carnesale's possible involvement with the Carter transition team, with the preparation of Presidential Review Memorandum 15 on Nuclear Power and Nonproliferation and with the preparation of President Carter's April 7, 1977, Policy Statement on Nuclear Power and Nonproliferation.

I am informed by NRC that Dr. Carnesale served as a member of the GESMO Hearing Board from September 14, 1976, through June 6, 1977. Senator McClure also asks that you identify any other individuals who can provide verification of the relevant facts regarding Dr. Carnesale's activities during this period that were related to the subject matter of the GESMO proceeding.

The Committee would appreciate a written statement from you in response to Senator McClure's request as soon as possible. The Committee may wish to consider action on the Carnesale nomination shortly after the present Congressional recess. Therefore, it would be most helpful to have your statement by August 18.

Thank you very much for your assistance in this matter.

Sincerely,



Robert T. Stafford
Ranking Minority Member



EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET
WASHINGTON, D.C. 20503

August 18, 1980

The Honorable Robert T. Stafford
United States Senate
Committee on Environment and Public Works
Washington, D.C. 20510

Dear Senator Stafford:

This letter responds to the questions which you and Senator McClure raised in your August 11 letter to me. You asked that I provide a statement to the Committee on Environment and Public Works concerning my knowledge of any activities or participation Dr. Albert Carnesale may have had in various Carter Administration decisions related to non-proliferation. This letter provides that statement.

I do not know of any participation by Dr. Carnesale in any Carter Campaign or Carter Administration activities related to nuclear power or to nuclear non-proliferation except those which took place during Dr. Carnesale's service on the Technical Coordinating Committee of the International Nuclear Fuel Cycle Evaluation. I am only indirectly aware of his activities on the TCC, and do not recall having met or talked with him, even during that period.

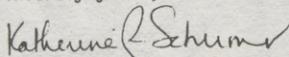
Specifically, I know of no occasion in which Dr. Carnesale was involved in activities related to the preparation of Presidential Review Memorandum 15, or to the President's April 7, 1977 statement on non-proliferation. I had no contact with the nominee in the preparation of the October 4, 1977 letter from Stuart Eizenstat to the Chairman of the Nuclear Regulatory Commission requesting termination of the GESMO proceedings. To the best of my knowledge, Mr. Eizenstat had no discussions with Dr. Carnesale related to that letter.

While I know nothing about the preparation of the President's speech at the United Nations (which I believe was in May 1976, not October), I was involved in the drafting of then-Governor Carter's speech on non-proliferation delivered in San Diego, California in September or October, 1976. I know of no participation by Dr. Carnesale in the preparation of that speech.

Finally, I do not have any suggestions for further verification of Dr. Carnesale's activities other than those persons listed in item 3 of Enclosure I of Senator McClure's letter to you.

I trust that this responds fully to the questions which you and Senator McClure have raised. Should you have any further questions or concerns, I would be delighted to try to answer them.

Sincerely yours,



Katherine P. Schirmer
Associate Director for
Natural Resources,
Energy and Science

JENNINGS RANDOLPH, W. VA., CHAIRMAN
 EDMUND S. MUSKIE, MAINE
 MIKE GRAVEL, ALASKA
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United States Senate
 COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
 WASHINGTON, D.C. 20510

August 11, 1980

Mr. Leonard Bickwit, Jr.
 General Counsel
 Nuclear Regulatory Commission
 Washington, D.C. 20555

Dear Mr. Bickwit:

The Environment and Public Works Committee is considering the President's nomination of Dr. Albert Carnesale to be a member of the Nuclear Regulatory Commission.

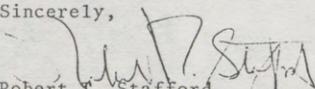
Senator McClure has written to the Committee requesting that certain information be obtained regarding Dr. Carnesale's past activities as part of the Committee's consideration of this nomination. I have enclosed a copy of this correspondence.

Senator McClure specifically requests that the Committee obtain a statement of the legal and ethical principles applicable to the members of the GESMO Hearing Board that governed their other activities. I have received an August 8, 1980, memorandum from you to Carleton Kammerer on this subject. I would appreciate confirmation from you that this memorandum includes the applicable standards of conduct that governed members of the GESMO Hearing Board.

The Committee would appreciate a written statement from you in response to Senator McClure's request as soon as possible. The Committee may wish to consider action on the Carnesale nomination shortly after the present Congressional recess. Therefore, it would be most helpful to have your statement by August 18.

Thank you very much for your assistance in this matter.

Sincerely,


 Robert T. Stafford
 Ranking Minority Member



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

August 13, 1980

The Honorable Robert T. Stafford
Committee on Environment and Public Works
United States Senate
Washington, D.C. 20510

Dear Senator Stafford:

I am responding to your letter of August 11, 1980 to Leonard Bickwit, Jr. regarding the standards of conduct that were applied to GESMO Hearing Panel members. This is to confirm that the applicable standards are set forth in the memorandum from Mr. Bickwit to Carlton Kammerer dated August 8, 1980 which has previously been provided to your committee.

Sincerely,

A handwritten signature in dark ink, appearing to read "S. F. Eilperin", with a long horizontal flourish extending to the right.

Stephen F. Eilperin
Acting General Counsel



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

August 8, 1980

MEMORANDUM FOR: Carleton Kammerer, Director, OCA
FROM: *FB* Leonard Bickwit, Jr., General Counsel
SUBJECT: NOMINATION OF ALBERT CARNESALE

In response to your request of this morning, attached is a copy of 10 CFR Part 0, which sets forth the applicable standards of conduct that governed members of the GESMO panel.

Sections 0.735-21, -22, -23, -24(c), -25, -26, -27, -30, and -50-55 applied to GESMO panel members.

Attachment: 10 CFR Part 0

**UNITED STATES NUCLEAR REGULATORY COMMISSION
RULES and REGULATIONS
TITLE 10, CHAPTER 1, CODE OF FEDERAL REGULATIONS - ENERGY**

**PART
0**

CONDUCT OF EMPLOYEES

- Subpart A—General**
- Sec. 0.735-1 Policy.
0.735-2 Program objective.
0.735-3 Responsibilities and authorities.
0.735-4 Definitions.
0.735-5 Basic requirements.
0.735-6 National emergency application.
- Subpart B—Conflict of Interest Restrictions**
- 0.735-20 General.
0.735-21 Acts affecting a personal financial interest (based on 18 U.S.C. 208).
0.735-22 Future employment (based on 18 U.S.C. 208).
0.735-23 Activities of officers and employees in claims against and other matters affecting the Government (based on 18 U.S.C. 205).
0.735-24 Receiving salary from source other than the United States Government (based on 18 U.S.C. 209).
0.735-25 Compensation to employees in matters affecting the Government (based on 18 U.S.C. 203).
0.735-26 Disqualification of former officers and employees in matters connected with former duties or official responsibilities (based on 18 U.S.C. 207).
0.735-27 Appearances by former employees before NRC.
0.735-28 Confidential statements of employment and financial interests.
0.735-29 Restriction against owning certain security interests upon Commissioners, staff and other related personnel.
- Subpart C—Other Restrictions Imposed by Statute on Conduct of Employees**
- 0.735-30 Description of statutory provisions.
- Subpart D—Restrictions Imposed by NRC Administrative Decision on Conduct of Employees**

- 0.735-40 Outside employment and other outside activity.
0.735-41 Misuse of information.
0.735-42 Gifts, entertainment, and favors.
0.735-43 Use of Government property.
0.735-44 Scandalous conduct.
0.735-45 Employee indebtedness.
0.735-46 Gambling, betting, and lotteries.
0.735-47 Handling of funds entrusted by fellow employees.
0.735-48 Ex parte contacts.
0.735-49 Employment of persons on extended leave of absence from a previous employer with reemployment rights or other benefits with the previous employer.
0.735-49a Other proscribed actions.
- Subpart E—Ethical and Other Conduct and Responsibilities of Special Government Employees**
- 0.735-50 Use of Government employment.
0.735-51 Use of inside information.
0.735-52 Coercion.
0.735-53 Gifts, entertainment, and favors.
0.735-54 Miscellaneous statutory provisions.
0.735-55 Applicable standards of conduct.
- Annex A—Concurrent Resolution.
Annex B—Position Categories Requiring Statements of Employment and Financial Interests by Incumbents.
Annex C—Criteria for Determining Positions of Categories of Positions Listed in Annex B.

AUTHORITY: The provisions of this Part 0 issued under E.O. 11222; 3 CFR, 1964-1965 Comp. 5 CFR 735.104 Sec. 201(f), Pub. L. 93-438, 88 Stat. 1243 (42 U.S.C. 5841).

- Subpart A—General**
- § 0.735-1 Policy.
- (a) The personnel policy of the U.S. Nuclear Regulatory Commission states, in part, that:
- The Atomic Energy Act requires the Commission to assure itself that the character, association and loyalty of workers in atomic energy are of a high

order. Conduct and self-discipline, both on and off the job, must measure up to unusual standards***.

(b) Section 735.101 of the Civil Service Commission regulations (5 CFR 735.101), issued pursuant to Executive Order 11222, May 8, 1965, states that:

The maintenance of unusually high standards of honesty, integrity, impartiality, and conduct by Government employees and special Government employees is essential to assure the proper performance of the Government business and the maintenance of confidence by citizens in their Government. The avoidance of misconduct and conflicts of interest on the part of Government employees and special Government employees through informed judgment is indispensable to the maintenance of these standards***.

§ 0.735-2 Program objective.

(a) The program objective is to protect the interests of the public and employees by setting forth principles, practices, and standards governing conduct of employees in such a manner that they may be readily understood by the individuals involved and practicably administered by the NRC.

(b) It is expected that the provisions of this part will be observed and administered in a manner which is consistent with both their spirit and their letter.

(c) Of necessity, because of the nature of the criminal statutes and the subject matter involved, this part cannot deal with all of the problems which may arise with regard to the conduct, including conflicts of interest, of employees and former employees.

§ 0.735-3 Responsibilities and authorities.

(a) Employees shall:
(1) Comply with the statutes and the rules, standards of conduct, and other

31 FR 4802

PART 0 • CONDUCT OF EMPLOYEES

regulations set forth in this part.

(2) Consult the full text of applicable statutes as to whether an action in question may in any way violate the statutes.

(3) Be guided in all their actions by the Code of Ethics for Government Service, adopted by concurrent Resolution of the Congress (Annex A).

(4) Conduct themselves in such a manner as to create and maintain respect for the NRC and the U.S. Government and avoid situations which require or appear to require a balancing of private interests or obligations against official duties.

(5) Be mindful of the high standards of integrity expected of them in all their activities, personal and official.

(6) Not give or appear to give favored treatment or competitive advantage to any member of the public, including former employees of the NRC, appearing before them on their own behalf or on behalf of any nongovernmental interest.

(7) Recognize that violation of any of the instructions or statutes referred to in this part may subject them to disciplinary action by NRC in addition to the penalty prescribed by law for such violation.

(8) Discuss with their immediate supervisor, or counselor, as appropriate, any problem arising out of this part.

(b) Supervisors:

(1) Inform themselves of any problems of their employees arising out of this part, consult with the cognizant NRC counselor as appropriate, and take prompt action to see that the problems, if they cannot be resolved, are referred to higher authority.

(2) Relieve employees from assignments in accordance with § 0.735-22(a).

(c) The Executive Director for Operations assumes responsibilities assigned in §§ 0.735-21(b), 0.735-22(b), 0.735-23(d) and (e), 0.735-26(c) and (d), and 0.735-28.

(d) The Directors of Offices and Divisions. (1) Bring to the attention of appropriate contractors under their jurisdiction those provisions of this part (such as "Future Employment"; "Ex Parte Contacts"; "Assisting Former Employees"; "Gifts, Entertainment, and Favors"; "Cancellation of Contracts"; and others) which may affect the actions of a contractor and his employees in dealing with NRC employees.

(2) Report to the Office of Inspector and Auditor. All complaints concerning fraud, graft, corruption, diversion of NRC assets, and misconduct of NRC employees; take

action as a result of investigations; and report on action taken, as provided in NRC Manual Chapter 0702, "Notification and Investigation of Misconduct."**

(3) Assume responsibilities assigned in §§ 0.735-21(b), 0.735-22(b), 0.735-23(d), 0.735-27, 0.735-28, and 0.735-40(b).

(e) The Director, Office of Administration. (1) Provides a copy of this part to each employee and special Government employee, and to each such new employee at the time of his entrance on duty.

(2) Provides a copy of all revisions to each employee and special Government employee.

(3) Brings the provisions of this part to the attention of each employee and special Government employee annually, and at such other times as circumstances warrant.

(4) Assures the availability of counseling services under paragraph (h) of this section to each employee and special Government employee.

(5) Has available for review by employees and special Government employees, as appropriate, copies of laws, Executive Order 11222, NRC regulations, and pertinent Civil Service Commission regulations and instructions relating to ethical and other conduct.

(6) Notifies employees and special Government employees at time of entrance on duty and periodically thereafter of the availability of counseling services under paragraph (h) of this section and how and where these services are available.

(f) The Director, Office of Administration, assumes the responsibilities assigned in §§ 0.735-40(b) and 0.735-49.

(g) The Office of Inspector and Auditor* investigate all questions of employees' conduct, fraud, etc., in NRC, in accordance with NRC Manual Chapter 0702.

(h) The General Counsel†

(1) Is the counselor for NRC.

(2) Serves as NRC's designee to the Civil Service Commission on matters covered by this part.

(3) Designates deputy counselors.

(4) Coordinates counseling services, and assures that counseling and interpretations on questions of conflicts of interest and other matters covered by the part are available to deputy counselors.

(5) Carries out the specific responsibilities assigned in §§ 0.735-27, 0.735-28, and 0.735-49(b).

§ 0.735-4 Definitions.

(a) "Commission" means the Commission of five members or a quorum thereof sitting as a body, as provided by section 201 of the Energy Reorganization Act of 1974, 88 Stat. 1233.

(b) "NRC" means the agency established by Title II of the Energy Reorganization Act of 1974 comprising the members of the Commission and all offices, employees, and representatives authorized to act in any case or matter, whether clothed with final authority or not.

(c) "Employee" means an NRC officer or employee and, insofar as statutory and Executive order restrictions are concerned, a member of the Commission, but does not include (unless otherwise indicated) a special Government employee, or an employee of another Government agency assigned or detailed to the NRC.

(d) "Former employee" means a former NRC officer or employee as defined in paragraph (c) of this section, a former special Government employee, as defined in paragraph (e) of this section, a former member of the Nuclear Regulatory Commission, a former member of the Atomic Energy Commission, and a former officer or employee of the Atomic Energy Commission.

(e) "Special Government employee" means an officer or employee of the NRC who is retained, designated, appointed, or employed to perform, with or without compensation, for not to exceed 130 days during any period of 365 consecutive days, temporary duties either on a fulltime or intermittent basis. The term includes NRC consultants, experts, and members of advisory boards, but does not include a member of the Uniformed Services.

(f) "Official responsibility" means the direct administrative or operating authority, whether intermediate or final, and either exercisable alone or with others, and either personally or through subordinates, to approve, disapprove, or otherwise direct Government action.

(g) "Organization," as used in this part in connection with 18 U.S.C. 208, means

* Amended 44 FR 62880.

† Amended 42 FR 20138.

PART 0 • CONDUCT OF EMPLOYEES

universities, foundations, nonprofit research entities and similar nonprofit organizations, States, counties and municipalities and subdivisions thereof as well as business organizations.

(h) "Person" means an individual, a corporation, a company, an association, a firm, a partnership, a society, a joint stock company, or any other organization or institution.

(i) [Deleted 40 FR 8774.]

§ 0.735-5 Basic requirements.

(a) *Applicability.* The provisions of this part apply to all current and former NRC employees and special Government employees. Except for § 0.735-28, the provisions of this part are not applicable to employees of other Government agencies assigned or detailed to the NRC. Employees of other Government agencies assigned or detailed to the NRC are required by § 0.735-28 to furnish a statement of employment and financial interest if they are performing duties of a position specified in § 0.735-28(a). However, an employee of another Government agency assigned or detailed to the NRC is not relieved of his responsibilities under regulations or code of conduct prescribed by his parent agency.

(b) *Cancellation of contracts.* The Commission reserves the right to declare void, in accordance with law, any contract negotiated or administered in violation of the provisions of NRC regulations, or statute.

(c) *Scope of part.* This part incorporates the statutes, the instructions and specific procedures, pertaining to an employee's conduct.

(d) *Construction of criminal or civil statutes.* The paraphrased version of any criminal or civil statute in this part shall not constitute a binding interpretation thereof upon the NRC or the Federal Government.

(e) *Certifications.* Certifications called for by §§ 0.735-23(e) and 0.735-26(c) and (d), shall be submitted for publication in the FEDERAL REGISTER.

(f) *Disciplinary and other remedial action.* (1) A violation of the regulations in this part by an employee or special Government employee may be cause for appropriate disciplinary action which may be in addition to any penalty prescribed by law.

(2) Remedial action, whether disciplinary or otherwise, shall be effected in

accordance with any applicable laws, Executive orders, and regulations.

(g) *Presidential appointees.* Presidential appointees covered by section 401(a) of Executive Order 11222 shall not receive compensation or anything of monetary value for any consultation, lecture, discussion, writing, or appearance the subject matter of which is devoted substantially to the responsibilities, programs, or operations on official data or ideas which have not become part of the body of public information.

§ 0.735-6 National emergency application.

The provisions of this part continue in effect without modification in a national emergency.

Subpart B—Conflict of Interest Restrictions

§ 0.735-20 General.

(a) Part I, "Policy," of Executive Order 11222 states:

Where government is based on the consent of the governed, every citizen is entitled to have complete confidence in the integrity of his government. Each individual officer, employee, or adviser of government must help to earn and must honor that trust by his own integrity and conduct in all official actions.

(b) The elimination of conflict of interest in the Federal service is one of the most important objectives in establishing general standards of conduct. A conflict of interest situation may exist where a Federal employee's private interests, usually of an economic form, conflict, or raise a reasonable question of conflict with his public duties and responsibilities. The potential conflict is of concern whether it is real or only apparent.

(c) An employee, including special Government employee, shall not: (1) Have a direct or indirect financial interest that conflicts substantially, or appears to conflict substantially, with his Government duties and responsibilities; or (2) engage in, directly or indirectly, a financial transaction as a result of, or primarily relying on, information obtained through his Government employment.

(d) An employee, including special Government employee, is not precluded from having a financial interest or engaging in financial transactions to the same extent as a private citizen not employed by the Government so long as it is not

prohibited by law, Executive Order 11222, Civil Service Commission regulations, or the regulations in this part.

(e) Certain provisions in 18 U.S.C. 201-209, dealing with conflicts of interest in Federal employment are referred to in §§ 0.735-21 through 0.735-27.

§ 0.735-21 Acts affecting a personal financial interest (based on 18 U.S.C. 208).

(a) *General.* Except as permitted by paragraphs (b), (c), and (d) of this section, no employee shall participate personally or substantially as a Government officer or employee, through decision, approval, disapproval, recommendation, the rendering of advice, investigation, or otherwise, in a judicial or other proceeding, application, request for a ruling or other determination, contract, claim, controversy, charge, accusation, arrest, or other particular matter in which, to his knowledge, he, his spouse, minor child, partner, organization in which he is serving as officer, director, trustee, partner, or employee, or any person or organization with whom he is negotiating or has any arrangement concerning prospective employment, has a financial interest.

(b) *Granting of ad hoc exemptions.* (1) If an employee desires to request an exemption from the prohibition of paragraph (a) of this section, he shall fully inform the head of his division or office as appropriate, in writing of the nature and circumstances of the particular matter and of the financial interests involved, and shall request a written determination in advance as to the propriety of his participation in such matter.

(2) The head of his division or office, as appropriate, after examining the information submitted, may relieve the employee from participation in the particular matter and so advise him in writing; or, he may approve the employee's participation in such matter upon advising him in writing:

(i) That he has determined the interest is not so substantial as to be deemed likely to affect the integrity of the services which the Government may expect from such officer or employee, and

(ii) That no provision of law and no regulation in this part would appear to be violated by the employee's participation in the particular matter.

(3) When the head of his division or office believes it is inappropriate for him to make a determination as provided in subparagraph (2) of this paragraph, he

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shall forthwith submit the information with his recommendation through channels to the Executive Director for Operations, who shall make a determination as provided in subparagraph (2) of this paragraph, forwarding the original of his determination to the submitting official and a copy to the employee involved.

(4) A copy of each request and response made under the provisions of subparagraphs (1) and (2) of this paragraph shall be forthwith forwarded through channels to the Executive Director for Operations as a matter of record. Copies of all documents referred to in subparagraphs (1), (2), and (3) of this paragraph shall be filed by the holders thereof in their confidential files.

(5) Whenever it can be reasonably anticipated that there will be a need to invoke these procedures repeatedly, and where it also appears that a burden would be placed on the NRC thereby, consideration should be given by the head of his division or office to dismissal or transfer of the employee to another position where the problems will not arise, or to the elimination of the outside interest creating the difficulty. It is expected that the employee concerned will take the initiative in resolving any problem in this area.

(c) *Exemption of remote or inconsequential financial interests*—(1) in accordance with the provisions of 18 U.S.C. 208(b)(2) the NRC has exempted the following financial interests from paragraph (a) of this section and from the requirements of paragraph (b) of this section, upon the ground that such interests are too remote or too inconsequential to affect the integrity of its employees' services:

(i) Financial interests in an enterprise in the form of shares in the ownership thereof, including preferred and common stocks whether voting or nonvoting, and warrants to purchase such shares;

(ii) Financial interests in an enterprise in the form of bonds, notes, or other evidence of indebtedness;

(iii) Investments in State or local government bonds and investments in shares of a widely held diversified mutual fund or regulated investment company, except holdings in mutual investment funds or regulated investment companies dealing primarily in atomic energy stocks;

Provided, That in the case of subdivisions (i) and (ii) of this subparagraph:

(A) The total market value of the financial interests described in said subdivisions with respect to any individual enterprise does not exceed \$1000; and

(B) the holdings in any class of shares, or bonds, or other evidences of indebtedness, of the enterprise do not exceed 1 percent of the dollar value of the outstanding shares, or bonds or other evidences of indebtedness in said class.

(2) Where a person covered by this exemption is a member of a group organized for the purpose of investing in equity or debt securities, the interest of such person in any enterprise in which the group holds securities shall be based upon said person's equity share of the holdings of the group in that enterprise.

(3) For purposes of subparagraph (1) of this paragraph, computations of dollar-value of financial interests in corporation shall be by means of:

(i) Market value in the case of stocks listed on national exchanges; or

(ii) Over-the-counter market quotations as reported by the National Daily Quotation Service in the case of unlisted stocks; or

(iii) By means of net book value (i.e. assets less liabilities) in the case of stocks not covered by the preceding two categories.

With respect to debt securities, face value shall be used for valuation purposes.

(4) The dollar value and percentage of financial interests listed above in subparagraph (1) of this paragraph shall be computed as of the date on which the employee first participated personally and substantially in any particular matter, within the meaning of 18 U.S.C. 208(a), relating to the enterprise concerned. The dollar value and percentage so computed shall govern during the entire period that the employee participates in the particular matter unless, after the aforesaid date of computation, he, or other person or organization referred to in paragraph (a) of this section, acquires an additional interest in the same enterprise. In the event of such subsequent acquisition, the dollar value and percentage shall be recomputed as of the date of such acquisition. If, in such case, the dollar value and percentage computed exceeds the limitations described in subparagraph (1) of this paragraph, the general exemption

provided therein shall no longer be applicable and an ad hoc exemption must be sought in accordance with paragraph (b) of this section.

(d) *Special exemption for special Government employees*. Federal Personnel Manual Chapter 735, Appendix C provides that a special Government employee should in general be disqualified from participating as such in a matter of any type the outcome of which will have a direct and predictable effect upon the financial interests covered by 18 U.S.C. 208. However, that chapter states that the power of exemption may be exercised in this situation "if the special Government employee renders advice of a general nature from which no preference or advantage over others might be gained by any particular person or organization." It is the policy of the Nuclear Regulatory Commission in conformity with the foregoing, to exercise the power of exemption pursuant to 18 U.S.C. 208(b) in such situations. The authority to grant such an exemption is delegated to the NRC official responsible for appointment or designation of the particular consultant or advisor. This exemption is noted on the form NRC-443 by the appointing official for the consultant or advisor concerned, by a statement that the employee "need not be precluded from rendering general advice in situations where no preference or advantage over others might be gained by any particular person or organization."

§ 0.735-22 Future employment (based on 18 U.S.C. 208).

(a) Solicitation, negotiation, or arrangements for private employment by an employee who is acting on behalf of the NRC in any particular matter in which the prospective employer has a financial interest are prohibited. With the authorization of his supervisor, an employee may be relieved of any assignment which, in the absence of such relief, might preclude such solicitation, negotiation, or arrangements.

(b) No employee shall undertake to act on behalf of the NRC in any capacity in a matter that to his knowledge affects even indirectly any party outside the Government with whom he is soliciting, negotiating, or has arrangements for

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future employment, except pursuant to the authorization of the Commission, its designee, or the Executive Director for Operations, as appropriate, after full disclosure. (See § 0.735-21.)

§ 0.735-23 Activities of officers and employees in claims against and other matters affecting the Government (based on 18 U.S.C. 205).

(a) No employee shall otherwise than in the proper discharge of his official duties:

(1) Act as agent or attorney for prosecuting any claim against the United States, or receive any gratuity, or any share of or interest in any such claim in consideration of assistance in the prosecution of such claim, or

(2) Act as agent or attorney for anyone before any department, agency, court, court-martial, officer, or any civil, military, or naval commission in connection with any proceeding, application, request for a ruling or other determination, contract, claim, controversy, charge, accusation, arrest, or other particular matter in which the United States is a party or has a direct and substantial interest.

(b) A special Government employee shall be subject to paragraph (a) of this section only in relation to a particular matter involving a specific party or parties (1) in which he has at any time participated personally and substantially as a Government employee or as a special Government employee through decision, approval, disapproval, recommendation, the rendering of advice, investigation or otherwise, or (2) which is pending in the department or agency of the Government in which he is serving: *Provided*, That subparagraph (2) of this paragraph shall not apply in the case of a special Government employee who has served in such department or agency no more than 60 days during the immediately preceding period of 365 consecutive days.

(c) Nothing in paragraph (a) of this section prevents an employee, if not inconsistent with the faithful performance of his duties, from acting without compensation as agent or attorney for any person who is the subject of disciplinary, loyalty, or other personnel administration proceedings in connection with those proceedings.

(d) Nothing in paragraph (a) of this section prevents an employee from acting, with or without compensation, as agent or attorney for his parents, spouse, child, or any person for whom, or for any estate for which, he is serving as guardian, executor, administrator, trustee, or other personal fiduciary except in those matters in which he has participated personally and substantially as a Government employee, through decision, approval, disapproval, recommendation, the rendering of advice, investigation, or otherwise, or which are the subject of his official responsibility, provided that the Commission, its designee, the Executive Director for Operations, or the head of an office or division, as appropriate, approves.

(e)(1) Nothing in paragraph (a) of this section prevents a special Government employee from acting as agent or attorney for another person in the performance of work under a grant by, or a contract with or for the benefit of, the United States when presented by the NRC provided that the Executive Director for Operations shall certify in writing that the national interest so requires. Such certification shall be submitted for publication in the FEDERAL REGISTER.

(2) The special Government employee shall immediately notify the NRC when so designated to act as agent or attorney by his private employer.

(f) Nothing in paragraph (a) of this section prevents an employee from giving testimony under oath or from making statements required to be made under penalty for perjury or contempt.

§ 0.735-24 Receiving salary from source other than the U.S. Government (based on 18 U.S.C. 209).

(a) No employee shall receive any salary, or any contribution to or supplementation of salary, as compensation for his services as an employee of the NRC from any source other than the Government of the United States, except as may be contributed out of the treasury of any State, county, or municipality.

(b) Nothing in paragraph (a) of this section prevents an employee of the NRC from continuing to participate in a bona fide pension, retirement, group life, health or accident insurance, profit sharing, stock bonus, or other employee welfare or benefit plan maintained by a former employer.

(c) Paragraph (a) of this section does not apply to a special Government employee or to an employee of the Government serving without compensation, whether or not he is a special Government employee.

(d) Paragraph (a) of this section does not prohibit acceptance of contributions, awards, or other expenses for training or to attend meetings under the terms of chapter 41 of title 5, United States Code. See NRC Appendix 4150.

§ 0.735-25 Compensation to employees in matters affecting the Government (based on 18 U.S.C. 203).

(a) No employee shall, otherwise than as provided by law for the proper discharge of official duties, directly or indirectly receive or agree to receive, or ask, demand, solicit, or seek, any compensation for any services rendered or to be rendered either by himself or another in relation to any proceeding, application, request for a ruling or other determination, contract, claim, controversy, charge, accusation, arrest, or other particular matter in which the United States is a party or has a direct and substantial interest, before any department, agency, court-martial, officer, or any civil, military, or naval commission.

(b) A special Government employee shall be subject to paragraph (a) of this section only in relation to a particular matter involving a specific party or parties (1) in which he has at any time participated personally and substantially as a Government employee or as a special Government employee through decision, approval, disapproval, recommendation, the rendering of advice, investigation, or otherwise, or (2) which is pending in the department or agency of the Government in which he is serving: *Provided*, That subparagraph (2) of this paragraph shall not apply in the case of a special Government employee who has served in such department or agency no more than 60 days during the immediately preceding period of 365 consecutive days.

§ 0.735-26 Disqualification of former officers and employees in matters connected with former duties or official responsibilities (based on 18 U.S.C. 207).

(a) No employee, after his employment has ceased, shall knowingly act as agent or attorney for anyone other than the United States in connection with any

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judicial or other proceeding, application, request for a ruling or other determination, contract, claim, controversy, charge, accusation, arrest, or other particular matter involving a specific party or parties in which the United States is a party or has a direct and substantial interest and in which he participated personally and substantially as an employee, through decision, approval, disapproval, recommendation, the rendering of advice, investigation, or otherwise, while so employed.

(b) No employee, within 1 year after his employment has ceased, may appear personally before any court or department or agency of the Government as agent, or attorney for, anyone other than the United States in connection with any proceeding, application, request for a ruling or other determination, contract, claim, controversy, charge, accusation, arrest, or other particular matter involving a specific party or parties in which the United States is a party or directly and substantially interested, and which was under his official responsibility as an employee of the Government at any time within a period of 1 year prior to the termination of such responsibility.

(c) Nothing in paragraphs (a) or (b) of this section prevents a former employee with outstanding scientific or technological qualifications from acting as attorney or agent or appearing personally in connection with a particular matter in a scientific or technological field if the Executive Director for Operations or the Commission, as appropriate, shall make a certification in writing, submitted for publication in the FEDERAL REGISTER, that the national interest would be served by such action or appearance by the former employee.

(d) A former NRC employee who desires to request for himself an exception to the legal restrictions set forth above on the basis of "scientific or technological" grounds may do so by submitting a written request to the head of the NRC office with which he would do business, who in turn will forward it to the Executive Director for Operations with his recommendation. The Executive Director for Operations, if he approves the exception, shall advise the former employee in writing through the NRC office with which he applied and shall submit for publication in the FEDERAL REGISTER a statement to the effect that:

(1) The former employee has out-

standing scientific or technological qualifications;

(2) The exception provided by 18 U.S.C. 207(b) is granted for a particular matter in a scientific or technological field; and

(3) The national interest would be served by granting the exception.

§ 0.735-27 Appearances by former employees before NRC.

When a former employee proposes to act as agent or attorney before an NRC office on behalf of anyone other than the United States in connection with any of the matters cited in § 0.735-26, he is expected to make known to the appropriate official of the NRC office the fact of his former assignment with NRC. The head of the office or division or employee before whom the former employee appears, before transacting business with the former employee or authorizing employees under his jurisdiction to transact any business with the former employee, shall call the former employee's attention to the restrictions and penalties contained in 18 U.S.C. 207. No NRC official or employee, except the General Counsel, shall offer to the former employee an interpretation of 18 U.S.C. 207 as applied to the situation at hand.

§ 0.735-28 Confidential statements of employment and financial interests.

(a) *Categories of employees required to submit statements.* The following employees shall submit confidential statements of employment and financial interest prepared in accordance with paragraph (c) of this section. These employees have duties and responsibilities which require the incumbent to report employment and financial interests in order to avoid involvement in a possible conflicts of interest situation, to protect the integrity of the government, and to carry out the purposes of the federal laws, executive orders and regulations pertaining to conflicts of interest.

(1) All employees paid at the levels of GG-13, GG-14, or GG-15.

(2) All employees occupying professional staff positions in the Office of Policy Evaluation, all contracting officers in the Office of Administration, and all attorneys in the Offices of the General Counsel and Executive Legal Director (including those employees being paid below the GG-13 level).

(3) All special Government employees except those who have worked 60 days

or more in the previous calendar year and were paid during that period at a level of GG-16 or above, or an equivalent thereto.

(b) *Notice of employees of time and place to submit statements.* Upon commencing NRC employment, the Office of Administration will provide all employees covered by the reporting requirement with a copy of the statement form. Each employee covered by the reporting requirement shall submit his statement to the head of his office not later than 30 days after his entrance on duty. Statements of special Government employees shall be submitted prior to appointment. Each regular and special Government employee covered by the reporting requirement shall submit to the head of his office a supplementary annual statement by May 15 of each year. The information provided in this annual supplement should reflect the individual's interests as of April 30. Notwithstanding the filing of the report(s) required by this section, each employee shall at all times avoid acquiring a financial interest that could result, or taking an action that would result, in a violation of the conflicts-of-interest provisions of section 208 of title 18, United States Code, or this Part 0.

(c) *Preparation of statement.* Statements shall be prepared in accordance with the following:

(1) *Statement Form.* The forms prescribed by NRC are:

Regular Government employees—Form NRC 269.

Special Government employees—Form NRC 443.

(2) *Statement content*—(i) *Interests of employee's relatives.* The interest of a spouse, minor child, or other member of an employee's immediate household is considered to be an interest of the employee and must be reported. For the purpose of this paragraph, "member of an employee's immediate household" means full-time residents of the employee's household.

(ii) *Information not known by employees.* If any information required to be included on the statement or supplementary statement, including holdings placed in trust, is not known to the employee but is known to another person, the employee shall request that other person to submit information on his behalf, and shall report such request in Part IV of Form NRC 269 or item 16b. of Form NRC 443.

(iii) *Information not required to be submitted.* A statement or supplementary statement need not contain the following:

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(A) Any information relating to the employee's connection with, or interest in, a professional society or a charitable, religious, social, fraternal, recreational, public service, civic, or political organization or a similar organization not conducted as a business enterprise and which is not engaged in the ownership or conduct of a business enterprise. For the purpose of this section, educational and other institutions doing research and development or related work involving grants of money from or contracts with the Government are deemed "business enterprises" and are required to be included in an employee's statement.

(B) Precise amounts of financial interests, indebtedness, or value of real property. The employee may, however, at a later time be required to reveal precise amounts if the NRC needs that information in order to carry out its responsibilities under applicable laws and regulations.

(C) Remote or inconsequential financial interests, as set forth in § 0.735-21(c).

(D) For special Government employees: Those financial interests which are determined by the official responsible for such employee's appointment as not to be related either directly or indirectly to the duties and responsibilities of said employee.

(d) *Reviewing statements and reporting conflicts of interest.*

(1) The employee shall prepare the statement in duplicate, retain one copy, and submit one copy to the head of his office.

(2) The office head, in reviewing the statement, shall assess it for conflicts or the appearance of conflicts of interest in the context of the employee's assigned duties and responsibilities in the NRC.

(3) If the office head desires advice and guidance, he may discuss the statement with the counselor or appropriate deputy counselor.

(4) The office head shall discuss with the employee and point out any aspects of the statement which give rise, in the office head's opinion, to questions of conflict or of appearance of conflict. (The office head shall not take, or direct the employee to take, any action with respect to such conflict without first seeking the advice of the counselor or appropriate deputy counselor.)

(5) The office head shall in all cases record his opinion as to the presence or absence of a conflict on the statement and forward same to the NRC counselor or deputy counselor.

(6) The NRC counselor or deputy counselor shall review the statement, and discuss any questions with the

employee and/or his respective office head.

(7) If the NRC counselor or deputy counselor believes that the statement evidences no question of conflict of interest, he shall record his opinion on the statement, and notify the office head.

(8) If the NRC counselor or deputy counselor believes there is a question of conflict of interest, he shall return the statement to the office head with his opinion recorded thereon. (The counselor or deputy counselor shall make his services available to the office head and employee involved to assist in effecting a resolution of any conflict or appearance of conflict.) The reviewer shall report to the counselor or deputy counselor the results of endeavors to effect resolution of the conflict at the employee-office head level, which results shall be recorded on the employee's statement and submitted to the counselor or deputy counselor for review and approval.

(9) When a statement submitted or information from other sources indicates a conflict between the interests of an employee and the performance of his service for the NRC and when the conflict or appearance of conflict is not resolved by the head of the employee's office, or the counselor or deputy counselor, the information concerning the conflict or appearance of conflict shall be reported to the Commission, or the Executive Director for Operations, as appropriate. The employee concerned shall be provided an opportunity to explain the conflict or appearance of conflict.

(10) When, after consideration of the explanation of the employee provided for in paragraph (d)(9) of this section, the Commission, or the Executive Director for Operations, as appropriate, decides that remedial action is required, immediate action to end the conflict or appearance of conflict of interest shall be taken. Remedial action may include, but is not limited to:

- (i) Changes in assigned duties;
- (ii) Divestment by the employee of his conflicting interest;
- (iii) Disciplinary action; or
- (iv) Disqualification for a particular assignment.

Remedial action, whether disciplinary or otherwise, shall be effected in accordance with any applicable laws, Executive Orders, and regulations. Disciplinary remedial action with respect to an employee of another Government agency assigned or detailed to the NRC shall be effected only by the parent agency.

(11) Upon completion of processing, the statement shall be filed in the office

of the counselor or deputy counselor, in a special file maintained for that purpose. An NRC office may request a copy of a statement from the counselor or deputy counselor. *Provided*, That it is required for purposes of carrying out responsibilities under this part.

(12) The required supplementary statements shall be processed in the same manner as an initial statement.

(e) *Confidentiality of employees' statements.* NRC shall hold each statement of employment and financial interests, and each supplementary statement, in confidence. To insure this confidentiality only the NRC counselor, deputy counselor(s), and those office heads to whom reports are to be submitted (including those employees specifically designated by them to assist in the review as may be necessary) are authorized to review the statements as provided in this section. The foregoing employees are responsible for maintaining the statements in confidence and shall not allow access to, or allow information to be disclosed from, a statement except to carry out the purpose of this part. NRC shall not disclose information from a statement except in accordance with procedures set forth in paragraph (d) of this section, or as the Commission, or the Executive Director for Operations, as appropriate, or the Office of Personnel Management shall determine for good cause shown.

(f) *Effect of employee's statements on other requirements.* The statements of employment and financial interests and supplementary statements required of employees are in addition to, and not in substitution for, or in derogation of, any similar requirement imposed by law, order, or regulation. The submission of a statement or supplementary statement by an employee or the absence of any requirement that an employee submit such a statement does not permit him or any other person to participate in a matter in which his or the other person's participation is prohibited by law, order, or regulation.

(g) *Availability of review.* Any employee who believes that his position has been improperly included under this section as one requiring the submission of a statement of employment and financial interests may utilize the grievance procedure in NRC Manual Chapter 4157, for review of his complaint.

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§ 0.735-29 Restriction against ownership of certain security interests by Commissioners, certain staff members and other related personnel

(a) No Commissioner or employee, including special government employees who are members of the Advisory Committee on Reactor Safeguards, the Atomic Safety and Licensing Board Panel or the Atomic Safety and Licensing Appeal Panel, who occupies a position at or above GS-13 or its equivalent, shall own any stocks, bonds, or other security interests issued by any entity falling within the categories set forth in paragraph (b)(1) of this section. This prohibition also applies to employees who occupy positions below the GS-13 level that fall within occupational codes designated by the Commission. The restrictions set forth in

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this section apply to spouse, minor child, or other members of the immediate household of a Commissioner, employee, or special government employee. In cases where the entity covered by the prohibition is a subsidiary of another corporation, the prohibition extends to the parent company.

(b) The Commission will publish twice yearly a list of stocks, bonds, and other security interests which employees covered by this section may not own.

(1) These are stocks, bonds, or other security interests issued by:

(i) Publicly or privately owned utilities which have filed an application with the Commission requesting an early site review, or seeking authorization to construct or operate a facility for the generation of electric energy by means of a nuclear reactor and those utilities which have received a construction permit or an operating license from the Commission that is currently effective.

(ii) State or local governments, if the primary purpose of the security is to finance the construction or operation of a nuclear reactor.

(iii) Companies manufacturing or selling nuclear power or test reactors.

(iv) Architectural-engineering companies that have been engaged to provide services relating to a nuclear facility by an applicant for a construction permit or an applicant for an operating license, and architectural-engineering companies which have filed a standard reference design that is under Commission review or has been approved by the Commission and is currently effective.

(v) Companies licensed by the Commission to mill, convert, enrich, fabricate, store, or dispose of source or special nuclear material, or applicants for such licenses.

(2)(i) An individual covered by this section who owns securities described in paragraph (a)(1) of this section shall dispose of them no later than 365 days after the entities first appear on the list described in paragraph (a) of this section. Notwithstanding the provisions of § 0.735-21(c), no employee may participate personally and substantially in a particular matter affecting any entity that appears on the list as long as the employee or his spouse, minor child, or other members of his immediate household owns the security interest.

(ii) An individual newly employed by NRC who is covered by this section shall dispose of any securities described in paragraph (a)(1) of this section that the employee may own no later than 30 days after his entrance on duty and within the same period shall ensure and sign a certification that neither the

employee nor any individual who is covered by this section through relationship with him owns any securities described in that paragraph.

(c) Each individual employed by NRC who is covered by this section shall each year sign either (1) a certification that neither he nor any individual covered by this section through relationship with him owns any securities described in paragraph (a)(1) of this section or, if he or any such individual in fact owns securities therein described, (2) a certification identifying them, disclosing how and when they were acquired and stating approximately when they will be disposed of.

(d) Securities described in paragraph (b)(1) of this section that are acquired by an individual who is covered by this section through gift, inheritance or other similar involuntary manner shall be disposed of within a reasonable time.

(e) The Commission may exempt an employee from the restrictions of this section where divestiture of the stock, bond, or other security interest is determined to be inequitable by the Commission.

Subpart C—Other Restrictions Imposed by Statute on Conduct of Employees

§ 0.735-30 Description of statutory provisions.

Each employee has a positive duty to acquaint himself with each statute that relates to his ethical and other conduct as an employee of the NRC and the Government. Certain of these statutes are referred to in §§ 0.735-21-0.735-27. Attention of employees is also directed to the following statutory provisions:

(a) The prohibitions contained in the following sections of the Atomic Energy Act of 1954, as amended: Section 222, "Violation of Specific Sections"; Section 223, "Violation of Sections Generally"; Section 224, "Communication of Restricted Data"; Section 225, "Receipt of Restricted Data"; Section 226, "Tampering With Restricted Data"; and Section 227, "Disclosure of Restricted Data" (42 U.S.C. 2272 through 2277).

(b) The prohibitions against the disclosure of classified information (18 U.S.C. 798, 50 U.S.C. 783).

(c) The prohibition against the disclosure of confidential information (18 U.S.C. 1905).

(d) The prohibition against the employment of a member of a Communist organization (50 U.S.C. 784).

(e) The prohibition against lobbying

with appropriated funds (18 U.S.C. 1913).

(f) The prohibition against proscribed political activities in subchapter III of chapter 73 of title 5, United States Code and 18 U.S.C. 602, 603, 607, and 608. (See NRC Manual Chapter 4122, "Political Activity.")

(g) The prohibition against bribery of public officials and witnesses (18 U.S.C. 201).

(h) The prohibition against acceptance of solicitation to obtain appointive public office (18 U.S.C. 211).

(i) The prohibitions against disloyalty and striking (5 U.S.C. 7311, 18 U.S.C. 1918). (See also NRC Manual Chapter 4121, "Oath of Office" and NRC Manual Chapter 4166, "Employee-Management Cooperation.")

(j) The provision relating to the habitual use of intoxicants to excess (5 U.S.C. 7352).

(k) The prohibition against the misuse of a Government vehicle (31 U.S.C. 638a(c)). (See also NRC Manual Chapter 5142, "Motor Vehicle and Aircraft Management.")

(l) The prohibition against the misuse of the franking privilege (18 U.S.C. 1719).

(m) The prohibition against the use of deceit in an examination or personnel action in connection with Government employment (18 U.S.C. 1917).

(n) The prohibition against fraud or false statements in a Government matter (18 U.S.C. 1001).

(o) The prohibition against mutilating or destroying a public record (18 U.S.C. 2071). (See also NRC Appendix 0230, "Records Disposition.")

(p) The prohibition against counterfeiting and forging transportation requests (18 U.S.C. 508).

(q) The prohibition against embezzlement of Government money or property (18 U.S.C. 641). (See also NRC Manual Chapter 5101, "Personal Property and Supply Management.")

(r) The prohibition against failing to account for public money (18 U.S.C. 643).

(s) The prohibition against an employee's private use of public money (18 U.S.C. 653).

(t) The prohibition against embezzlement of the money or property of another person in the possession of an employee by reason of his employment (18 U.S.C. 654).

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(u) The prohibition against unauthorized use of documents relating to claims from or by the Government (18 U.S.C. 285).

(v) The prohibition against making false entries in official records with intent to defraud or making false reports concerning moneys and securities with such intent (18 U.S.C. 2073).

(w) The prohibition against an employee acting as the agent of a foreign principal registered under the Foreign Agents Registration Act (18 U.S.C. 219).

(x) House Concurrent Resolution 175, 85th Congress, 2d session, 72 Stat. B 12, the "Code of Ethics for Government Service."

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Subpart D—Restrictions Imposed
by NRC Administrative Decision
on Conduct of Employees

§ 0.735-40 Outside employment and other outside activity.

(e) There is no general prohibition against employees engaging in outside employment or other outside activity; except that no employment or activity may be undertaken which is not compatible with the full and proper discharge of the duties and responsibilities of the employee's Government employment. Incompatible activities include but are not limited to:

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(1) Acceptance of a fee, compensation, gift, payment of expense, or any other thing of monetary value in circumstances in which acceptance may result in, or create the appearance of, conflicts of interests; or

(2) Acceptance of any employment, fee, compensation, or payment of expense, from (i) A Commission licensee; (ii) an applicant for Commission license; (iii) an organization directly engaged in activities in the commercial nuclear field; (iv) a Commission contractor; (v) a Commission supplier; (vi) holder of a license issued by a State pursuant to an agreement between the Commission and the State; (vii) a trade association which represents clients concerning nuclear matters; or (viii) a law firm or other organization which is participating in an NRC proceeding or which regularly represents itself or clients before the NRC, unless written authorization is received pursuant to § 0.735-40(b). Ordinarily, an employee will be authorized to serve as an instructor at an academic institution which holds a Commission license, or to engage in other proposed activities of a similar character.

(3) Outside employment which tends to impair his mental or physical capacity to perform his Government duties and responsibilities in an acceptable manner.

(b) In any case in which there is a question as to the propriety of outside employment in which an employee proposes to engage, or where prior written authorization is required pursuant to § 0.735-40(a)(2), the employee's office or division head shall prepare and transmit the following information to the appropriate individual(s) specified in paragraph (f) of this section: (1) Name and job title of the employee involved; (2) A brief summary of the employee's official NRC duties; (3) A brief description of the proposed employment or outside activity, including the compensation to be received; (4) The name and nature of the business of the employing individual or organization; (5) His views whether the outside employment or activity should be authorized.

*Redesignated 42 FR 38893.

(c) An employee shall not receive any salary or anything of monetary value from a private source as compensation for his services to the Government (18 U.S.C. 209).

(d) Employees are encouraged to engage in teaching, lecturing, and writing that is not prohibited by law, Executive Order 11222, CSC regulations, or the regulations in this part. However, an employee shall not, either for or without compensation, engage in teaching, lecturing, or writing, including teaching, lecturing, or writing for the purpose of the special preparation of a person or class of persons for an examination of the Civil Service Commission or Board of Examiners for the Foreign Service, that is dependent on information obtained as a result of his Government employment, except when that information has been made available to the general public or will be made available on request, or when the Executive Director for Operations has given written authorization for the use of nonpublic information on the basis that the use is in the public interest.

(e) Except as allowed for training or to attend meetings under section 4111 of title 5, United States Code, and Executive Order 10800, no employee shall accept a fee from an outside source on account of a public appearance, a speech, or lecture, if the public appearance or the preparation or delivery of the speech or lecture was a part of the official duties of the employee, if the public appearance, the speech, or the lecture was made during official working hours, or if travel for the purpose of the public appearance, speech, or lecture was made at Government expense. In addition, no employee shall accept a fee for the preparation, publication, or review of an article, story, or book if it was prepared during official working hours and/or was a part of the official duties of the employee.

(f) Employees of offices reporting to the Commission through the Executive Director for Operations must receive the written authorization of the Executive Director for Operations before engaging in activities covered by paragraphs (a)(2) and (b) of this section. The Executive Director for Operations before making his decision shall consult with the head of the employee's office or division and with the counselor or deputy counselor. Employees of boards, panels, and offices re-

porting directly to the Commission must receive the written authorization of the head of their office before engaging in activities covered by Paragraphs (a)(2) and (b) of this section. The head of the employee's office before making his decision shall consult with the counselor or deputy counselor before making his decision.

(g) Bona fide reimbursements for expenses of travel and such other necessary subsistence may be accepted if (1) It is not prohibited by paragraph (a) of this section, (2) if reimbursement from the government is not received; and (3) it is not proscribed by Decision B-128527 of the Comptroller General dated March 7, 1967, or otherwise prohibited by law. Questions concerning application of the Comptroller General's decision should be referred to the counselor. However, this paragraph does not allow an employee to be reimbursed, or payment to be made on his behalf, for excessive personal living expenses, gifts, entertainment, or other personal benefits.

(h) An employee is not precluded by this § 0.735-40 or § 0.735-42 from:

(1) Participation in the affairs of or acceptance of an award for a meritorious public contribution or achievement given by a charitable, religious, professional, social, fraternal, nonprofit educational, recreational, public service, or civic organization.

§ 0.735-41 Misuse of information.

For the purpose of furthering a private interest, an employee shall not, except as provided in § 0.735-40(d), directly or indirectly use, or allow the use of, official information obtained through or in connection with his Government employment which has not been made available to the general public. See also section 68a of the Atomic Energy Act of 1954, 42 U.S.C., section 2098(a), "Public and acquired lands," which provides as follows:

a. No individual, corporation, partnership, or association, which had any part, directly or indirectly, in the development of the atomic energy program, may benefit by any location, entry, or settlement upon the public domain made after such individual, corporation, partnership, or association took part in such project, if such individual, corporation, partnership, or association, by reason of having had such part in the development of the atomic energy program, acquired confidential official information as to the

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existence of deposits of uranium, thorium, or other materials in the specific lands upon which such location, entry, or settlement is made, and subsequent to August 30, 1954, made such location, entry, or settlement, or caused the same to be made for his, or its, or their benefit.

§ 0.735-42 Gifts, entertainment, and favors.

(a) Except as provided in paragraph (b) of this section, an employee shall not solicit or accept, directly or indirectly, any gift, gratuity, favor, entertainment, loan, or any other thing of monetary value, from a person who:

(1) Has, or is seeking to obtain, contractual or other business or financial relationships with NRC;

(2) Conducts operations or activities that are regulated by NRC or is an applicant for a license from NRC; or

(3) Has interests that may be substantially affected by the performance or nonperformance of his official duty.

(b) The following exceptions are authorized as being necessary and appropriate in view of the nature of the NRC's work and the duties and responsibilities of its employees:

(1) When the circumstances make it clear that it is obvious family or personal relationships (such as those between the parents, children, or spouse of the employee and the employee) rather than the business of the persons concerned which are the motivating factors;

(2) Acceptance of food and refreshments of nominal value on infrequent occasions in the ordinary course of a luncheon or dinner meeting or other meeting or on an inspection tour where an employee may properly be in attendance;

(3) Acceptance of loans from banks or other financial institutions on customary terms to finance proper and usual activities of employees, such as home mortgage loans;

(4) Acceptance of unsolicited advertising or promotional material, such as pens, pencils, note pads, calendars and other items of nominal intrinsic value; and

(5) Acceptance of transportation not inconsistent with the provisions of paragraph (c) of this section.

(c) No employee shall accept free transportation in motor vehicles, aircraft, or other means, for official or unofficial purposes from NRC contractors, prospective contractors, licensees or

prospective licensees, or representatives of any of them when such transportation might reasonably be interpreted as seeking to influence the impartiality of the employee or the agency.

(d) An employee shall not solicit a contribution from another employee for a gift to an official superior, make a donation to an official superior, or accept a gift from an employee receiving less pay than himself (5 U.S.C. 7351), nor shall an employee directly or indirectly solicit from, accept from, offer to, or grant to an official superior or subordinate employee a loan of more than a nominal amount. However, this paragraph does not prohibit (1) a voluntary gift of nominal value or donation in a nominal amount made on a special occasion such as marriage, illness, or retirement, or (2) a loan as described above of more than a nominal amount where a special personal or business relationship is involved, with prior approval of the higher-ranking employee's supervisor, after consultation with the counselor for NRC, or a deputy counselor, as provided in § 0.735-3(h). A copy of such approval shall be filed as provided for in § 0.735-28(e)(11).

(e) An employee shall not accept a gift, present, decoration, or other thing from a foreign government unless authorized by Congress as provided by the Constitution and in Public Law 95-105, 91 Stat. 862.*

§ 0.735-43 Use of Government property.

An employee shall not directly or indirectly use, or allow the use of, Government property of any kind, including property leased to the Government, for other than officially approved activities. An employee has a positive duty to protect and conserve Government property, including equipment, supplies, and other property entrusted or issued to him.

§ 0.735-44 Scandalous conduct.

No employee shall engage in criminal, infamous, dishonest, immoral, or notoriously disgraceful conduct or other conduct prejudicial to the Government.

§ 0.735-45 Employee indebtedness.

Except as provided in § 0.735-42(d), the NRC considers the credit affairs of its employees essentially their own concern. However, employees are expected to conduct their credit affairs in a manner which does not reflect adversely on the Government as their employer. The NRC will not be placed in the position of acting as a collection agency or of determining the validity of amount of contested debts. An employee is expected to pay each just financial obligation in a proper and timely manner, especially one imposed by law such as Federal, State, or local taxes. Failure on the part of an employee without good reason to honor just financial obligations or to make or adhere to satisfactory arrangements for settlement may be cause for disciplinary action. For the purpose of this section, a "just financial obligation" means one acknowledged by the employee or reduced to judgment by a court, and "in a proper and timely manner" means in a manner which NRC determines does not, under the circumstances, reflect adversely on the Government as his employer.

§ 0.735-46 Gambling, betting, and lotteries.

An employee shall not participate, while on Government-owned or -leased property or while on duty for the Government, in any gambling activity including the operation of a gambling device, in conducting a lottery or pool, in a game for money or property, or in selling or purchasing a numbers slip or ticket. However, this section does not preclude activities:

(a) Necessitated by an employee's law enforcement duties; or

(b) Under section 3 of Executive Order 10927 and similar agency-approved activities.

§ 0.735-47 Handling of funds entrusted by fellow employees.

No employee shall receive, retain, or disburse funds entrusted to him by fellow employees, e.g., credit union deposits or donations to charitable organizations, except with the utmost care in the safeguarding of such funds and the maintenance of full and complete records with regard to the receipt, custody, and disbursement of such funds. Such records shall be made available to appropriate authorities upon proper request.

*Amended 43 FR 1929.

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§ 0.735-48 Ex parte contacts.

Certain ex parte contacts by an employee are prohibited in quasi-judicial proceedings under §§ 2.719 and 2.780 of this chapter.

§ 0.735-49 Employment of persons on extended leave of absence from a previous employer with reemployment rights or other benefits with the previous employer.

(a) NRC may employ persons on extended leave of absence from private employers where it is the way most advantageous to the NRC to obtain qualified employees with needed skills and no violation of conflict of interest statutes would be involved. The necessity for continued employment of such persons shall be reviewed annually by the Director, Office of Administration. In their NRC assignments, such employees shall not be permitted to handle, directly or indirectly, or have access to, business confidential data of their former employers' competitors.

(b) When it is proposed to employ such a person, a statement of the exact terms and conditions of the leave of absence from his employer will be obtained from the prospective employee and submitted to the General Counsel for a prior determination of possible violation of statute.

(c) The following quotation from 18 U.S.C. 209 is pertinent to this situation.

(b) Nothing herein prevents an officer or employee of the executive branch of the U.S. Government or of any independent agency of the United States, or of the District of Columbia, from continuing to participate in a bona fide pension, retirement, group life, health or accident insurance, profit-sharing, stock bonus, or other employee welfare or benefit plan maintained by a former employer.

§ 0.735-49a Other proscribed actions.

An employee shall avoid any action, whether or not specifically prohibited by this Part 0, which might result in, or create the appearance of:

(a) Using a public office for private gain;

(b) Giving preferential treatment to any person;

(c) Impeding Government efficiency or economy;

(d) Losing complete independence or impartiality;

(e) Making a Government decision outside official channels; or

(f) Affecting adversely the confidence of the public in the integrity of the Government.

Subpart E—Ethical and Other Conduct and Responsibilities of Special Government Employees

§ 0.735-50 Use of Government employment.

A special Government employee shall not use his Government employment for a purpose that is, or gives the appearance of being, motivated by the desire for private gain for himself or another person, particularly one with whom he has family, business, or financial ties.

§ 0.735-51 Use of inside information.

(a) A special Government employee shall not use inside information obtained as a result of his Government employment for private gain for himself or another person either by direct action on his part or by counsel, recommendation, or suggestion to another person, particularly one with whom he has family, business, or financial ties. For the purpose of this section, "inside information" means information obtained under Government authority which has not become part of the body of public information.

(b) Special Government employees may teach, lecture, or write in a manner not inconsistent with § 0.735-40(d), in regard to employees.

§ 0.735-52 Coercion.

A special Government employee shall not use his Government employment to coerce, or give the appearance of coercing, a person to provide financial benefit to himself or another person, particularly one with whom he has family, business, or financial ties.

§ 0.735-53 Gifts, entertainment, and favors.

(a) Except as provided in paragraph (b) of this section, a special Government employee, while so employed or in connection with his employment, shall not receive or solicit from a person having business with NRC anything of value as a gift, gratuity, loan, entertainment, or favor for himself or another person, particularly one with whom he has family, business, or financial ties.

(b) Exceptions authorized for employees under § 0.735-42 shall have equal application with respect to special Government employees.

§ 0.735-54 Miscellaneous statutory provisions.

Each special Government employee shall acquaint himself with each statute that relates to his ethical and other conduct as a special Government employee of NRC and of the Government. The NRC official responsible for his appointment shall call his attention specifically to §§ 0.735-21, 0.735-22, 0.735-23, 0.735-24(c), 0.735-25, 0.735-26, 0.735-27, and 0.735-30.

§ 0.735-55 Applicable standards of conduct.

Special Government employees shall adhere to the standards of conduct made applicable to such employees by Subpart B of this part and to the standards of conduct made applicable to regular employees by §§ 0.735-43, 0.735-44, 0.735-46, and 0.735-48. In addition, special Government employees who are not consultants or advisers shall also be subject to §§ 0.735-45 and 0.735-47.

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ANNEX A—CONCURRENT RESOLUTION

Resolved by the House of Representatives (the Senate concurring). That it is the sense of the Congress that the following Code of Ethics should be adhered to by all Government employees, including officeholders:

CODE OF ETHICS FOR
GOVERNMENT SERVICE

Any person in Government service should:

1. Put loyalty to the highest moral principles and to country above loyalty to persons, party, or Government department.
2. Uphold the Constitution, laws, and legal Regulations of the United States and of all governments therein and never be a party to their evasion.
3. Give a full day's labor for a full day's pay; giving to the performance of his duties his earnest effort and best thought.
4. Seek to find and employ more efficient and economical ways of getting tasks accomplished.
5. Never discriminate unfairly by the dispensing of special favors or privileges to anyone, whether for remuneration or not; and never accept, for himself or his family, favors or benefits under circumstances which might be construed by reasonable persons as influencing the performance of his governmental duties.
6. Make no private promises of any kind binding upon the duties of office, since a Government employee has no private word which can be binding on public duty.
7. Engage in no business with the Government, either directly or indirectly, which is inconsistent with the conscientious performance of his governmental duties.
8. Never use any information coming to him confidentially in the performance of governmental duties as a means for making private profit.
9. Expose corruption wherever discovered.
10. Uphold these principles, ever conscious that public office is a public trust.

Approved by the House of Representatives
August 28, 1957.

Approved by the Senate July 11, 1958.

JUL 19 1958

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United States Senate

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
 WASHINGTON, D.C. 20510

August 12, 1980

Mr. William Anders
 Air Craft Equipment Division
 General Electric Company
 French Road
 Utica, New York 13503

Dear Mr. Anders,

The Environment and Public Works Committee is considering the President's nomination of Dr. Albert Carnesale to be a member of the Nuclear Regulatory Commission.

Senator McClure has written to the Committee requesting that certain information be obtained regarding Dr. Carnesale's past activities as part of the Committee's consideration of this nomination. I have enclosed a copy of this correspondence.

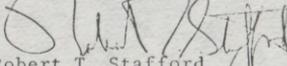
Senator McClure requests that the Committee obtain a statement from you regarding the legal and ethical principles applicable to the members of the GESMO Hearing Board that governed their other activities, and regarding your knowledge of Dr. Carnesale's activities while a member of the GESMO Hearing Board. Enclosure 1 to Senator McClure's August 4, 1980, letter asks about Dr. Carnesale's possible involvement in a number of activities during the period of his service on the GESMO Hearing Board, and how the legal and ethical principles would apply to any such involvement. In addition, the enclosure to Senator McClure's letter asks for a description of Dr. Carnesale's role, if any, in the decision of the GESMO Hearing Board after the President's April 7, 1977, Policy Statement on Nuclear Power and Nonproliferation to postpone indefinitely the GESMO proceeding, and in the subsequent NRC decision to terminate GESMO proceedings.

I am informed by NRC that Dr. Carnesale served as a member of the GESMO Hearing Board from September 14, 1976, through June 6, 1977. I have also enclosed a copy of a memorandum from NRC's General Counsel on the subject of the standards of conduct that governed members of the GESMO Board.

The Committee would appreciate a written statement from you in response to Senator McClure's request as soon as possible. The Committee may wish to consider action on the Carnesale nomination shortly after the present Congressional recess. Therefore, it would be most helpful to have your statement by August 18.

Thank you very much for your assistance in this matter.

Sincerely,


Robert T. Stafford
Ranking Minority Member

Identical letters sent to:

George Bunn
Dr. Melvin Carter
Dr. Edward Mason
Dr. Frank L. Parker
Kline Weatherford

In order to expedite the printing of this hearing record, responses from Messers Anders, Bunn, Carter, Mason, Parker, and Weatherford were not received by time of publication.

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