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MEMORANDUM FOR: The Files  
FROM: James K. Asselstine *James K. Asselstine*  
SUBJECT: DISCUSSION WITH STEPHEN B. COMLEY RE NUCLEAR SAFETY  
AND EMERGENCY PLANNING

SERVED AUG 19 1986

On Friday, August 15, 1986, I met with Mr. Stephen B. Comley to discuss his concerns regarding nuclear safety and emergency planning. Mr. Comley is a resident of Rowley, Massachusetts. Mr. Comley is interested in the Seabrook Nuclear Power Plant but is not a party in the Seabrook licensing proceeding. We did not discuss any contested issues in the Seabrook licensing proceeding. The following is a written summary of my responses to Mr. Comley's questions.

Question 1: Do you feel that the people of Rowley should have a voice in evacuation planning as it pertains to the Seabrook power plant?

Answer: As a general matter, I believe that the 10-mile emergency planning zone (EPZ) established by the Commission is a reasonable boundary for planning protective actions, including evacuation, in the event of a nuclear power plant accident. However, the Commission's regulations are flexible in that they allow expansion of the 10-mile EPZ to take into account nearby facilities or features for which emergency planning would be appropriate. An example would be a school located just outside the EPZ. In previous cases, I have supported expanding the size of the EPZ slightly in a particular area where the facts of the case indicate a particular feature, facility or problem area which can affect overall emergency planning for the plant. An example of this is the bridge going to Cape Cod, which is located just beyond the 10-mile EPZ for the Pilgrim plant. Because the bridge could significantly affect emergency planning for the Pilgrim plant and because it is the principal artery leading to and from Cape Cod, I believe that it should be included in the Pilgrim EPZ, and I have so stated in the past. Whether the town of Rowley should be included in the EPZ for Seabrook would depend upon the facts in that particular case. Although this is not now a contested issue in the Seabrook proceeding, I understand that it may become one. If so, my decision would be based upon the record developed in the case. I have not reviewed

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the situation for Seabrook, and I have no opinion on the issue at the present time.

Question 2: Evacuation issue - people who can't be moved... Do you feel some means should be provided for people who cannot be moved, other than merely being sheltered?

Answer: I am not aware that this question has been faced squarely by the Commission in any previous case. As a general matter, the Commission's regulations require that emergency planning within the EPZ provide for a range of protective actions. These can include sheltering, but for at least some accident situations evacuation may be necessary for some or all of the people within the EPZ. Thus, emergency planning measures have been required to include needed transportation, particularly for those who are unable to evacuate themselves. I agree with this element of our emergency planning requirements. For this reason, the Commission emphasized the need for arrangements for ambulances and buses if evacuation is needed for a care facility for elderly nuns near the Fermi-2 reactor. The Commission has also considered the need for sheltering and evacuation of prisoners in detention facilities located near nuclear power plants. However, I do not believe that the Commission has faced the situation in which evacuation is impossible for some individuals within the EPZ and the only alternative is sheltering within unprotected facilities.

Question 3: Location issue - Seabrook. Has the summer beach population been fully taken into consideration?

Answer: I believe that this is a contested issue in the Seabrook proceeding. My opinion on this and other contested issues will be based upon the formal record in the Seabrook case. I have no opinion on the issue at the present time and I cannot discuss it with you.

Question 4: As we have yet to receive all of the information on Chernobyl, what are your opinions on reducing the radius from 10 miles to 2 miles?

Answer: You are quite correct that we have not yet received all of the information needed on the Chernobyl accident to assess its potential impact on emergency planning. It seems to me that the Chernobyl accident may well raise questions on emergency planning that cut the other way -- that is, is the 10-mile EPZ large enough and should we consider expanding it? It seems to me that this is an open question until we receive additional information on the causes, sequence of events and consequences of the Chernobyl accident. Over the past three years, the U.S. nuclear industry has advocated

reductions in the radioactive source term (the estimates of the amounts and types of radioactive materials which could be released during a serious nuclear accident). The industry argues that these reduced source terms would justify relaxations in several NRC regulations. Chief among those is a reduction in the size of the emergency planning zone, perhaps to an area as small as two miles. The American Physical Society and others have identified a number of areas where additional work is needed to provide a sound scientific basis for any source term reassessment. They have advised that across-the-board reductions in the source term are not yet justified, and that specific numerical reductions are unwarranted. The Commission has not yet taken action to reduce the source terms, and our technical staff has advised that any across-the-board reductions in emergency planning zones are premature. The staff has rejected at least one site-specific proposal to reduce the EPZ for the Calvert Cliffs plant on the ground that the request is premature. Of course, any licensee is free to propose a site-specific reduction in the size of the EPZ for the plant and the individual proposal would be considered by the Commission on its merits.

Question 5: I understand that the low level licensing requirements have been reduced as they pertain to issues of evacuation problems that may arise in a city or town. This change has enabled question not to be resolved before a license is issued. Given the Chernobyl incident and the problems and questions that surround the Pilgrim Nuclear Plant in Plymouth (which has been branded "the worst-run plant in the US"), do you think we should reverse again and require that evaluation issues be resolved before a low level license is granted to any new plants?

Answer: The Commission's regulations require adequate emergency planning measures to be in place prior to the issuance of a full-power license, but not prior to the issuance of a low-power license (these are limited to no more than five percent of full power). This decision was based upon the technical judgment that a plant beginning operation and not going above five percent power fails to generate the quantity of fission products and decay heat which could pose a hazard to the public requiring evacuation or other protective action. I agree with this technical judgment that the risk to the public from low-power operation of a new plant is very low. Some have questioned whether the Chernobyl accident affects this judgment since that accident apparently occurred at low power levels. However, our staff advises that the situation at Chernobyl was quite different because the plant had been operating at higher power levels for some time, with the consequent build-up of fission products and decay heat. Having said this, I should note

that I opposed issuance of a low-power operating license for the Shoreham plant on the ground that there appeared to exist an outstanding emergency planning issue which might prevent that plant from ever going into full-power operation. In the circumstances of that case, it seemed to me unwise to contaminate the plant until the Commission had resolved the outstanding emergency planning issues. Such circumstances may well arise in other cases, and I will have to examine each case individually. But my decision in Shoreham turned on the wisdom of contaminating a plant that might never receive a full-power operating license and not on the risk to the public of low-power operation.

Question 6: Do you feel that the NRC has represented the people as well as it has represented the nuclear industry?

Answer: I believe that in some cases, the NRC has acted more as the protector of the nuclear industry than the protector of the public. These cases have included the Commission's decision to allow operation of the Indian Point plants in the face of continued significant deficiencies in emergency planning; the Commission's decision to reject the safety improvements recommended by the NRC staff and the hearing board in the Indian Point Special Proceeding; the Commission's decision to allow the restart of TMI, Unit 1; the Commission's decision to end the search for further reductions in the risk of severe nuclear accidents in the Severe Accident Policy Statement; and the Commission's decision to restrict the NRC staff's ability to develop needed new safety requirements in the Commission's backfit rule. My views are well documented in my dissenting views on each of these decisions, and they have been widely publicized. For the most part, I am the only member of the current Commission who has opposed these actions; however, one other Commissioner opposed the backfit rule. Despite my opposition to these key Commission decisions, I believe that the NRC contains many able and dedicated people who are committed to the regulatory mission of the agency. If given the proper policy direction from the top, I am confident that the agency could pursue its regulatory responsibilities in a manner that would restore public confidence in the NRC as an objective and fair regulator that puts the interests of the public foremost.

Question 7: Has Chernobyl changed your thinking regarding nuclear power?

Answer: The Chernobyl accident has not dramatically altered my views on nuclear power or on the key regulatory issues which are before the NRC. I continue to believe that nuclear power plants can be operated, built, and designed safely, and that they should be a part of our overall energy mix. In reaching this judgment, I recognize the substantial

commitment to nuclear power which we already have in the U.S. The challenge is to ensure that the approximately 125 plants we have in operation or under construction are run safely. Hence, Chernobyl has underscored my belief that a severe nuclear accident in the U.S. is unacceptable, and that further regulatory initiatives are needed for the future if we are to reduce the long-term risk of nuclear power to an acceptable level. In a recent letter to the President of the Atomic Industrial Forum, I outlined my own assessment of our current understanding of the risks of nuclear power and the steps that I believe are needed to reduce that risk to acceptable levels. I am pleased to note that as part of its recent Safety Goals Policy Statement the Commission agreed to a statement that an objective of our regulatory process should be to prevent the occurrence of a severe nuclear accident -- that is, an accident causing damage to the reactor core -- at any U.S. nuclear power plant. This statement, together with the Commission's recent increased attention on the operating performance of U.S. plants, particularly those with a history of poor performance, is an encouraging step in the right direction.

Question 8: Do you feel that people are really informed about and know of the dangers of nuclear power?

Answer: I am not convinced that the public is fully informed of the risk of nuclear power. The issues are often complex, and the debate on the issues is frequently polarized and somewhat distorted. In my recent letter to the AIF, copy attached, I attempted to describe my view of the risk of a nuclear accident, including the uncertainties in estimating that risk. As I noted in my letter, I do not believe that we fully understand that risk, and we should not be afraid to say so.

Question 9: Cost versus other funds - obsolete?

Answer: As I understand your question, do I believe that nuclear power is obsolete based upon cost considerations? The Commission's regulations focus on health and safety considerations rather than on the overall cost of nuclear power. It is true that the cost of nuclear power has increased substantially in recent years, particularly for the large new plants. The cost of operating and maintaining the older existing plants has also increased significantly over the past several years. Although there are many reasons for the cost increases, among the more significant are poor management of plant construction, the lack of standardization, a design-as-you-build approach to plant construction, and the need to address new and unanticipated safety issues, including those arising from the Three Mile Island accident. Whether nuclear power remains competitive

with other alternatives is difficult to say. It appears, however, that due to a combination of factors, including reduced demand for electricity, financial conditions, and uncertainty about costs and safety requirements, that no U.S. utility at the present time is prepared to commit to build a new nuclear powerplant.

Question 10 How Many people were hospitalized in Russia?

Answer: I do not know the answer to this question. We are awaiting further details on the Chernobyl accident at the upcoming meeting of the International Atomic Energy Agency late this month.

QUESTION 11. How old was the plant - 3 years?

Answer: The reactor which had the accident at Chernobyl was the newest unit of the four-unit Chernobyl plant. Although I do not know the date on which the unit began operation, I believe that the plant had been in operation no more than three years, and perhaps less.

Question 12: What are the differences between the Russian plants and our nuclear plants as you see them?

Answer: There clearly are a number of design differences between U.S. nuclear powerplants and the Chernobyl plant. Other Russian plant designs are more similar to ours. I do not believe that we have enough detailed design information about the Chernobyl plant to fully understand their design or the significance of the differences between their design philosophy and ours. We are awaiting more detailed design information at the upcoming IAEA meeting later this month. However, quite apart from the design differences between the U.S. and Russian plants, there are some broad lessons with applicability to the U.S. nuclear program. One of these is the unacceptability of a severe accident here and the need to ensure that sufficient steps are taken to prevent such an accident from occurring and to limit the potential for a large offsite release of radiation should one occur. I have proposed initiatives, described in my letter to the AIF, which would accomplish these objectives. In addition, there are specific safety areas, such as hydrogen control, which may require additional attention based upon the information obtained from Chernobyl.

Question 13: Regarding future generations, would you recommend that we continue to build nuclear plants?

Answer:

I believe that we should retain the nuclear power option for the future in this country. When I examine other energy alternatives, it appears at the present time that coal and nuclear are the principal means available for providing large central station generating facilities. Conservation and other options are having a significant impact; however, it is unclear whether they can eliminate the need for new large generating facilities at some point in the future. But if nuclear power is to remain a viable option for the future, three conditions must be met. First, the existing plants must operate safely and there must not be a severe accident at any of the existing plants for the foreseeable future -- at least the next 20 years. Second, we must restructure the process for designing, constructing and operating future nuclear plants. This restructuring must include greater use of standardized designs; the development of essentially complete designs before the start of construction; better, more centralized management of the construction process; greater attention to construction quality assurance; improved designs which emphasize greater margins of safety, simplicity, ease of operation and ease of maintenance; better utility management; and improved operations and maintenance performance. Third, we must make continued progress toward developing a safe and environmentally acceptable solution to the nuclear waste disposal problem. Each of these areas, in my view, is in need of attention if nuclear power is to remain a viable option for the future.

Question 14: Do you feel that the public would be justified in believing that the NRC is not acting in the public's best interest?

Answer:

As I noted in my response to question 6, I believe there are some significant Commission decisions in recent years in which the Commission has acted more as the protector of the industry than the protector of the public. In such cases, I believe that the public would be justified in concluding that the NRC is not acting in the public's best interests. At the same time, as I noted in my previous response, the NRC staff is composed of many hard-working and dedicated people. If given the proper policy guidance and direction, the NRC could do much to restore public confidence in the agency as a fair and objective regulator, and in the safety of nuclear power as well.