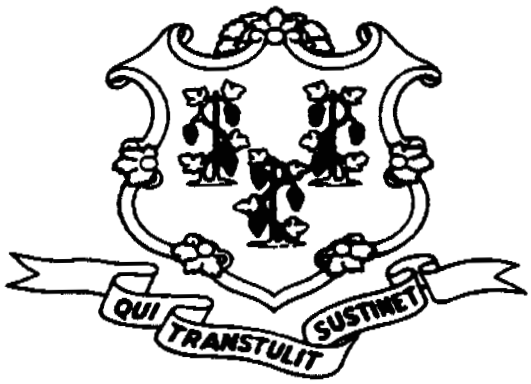
State of Connecticut



THE NUCLEAR ENERGY ADVISORY COUNCIL REPORT

1997

Established Pursuant to Public Act 96-245

Representative Terry Concannon, co-chairperson
Evan W. Woollacott, co-chairperson

January 29th, 1998

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CHARGE TO THE COUNCIL

Section 17 of Public Act 96-245 created the Nuclear Energy Advisory Council (NEAC) and requires it to:

1. hold regular public meetings to discuss issues relating to the safety and operations of nuclear power plants, and to advise the governor, legislature, and municipalities within a five-mile radius of the plants on these issues;
2. work with federal, state, and local agencies and the companies operating such plants to ensure public health and safety;
3. discuss proposed changes in or problems arising from the operation of the plant;
4. communicate, through reports and presentations, with the plants' operators about safety or operational concerns at the plant; and
5. review the current status of the plants with the Nuclear Regulatory Commission (NRC).

COUNCIL MEMBERS

The council has 14 members (appendix 1).

EXECUTIVE SUMMARY

During its second year, NEAC concentrated on those health and safety issues that were critical to the start up of the state's nuclear power plants. The major items that were monitored included the physical restart program, the (Independent) Corrective Action Verification Program (ICAVP), and efforts to establish a safety conscious work environment. Having reservations regarding the "independence" aspect of the ICAVP, NEAC adopted the policy of addressing the program as the Corrective Action Verification Program (CAVP)

Much progress was made on the physical restart program, to the extent that it is well ahead of the other work required prior to the restart of any of the nuclear power plants. The controlling items are the CAVP results and the work to develop a safety conscious work environment.

Working to promote the "independence" of the ICAVP process, NEAC members participated in the selection of some of the systems to be tested. NEAC monitored NU, the NRC and the contractors by direct assessments, on-site inspections, participation in telephone calls, and full Council reviews during its monthly meetings. Although the deficiencies identified by Sargent & Lundy for Millstone 3 are, basically, minor in nature, NEAC is quite concerned about the sheer number of discrepancy reports. If this number were found on the four selected systems, including 11 interface systems out of a population of 88 systems, NEAC questions the adequacy of the work performed by Northeast Utilities on the systems that were not part of the independent review process. A decision will have to be made by the NRC on whether, in light of the CAVP results, Sargent & Lundy should be assigned additional systems to evaluate. Such expanded review could delay the restart of Millstone 3.

The most difficult startup prerequisite is whether the culture changes made thus far are adequate to ensure a safety conscious work environment. NEAC was also very involved in this area, monitoring at Millstone 3 and observing meetings. Although there are some facts that identify progress, it is still a subjective judgement. Even now, after much effort by the NU management, there are some employees that do not feel comfortable in reporting real or apparent safety concerns to NU management. Upon review of this issue, the NRC may require further attention to this area prior to restart.

Although the above summary concentrates on the Millstone 3 lead unit, Unit 2 is going through the same process and is about three months behind the Millstone 3 status. Unit 1 was recently placed on hold so that efforts could be concentrated on the two larger units.

The decision to close Connecticut Yankee (CY) caused NEAC to study and monitor the CY decommissioning process. In addition, NEAC continued to address the High Level Nuclear Waste issue. Until this is resolved nationally, the spent fuel elements must remain at the site.

Other work completed by NEAC included an in-depth study of the role of nuclear plants in a restructured electric power world relative to the health and safety of the public. A separate review was conducted on emergency preparedness and the results of our work were shared with local, state, and federal agencies.

Alternate energy sources were evaluated as we considered the finite role of nuclear power as an energy resource for Connecticut and New England.

At the request of NEAC, the Connecticut Academy of Science and Engineering is conducting a study of cancer rates downwind of the Connecticut Yankee plant as compared with a control area in another part of the State. The results of this study are scheduled to be available in 1998.

We were pleased to have been asked to summarize the NEAC charter and present the results of our ground-breaking work to professionals at the American Nuclear Society meeting in Albuquerque, New Mexico, this past fall.

NEAC believes that it should continue its work efforts during 1998. As can be seen, much has been accomplished. However, much remains to be done.

REPORT ON ISSUES

INTRODUCTION

As reported in NEAC's 1996 report, the Council's initial work was directed toward issue identification. NEAC recommended that work must continue on a substantial number of issues that are critical to the well being, health, and safety of the public. These recommendations formed the basis for the

Council's work accomplished in 1997 and this report covers the significant progress it made. In addition, NEAC has included specific recommendations for consideration by the legislature and others.

NU RESTART PROGRAM

NEAC monitored the program to restart Millstone 1, 2, and 3 in the following ways:

1. through briefings by NU, the NRC and the ICAVP contractors at most NEAC monthly meetings (Appendix 2);
2. by touring Millstone 3 and the Motor Operated Valve Maintenance Facility;
3. by observing public meetings between NU and NRC and the ICAVP contractors that discussed NU's progress towards restart (**Correction Action Verification Program**);
4. by observing public briefings for the NRC by Little Harbor Consultants regarding NU's progress in implementing the Safety Conscious Work Environment and Employee Concerns programs, which are essential to the success of the restart effort at the Millstone plants (**Safety Conscious Work Environment**); and
5. by having a member of NEAC monitor control room functions at Millstone 3. (**Millstone Monitor**)

In addition, NEAC monitored the status of the restart program by reviewing NRC staff memos on the recovery effort, prepared for the commission's members, and the staff's Restart Assessment Plan. This plan includes the Significant Items List, which is updated periodically based on:

1. Response to NRC's 10 CFR 50.54(f) letter reporting the status of Significant Items for Restart and Items to Be Completed after Restart;
2. NU's Operational Readiness Plan for Millstone 3;
3. NU's Progress toward Restart Readiness Reports, including key performance indicators, prepared for quarterly NRC briefings; and

4. Progress reports prepared by Department of Public Utility Control contractors on NU's readiness to restart.

Each Council member received over five linear feet of documents to review.

Corrective Action Verification Program

The Corrective Action Verification Program (CAVP) sub-committee focused on:

a) Monitoring the activity of the two contractors selected to perform the CAVP; Parsons Power (Reading, PA) at Millstone 2, and Sargent & Lundy (Chicago) at Millstone 3,

b) Recommending systems for the Tier I review in accordance with CAVP procedures, and

c) Proposing development of safety significance levels in characterizing the Discrepancy Reports (DRs)

a) Monitoring: NEAC members monitored and participated in the 2 to 3 weekly telephone conference calls between the NRC, NU and the individual contractors. In Connecticut, as part of the protocol, NEAC was invited to observe nearly a dozen on-site meetings at Millstone between the NRC, NU and the contractors. These sessions were in addition to the numerous public meetings that addressed CAVP issues and schedules regarding the Readiness to Restart the Millstone Plants.

In addition, members traveled to Chicago and to Reading, PA, on several occasions to observe meetings, interviews and conferences between the NRC and contractors. Rep. Concannon traveled to Chicago on April 8 and 9 to monitor the meeting between the NRC and Sargent & Lundy. John Markowicz went to Reading on May 27 to monitor a meeting between the NRC and Parsons Power. Evan Woollacott visited Chicago on September 9 for a meeting between the NRC and Sargent & Lundy. Finally, John Helm went to Reading on December 5 for a meeting between the NRC and Parsons. (Appendix 3 describes these meetings in detail.)

b) Tier 1 System Selection: As part of the checks and balances built into the (Independent) Corrective Action Verification Program in order to ensure the independence of the selected contractors, the NRC offered NEAC "the opportunity to recommend one or two systems using any method that it deems appropriate. The NRC will consider including one or both of the systems recommended by NEAC. This would address the public concern regarding the potential for the list of systems to be disclosed to the licensee before the start of the ICAVP, (POLICY ISSUE: SECY-97-003, 1/3/97). As a result, on two

occasions the subcommittee was asked to provide its recommendations in selecting groups of systems to be randomly selected for inclusion in the CAVP for Millstone 2 and 3. Using data provided by NU and the NRC, the subcommittee analyzed the risk and safety significance of the relevant systems and recommended nine groups of systems (consisting of 22 separate systems) for Millstone 3, and seven systems groups (consisting of 20 systems) for Millstone 2. At NEAC meetings held in July and September, members of the public then selected 2 systems randomly for each plant for the CAVP. This process was considered comprehensive in that each of the four system groups selected are being evaluated as to reasonable mechanical, electrical and electronic boundaries.

c) Discrepancy Reports: NEAC aggressively sought to include methods and criteria in the CAVP to help the public understand and evaluate the safety significance of the Discrepancy Reports (DRs) - the key work products of the program. The subcommittee considers the NRC's adoption of the four levels (1-4) of Discrepancy Reports to be a major accomplishment. The use of these significance levels enables the public and NEAC to assess the results of the CAVP analyses including the trends associated with the hundreds of DRs generated by the program contractors (Appendices 4A and 4B)

American Nuclear Society Winter Meeting, Albuquerque

On Monday, November 17, Rep. Terry Concannon and John Markowicz represented NEAC as part of a panel invited to discuss *The Millstone Recovery and Lessons Learned.* The nine-member panel also included representatives from the NRC, NU, NEI, Little Harbor Consultants and a former whistle-blower, now a consultant. The NEAC presentation (Appendix 5) addressed the origins of NEAC, its legislative charge, composition, evolution, activities, and the role played by the Council as observers of the Millstone restart process. The intensity of our involvement is unique in the nuclear industry and it generated much interest during the lengthy question and answer period, which followed the presentation.

Safety Conscious Work Environment

In 1997, NEAC continued to monitor employee concern issues at NU, including the activities of the contractor, Little Harbor Consultants (LHC). The NRC retained LHC to implement its order establishing a Third Party Oversight Program (TPOP). NEAC members attended public meetings between LHC, NU, and the NRC. However, NEAC did not enter into protocol agreements to participate in non-public, working meetings, as it had in connection with the Corrective Action Verification Program. At

NEAC's request the Council received copies of relevant documents generated as part of the TPOP as well as by NU in its implementation of the its Employee Concerns and the Safety Conscious Work Environment programs. Members of NEAC were invited to, and observed, three Millstone Nuclear Management Team training meetings/conferences that focused on these programs and employee concern issues.

Millstone Monitor

John W. Sheehan (Bill), a member of NEAC, went through the "badging" process which permits him unescorted entry into the Millstone plants. Beginning in December 1997, he visited Millstone 3 on several occasions and has monitored the control room functions. (Appendix 6).

EMERGENCY PREPAREDNESS

This subcommittee has been working with the Citizens Regulatory Commission, a local group of volunteers from southeastern Connecticut, to determine the effect of new NRC policies on local nuclear emergency preparedness planning. NEAC's April meeting focused on emergency planning (Appendix 7A) and a tour of the Waterford Emergency Operations Center took place before the meeting in May.

The NRC recommended two policy changes in 1996 and 1997. The first calls for immediate evacuation instead of the current policy of delay and assessment. The second concerned the federal purchase of potassium iodide (KI) for release to states that request this chemical. KI is used to block the thyroid gland's absorption of radioactive iodine, a substance that might be emitted by a radiological event. NRC report SECY-97-124 (June 30, 1997) stated that the NRC would fund the purchase of KI and provide it to states upon request. The states would be responsible for its storage, distribution, and the routine replacement of expired stock. NEAC members have expressed interest in obtaining additional information before recommending any specific action to the legislature.

In researching and investigating these recommendations, the subcommittee also found a number of additional areas in which the nuclear emergency preparedness planning process could be improved. As these areas were primarily of concern to the three towns located in the ten-mile Emergency Planning Zone surrounding the Millstone Power Station, questions and recommendations were provided to the Waterford, New London, and East Lyme emergency planning officials at a meeting on June 26, 1997. At the

suggestion of these officials, some of the recommendations were forwarded to the State Office of Emergency Management (OEM) in a letter dated July 22, 1997 (Appendix 7B). OEM issued a reply on July 30, 1997 (Appendix 7C) promising to look into these matters as part of its normal revision process at some future date. In addition, 20 questions and recommendations were included in a letter forwarded to the Federal Emergency Management Agency (FEMA) on September 9, 1997 (Appendix 7D). FEMA responded in a letter dated September 24, 1997 (Appendix 7E) enclosing a matrix indicating how the 20 questions had been allocated to FEMA, NRC, and OEM for appropriate responses. The NRC responded, November 13, 1997 (Appendix 7F). Two additional nuclear emergency concerns related to the Connecticut Yankee plant were forwarded to FEMA on October 10, 1997 (Appendix 6G). As of December 31, 1997 no further correspondence had been received concerning these matters.

DECOMMISSIONING (Full Report in Appendix 8)

An impression exists among members of the public who are living in the vicinity of Connecticut Yankee that those involved in the decommissioning process will be concerned more with cutting costs than with safety. This controversy has been heightened by the very different perspectives articulated regarding the manner in which the decommissioning of the Yankee Rowe plant in Massachusetts was handled.

Since the Yankee Rowe decommissioning, the NRC has amended its rules to provide licensees with greater flexibility and Connecticut Yankee will be one of the first plants to be decommissioned under these rules. In light of the Connecticut Yankee operating history, members of the public are concerned that the safety of the decommissioning process may be compromised. While the current management of NU has accomplished a great deal in promoting safety, the subcommittee believes that the Council should find a way to ensure that no unsafe or illegal activities occur in decommissioning nuclear plants in the state. Even after highly contaminated components are removed, the spent fuel assemblies are expected to remain on site for decades.

NUCLEAR OPERATIONS & SAFETY IN A RESTRUCTURED UTILITY WORLD
(Full Report in Appendix 8)

Nuclear power is the largest single source of electricity generation in New England. Use of nuclear power supports the state's energy policy regarding environmental protection and fuel diversity. Operating nuclear

reactors release no sulfur dioxide, nitrous oxides, carbon dioxide, or particulates. Although there are radiogenic releases, on balance, environmental, economic, and fuel diversity considerations indicate that Connecticut and New England should continue to use nuclear power as an electric energy source. Fossil fuel plants, the most feasible alternative to nuclear power, produce substantial amounts of carbon dioxide, which raises significant concerns regarding global warming. Although engineering improvements can reduce the atmospheric discharge of most fossil fuel pollutants, there is no process available to significantly reduce the amount of carbon dioxide discharged by fossil-fueled plants. Re-powering can reduce carbon dioxide emissions by increasing plant efficiency, but the chemical reality is that fossil fuels are carbon-based.

The subcommittee believes that prudent decisions made by a utility to decommission a nuclear plant for economic reasons should not be penalized by legislation restructuring the utility industry. Such penalties could lead, in a deregulated world, to cost pressures that could threaten the health and safety of the public. Based on the lessons learned during this most difficult period, independent monitoring of nuclear plant operations and decommissioning must be continued to ensure a safety conscious work environment in order to protect the general public and plant operators. This monitoring must be conducted independently of the utility and the NRC.

Prudent decommissioning could be collected through a separately itemized wires charge. In a competitive market, continuing to recover decommissioning costs through rates could result in cost cutting that could jeopardize public health and safety.

ALTERNATIVE ENERGY SOURCES **(Full Report in Appendix 8)**

With all of the nuclear power plants in Connecticut shut down for more than two years, people are asking about alternatives such as renewable energy. The report considers several alternatives in the framework of five requirements that any energy system in the State should meet. The report describes the issue of global warming and discusses its significance in determining the kinds of technology that are likely to become dominant in the future. The report concludes that nuclear energy, when plants operate at the industry's typical capacity factor, best meets the five requirements.

HIGH LEVEL NUCLEAR WASTE

By law, the federal Department of Energy is responsible for the disposal of high level nuclear waste, such as spent fuel, and each nuclear plant is assessed a one mill per kilowatt-hour charge to cover the costs of disposal. In its 1996 report, NEAC recommended that Congress quickly pass an integrated spent fuel management bill, which included provisions for the establishment of a centralized interim waste depository. NEAC believes that retaining the fuel at local generating sites could affect the safety and well-being of the public. Shipping such waste to a central facility would alleviate the concerns raised by host communities regarding the continued storage of spent fuel on site even when the plant is being decommissioned. Removing the fuel would also facilitate the use of a valuable site for electric generation, thereby benefiting the local economy.

In 1997, NEAC sent letters to Connecticut's congressional delegation urging each member to support the bill as being in the best interests of the people of the state. Council members also visited Senator Lieberman at his Hartford office to emphasize the importance of centralized storage. Evan Woollacott visited the Washington offices of both U.S. Senators. The senators felt they could not support the bill. Fortunately, each chamber passed a bill supporting the Council's recommendations. The two bills are in conference to resolve their differences, with the conference report subject to a vote by each chamber. The subcommittee believes that quick passage of this bill is important in that Connecticut Yankee is now being decommissioned. In addition to the Council's lobbying efforts, both NEAC co-chairs have visited the Yucca Mountain site (Rep. Concannon in 1997, see Appendix 9).

CANCER RISK STUDY

As a result of concern expressed by the public, NEAC contacted the Connecticut Academy of Sciences and Engineering (CASE) and asked it to analyze cancer rates downwind of the Connecticut Yankee plant as compared to a control area in another part of the State. During 1997, a protocol for the study was developed by the Academy and approved by NEAC. Work on the study is now in progress. A copy of the protocol is included as Appendix 10A and 10B.

RECOMMENDATIONS

STATE

1. The State should authorize and fund a Nuclear Advisor, to observe the decommissioning of the Connecticut Yankee plant in Haddam and the restart and operation of the Millstone plants in Waterford. The position should be in the executive/policy branch and the advisor should provide reports to NEAC and the towns of Haddam and Waterford;
2. The state should establish a task force to study the regional economic impact of nuclear plant decommissioning;
3. Provisions should be made to help offset the loss in property taxes in towns affected by a plant's premature decommissioning;
4. The legislature, governor, and NEAC should insist on oversight by a resident NRC inspector during the entire decommissioning effort at Connecticut Yankee, and regular inspections should be carried out by NRC for as long as high level radioactive waste remains on site;
5. Public officials should act with responsibility and in a well-informed manner when addressing nuclear issues. It is recommended that they consider consultation with NEAC;
6. The legislature and Governor should urge Connecticut's congressional delegation to follow through on the recommendations made by the U.S. General Accounting Office in its 1997 report *Nuclear Regulation: Preventing problem plants requires more effective NRC action* (GAO/RCED-97-145);
7. Connecticut should focus its support of alternative energy technologies on those that are realistically capable of replacing the Millstone Point electricity generating capacity;
8. As part of the initiative to restructure the electric industry, the legislature should encourage businesses in Connecticut to develop efficient, non-polluting energy technologies such as fuel cells. A portfolio requirement would require electric suppliers to derive a percentage of their power from fuel cells, renewable sources, or methane produced in landfills and sewage treatment plants;
9. The State should encourage policy-driven as well as market-driven investments in conservation;

10. Any restructuring bill should provide for independent monitoring to insure both the utility and the NRC support a safety conscious work environment for nuclear plants and to protect the health and safety of plant personnel and the public;
11. Prudent decisions made by utilities to retire nuclear plants on economic grounds should not be penalized in any restructuring legislation. Continued operation of uneconomic plants could result in cost-cutting which could be harmful to the health and safety of the public;
12. Connecticut should not consider a state emissions tax. However, a restructuring bill could include labeling provisions, as the 1997 bill did. This would enable consumers to know the mix of energy sources used to produce the electricity they purchase and allow them to base their decision on non-price factors without affecting the competitive nature of the market;
13. Securitization is recommended as an economical method of paying down the nuclear plant's above-market embedded costs, once the ratepayers responsibility for these costs is determined. This would facilitate a nuclear plant's entrance into a competitive market while protecting the health and safety of the public;
14. Prudent decommissioning could be collected through a separately itemized wires charge. In a competitive market, continuing to recover decommissioning through rates might result in cost cutting that could jeopardize public health and safety; and
15. Connecticut should sponsor studies of the relative financial and environmental impact of nuclear versus other electricity supply systems on the state's economy and quality of life.

NEAC

1. NEAC should continue to observe and monitor CAVP activity, within its available funds, to maintain a presence that has grown to be a respected element of the overall CAVP process;
2. The emergency preparedness subcommittee should continue to pursue responses from FEMA and OEM in 1998 on its remaining unanswered questions and recommendations. These responses are needed to complete the subcommittee's evaluation of nuclear emergency planning. When these responses are received, NEAC will be able to recommend specific actions for the legislature's consideration;

3. NEAC should continue to look at the issues surrounding Connecticut's storage and distribution of potassium iodide;
4. NEAC should continue to monitor the high level nuclear waste program in 1998 to ensure not only that the bill passes but that, if it is vetoed, the veto be overridden, and that work on an interim storage site begin quickly;
5. NEAC should participate in the proceedings of the Northeastern High Level Radioactive Waste Transportation Task Force, which has been convened by the Council of State Governments. The purpose of this task force, and its counterparts from the Midwest, South, and West, is to interact with the Department of Energy on issues revolving around the transportation of spent nuclear fuel and high level radioactive waste. This issue affects 44 of the 48 contiguous states, including all of New England; and
6. NEAC should take the actions necessary to ensure that spent fuel from plants undergoing decommissioning receives priority in disposal.

COUNCIL ACTIVITIES IN 1997

Meetings

Section 17 of Public Act 96-245 requires the Council to hold regular public meetings to discuss issues relating to the safety and operations of nuclear power plants. The Council met monthly, on January 9, February 20, March 20, April 17, May 15, June 19, July 17, August 21, September 18, October 16, November 20, December meeting postponed to January 8, 1998. The January 1997 meeting was held at the Legislative Office Building in Hartford; the October meeting was held in Haddam and the remaining meetings were held in Waterford.

The NRC, NU, the CAVP contractors and various citizens' organizations made presentations at these meetings, and comments were received from members of the general public. The March 20 meeting was dedicated to a public forum. The minutes of the meetings are enclosed as appendix 2.

Correspondence

The Council entered into extensive correspondence with the NRC, NU, federal officials, and others, as evidenced by Table 1.

Table 1: NEAC Correspondence

FROM	TO	DATE	SUBJECT
NEAC	Bruce Kenyon, NU Bernard Fox, NU Shirley Jackson, NRC William Travers, NRC	2/4	Independence of ICAVP
NEAC	Shirley Jackson, NRC	2/7	Use of fines imposed on NU
NEAC	CT Congressional delegation	2/7	Cover letter and copy of 2/7 letter to Shirley Jackson
Rep. Sam Gejdenson	Rep. Concannon	2/24	Response to 2/7 letter
Bruce Kenyon, NU	NEAC	2/27	Response to 2/4 letter
Eugene Imbro, NRC	NEAC	3/6	IVACP contract with Sargent & Lundy, Millstone 2 issues
Shirley Jackson	NEAC	4/10	Restrictions on use of NRC fines
NEAC	Sen. Chris Dodd Sen. Joseph Lieberman	4/25	Federal high level waste legislation
NEAC	Congressional delegation	4/25	Participation in hearings related to nuclear plant shutdowns
NEAC	Shirley Jackson	4/25	Independence of Sargent and Lundy
Rep. Concannon	Shirley Jackson	5/21	Response to 4/10 letter
NEAC	Sen. Joseph Lieberman Sen. Chris Dodd	5/21	Cover letter with copy of 5/21 letter to Shirley Jackson
Samuel Collins, NRC	NEAC	5/27	Response to 5/27 letter to Shirley Jackson
Sen. Joseph Lieberman	Rep. Concannon	6/13	Response to 4/25 letter re: federal legislation
Sen. Christopher Dodd Sen. Joseph Lieberman	cc: NEAC	6/25	S. 960 Partial use of NRC civil penalty to aid local communities
Shirley Jackson	NEAC	7/2	Response to 5/21 letter
Jacque Durr, NRC	NEAC	8/11	Answers to question raised by NEAC at 7/17 meeting
Connecticut Academy of Science and Engineering (CASE)	NEAC	8/20 Revised 11/19	Study of Cancer incidence near the CY Nuclear Plant, with Statement of Inquiry..
Rep. Sam Gejdenson	Rep. Concannon	11/21	Role of NEAC
NEAC	Shirley Jackson	12/31	Continued presence of on-site resident inspector during decommissioning of Connecticut Yankee

APPENDIX 1

APPENDICES

Nuclear Energy Advisory Council Membership

Rep. Terry Concannon (Co-Chair), Haddam; BSc Biochemistry, Dublin, Ireland. Legislator, tax consultant.

Evan Woollacott (Co-Chair), Simsbury; MBA, Wharton School. Consultant, formerly VicePresident Combustion Engineering.

Lawrence (Bill) Brockett, Middle Haddam; BS Mech. Engineering, Yale. Consultant, formerly Director of Nuclear Systems, Honeywell.

Trevor Davis, Jr., Haddam Neck; MBA U. of Hartford. Senior commercial real estate broker.

Jelle Zeilinga DeBoer, Haddam; Ph.D., Harold T. Steams Professor of Earth Science, Wesleyan University Professeur Associe, U. of Bordeaux, France.

Sen. John Fonfara, Hartford; legislator

Denny Galloway, Ledyard; Supervising Radiation Control Physicist, DEP.

John Helm, Sr., Groton; MS Mech. Engineering, Columbia. Consultant, former experience includes nuclear submarine development and Manhattan Project.

Mark Holloway, Niantic; BS Interdisciplinary Sciences, Charter Oak. Task manager and analyst in nuclear submarine development.

Robert J. Klanko, Woodbridge; BSE Chemical Engineering, UConn. Engineering consultant, member State Emergency Response Commission.

John Markowicz, Waterford; BS engineering, Naval Academy. Economic development director, former Chief Engineer nuclear powered submarine.

Frank Rothen, Waterford; Vice President Work Services Northeast Utilities.

Butch Rowley, New London; BS, SCSU. Unit supervisor emergency dispatch center.

John (Bill) Sheehan, Waterford; MBA, Rensselaer Polytechnic. Dir. management information systems, former Captain nuclear powered submarine.

APPENDIX 2

Nuclear Energy Advisory Council
January 9, 1997
6:00 p.m.

Attendees:

Representative Terry Concannon, Co-Chairman
Mr. Evan W. Woollacott, Co-Chairman
Mr. Trevor Davis, Jr.
Mr. Jelle Zeilinga DeBoer
Mr. Kevin T.A. McCarthy, representing the Commissioner of the Department of Environmental Protection, Sidney Holbrook
Mr. John Helm, Sr.
Mr. Mark Holloway
Mr. John C. Markowicz
Mr. Steve Percy
Mr. Barry Ilberman, representing Mr. Frank Rothen
Mr. Richard Rowley
Mr. John (Bill) W. Sheehan

Mr. Kevin E. McCarthy, Principal Analyst of the Office of Legislative Research

Representative Terry Concannon, Co-Chairman of the NEAC called the meeting to order at approximately 6:10 p.m. on January 9, 1997, in Room 1C of the Legislative Office Building, Hartford, Connecticut.

Co-Chair Concannon called for a motion to accept the NEAC Minutes of the November 7, 1996 meeting. Mr. Bill Sheehan made the motion to accept, it was seconded by Mr. John Helm, and accepted with the exception of one spelling amendment in the name "Bernhardt".

Co-Chair Concannon then announced there will be a public meeting on January 15, 1997, at 7:00 p.m., in the Haddam-Killingworth High School, Higganum, Conn., regarding decommissioning. The Nuclear Regulatory Commission (NRC) will explain their decommissioning requirements at the meeting.

Co-Chair Concannon then reminded the council about Mr. Paul Blanch submitting and addressing a letter on the subject of upcoming civil penalties for Northeast Utilities at the December 12, 1996 meeting. She commented that Mr. Blanch had suggested that the council might want to request that a portion of the penalties be used to further nuclear safety and energy conservation within the State of Connecticut. She explained that last week she had a meeting with representatives from Senator Dodd's office during which they said that there is interest at the federal level in seeing that the monies don't go into the federal general fund, but that they would be used for another purpose. Mr. Evan Woollacott suggested that a letter be written with a recommendation to the NRC that the monies be given to the State. He also said that Northeast Utilities be required to list the activities that they would be doing to benefit public health and safety and submit it to the NRC for approval with a copy to the NEAC for review and comment. Mr. Sheehan requested that the letter state nuclear health and safety and environmental

considerations in and around the nuclear plants instead of just public health and safety. Rep. Concannon suggested the council draft a letter to our federal representatives asking them to look into this issue. Mr. Rowley made a motion to draft a letter to our federal representatives, the motion was seconded by Mr. Bill Sheehan, and accepted. Mr. Evan Woollacott stated he would draft this letter for the NEAC.

Mr. Holloway explained to the council members the reason they did not meet in East Lyme for this meeting was because East Lyme requires an insurance waiver submitted to the town, indicating that the State of Connecticut has a policy to cover any liability. An acceptable alternative is to have one of the council members appear before the First Selectman at a selectmen's meeting and request a liability waiver. He stated that he could approach the town to request a waiver for future meetings.

Co-Chair Concannon also commented that the draft report from the NEAC ICAVP Subcommittee has been completed. She explained the next step is to write a cover letter which will introduce the report. The report will be distributed to the NRC; Northeast Utilities and the general public.

The council then reviewed and amended the draft report to the legislature as required by Section 17 of Public Act 96-245.

Co-Chair Concannon called for a motion to accept the report to the legislature as revised this evening. Mr. Bill Sheehan made the motion to accept the report, it was seconded by Mr. Mark Holloway and accepted.

It was decided to hold the next meeting in the Auditorium, of the Waterford Town Hall, Waterford, Connecticut, at 7:00 p.m. on February 20, 1997. The council decided to try to have Mr. Bernard Fox, Northeast Utilities CEO come and speak to the NEAC. Subsequent meetings will be held on March 20, 1997 and April 17, 1997. Other items the council wanted on the upcoming agendas are: 1) an emergency response briefing by Northeast Utilities and the state agencies involved in emergency response activities; 2) arrange to have FEMA give the council a presentation; 3) arrange to have NRC and Northeast Utilities give an update and 4) to find out how other States monitor their nuclear plants.

She then opened the floor to the public. The following member of the public spoke to the attendees:

Mr. Paul Blanch, West Hartford

Co-Chair Concannon made the motion to adjourn the meeting. This was seconded, accepted, and the meeting was adjourned.

Nuclear Energy Advisory Council
February 20, 1997
7:00 p.m.

Attendees:

Representative Terry Concannon, Co-Chairman
Mr. Evan W. Woollacott, Co-Chairman
Mr. Trevor Davis, Jr.
Mr. Jelle Zeilinga DeBoer
Mr. Kevin T.A. McCarthy, representing the Commissioner of the Department of Environmental Protection, Sidney Holbrook
Mr. John Helm, Sr.
Mr. Mark Holloway
Mr. John C. Markowicz
Mr. Steve Percy
Mr. Frank Rothen
Mr. John (Bill) W. Sheehan

Mr. Bruce Kenyon, President & Chief Executive Officer of Northeast Nuclear Energy Company
Mr. Neil "Buzz" S. Carns, Senior Vice President and Chief Nuclear Officer - Millstone
Mr. David M. Goebel, Vice President - Nuclear Oversight
Mr. Philip McKee, Nuclear Regulatory Commission
Mr. William Travers, Nuclear Regulatory Commission

Representative Terry Concannon, Co-Chairman of the NEAC called the meeting to order at approximately 7:10 p.m. on February 20, 1997, in the Waterford Town Hall, Waterford, Connecticut.

Co-Chair Concannon moved the acceptance of the NEAC Minutes of the January 9, 1997 meeting. The motion was seconded and accepted.

Co-Chair Concannon explained the first section of this meeting would be an updated briefing from Northeast Utilities. She then introduced Mr. Bruce Kenyon and she also requested that before he started his presentation he make the announcement that became public today. Mr. Kenyon stated that an announcement was made today that Mr. Bernard Fox, Chief Executive Officer of Northeast Utilities, announced his intention to retire from the company later this year. The timing will be up to the board and how they manage the transition. Mr. Kenyon then gave an overview of the following:

Recent Accomplishments
- Proposed ICAVP contractor for each unit
- Established new Oversight leadership team
- Proposed Employee Concerns Oversight contractor
- Developed an enhanced Employee Concerns Program
- Begin series of employee and community discussions on employee concerns

Progress
- Improved Corrective Action Program
- Conducted leadership assessment
- Established longer-term leadership team for each unit

Leadership Progress
- New Leadership Team Additions
    - Buzz Carns, Sr VP & CNO of Millstone
    - Mike Brothers, VP of Millstone 3

- Recovery Teams
    - long term agreements with PECO & VEPCO
- Use of Other Loaned Individuals Throughout the Organization

Mr. Neil "Buzz" S. Carns
- Reports to Bruce Kenyon - began on 2/3/97
- Responsible for all Millstone operations
- Previously held the following positions:
    Chairman, President and CEO of Wolf Creek
    V.P. of Arkansas Nuclear One
    Captain in the U.S. Navy Nuclear Program

Success Objectives
1. High standards and clear accountabilities
2. Strong nuclear safety philosophy
3. Effective self-assessment
4. Effective corrective action process
5. Licensing and design bases restored with process to ensure they are properly maintained
6. An environment that supports the identification & effective resolution of employee concerns
7. Commitment to achieve excellence in nuclear operations

Paul Blanch - Retained as an NU Consultant
- employee concerns
- communications with the public
- strategic issues

Mr. Neil "Buzz" S. Carns was then introduced and he made the following presentation:

Readiness
- System
- Organizational
- Operational
- Regulatory
- Communications

Millstone Unit 1 Progress
- Restart readiness
- Operational Readiness Plan was approved on 1/17/97
- Spent fuel pool cooling
- Forum for Leadership Excellence
- Monthly "All Hands" meetings are scheduled
- Proposed ICAVP contractor - Sargent & Lundy
- GE and Stone & Webster to assist in the 50.54(f) program

Millstone Unit 2 Progress
- Restart readiness
- Operational Readiness Plan Schedule was released on 2/3/97
- Completed full core-off-load on 2/2/97
- "Enlightened Leadership": sessions held for first line supervisors
- Proposed ICAVP contractor - Parsons Power to begin in May 1997
- ABB and Stone & Webster to assist in the 50.54(f) program

Millstone Unit 3 Progress
- Restart readiness
- Began Specific System Assessment process
- Schedule for all NRC "significant issues" submitted to NRC on 2/5/97
- Proposed ICAVP contractor - Sargent & Lundy to begin in May 1997
- Westinghouse and Southern Co. to assist in the 50.54(f) effort

ICAVP Contractor
- ICAVP will verify adequacy of NU's efforts:
  - establish design bases and design controls
  - translation of design bases into operating procedures, maintenance and testing practices
  - verification of system performance
  - implementation of modifications since initial operating license

ICAVP Contractor - Financial and Organizational Independence
- Sargent & Lundy and Parsons meet all provisions of the NRC Order regarding independence
  - no stock nor any other financial interest in NU
  - no current work at Millstone
  - previous work was minimal
- Regarding Technical Capabilities
  - well-formulated project plan
  - experienced team

ICAVP Contractor - Financial and Organizational Independence
- Team Members
  - Resumes indicate no prior work at Millstone
    - only one individual from Parsons did prior work at Millstone- NDE on MP-1 RPV nozzles
  - Each member required to certify independence from NU, and its design contractors involved in original unit design and the current Configuration Management Program

ICAVP Contract restrictions
- The contract will preclude S&L and Parsons from working within 12 months after completion of all work on the affected units
- Sargent and Lundy procedure for substitution of personnel will be approved by the NRC
  - technical experience
  - independence

Near Term Activities Millstone 1
- Forum for leadership excellence
- Training
  - skill enhancement for eng. and maint.
  - upgrade of training programs
- Operational Readiness Plan deliverables
- Systems required for reload restored to operability by May 15

Near Term Activities Millstone 2
- ICAVP contractor selected
- Complete Phase 1 and 2 system reviews
- Complete Facility 2 outage/start Facility 1 outage
- Complete 35 of 91 required design modifications

Near Term Activities Millstone 3
- ICAVP contractor recommended to NRC
- Maintenance Rule Wave 1 systems complete and ready for SSAs
- ICAVP

Near Term Activities Engineering/Support
- Training: upgrade materials, Instructor preparation and records
- Engineering Programs: design control, MOVs, fire protection and assess erosion corrosion program
- Licensing: Complete reorganization to focus compliance at each unit
- Emergency Plan: Upgrade procedures and training

Mr. David M. Goebel was then introduced and he made the following presentation:

10/24/96 - NRC Issued an Order requiring NNECO:

- to prepare and implement a comprehensive plan for improving the employee concerns environment at Millstone
- to hire an independent third-party team to oversee its handling of employee concerns at Millstone - the IOTEC

Background

- 12/23/96 - NNECO nominated Little Harbor Consultants, Inc. (LHC) to fulfill the role of the IOTEC after extensive review of all candidates
- 1/31/97 - NNECO submitted the employee concerns comprehensive plan to the NRC

Comprehensive Plan

- Volunteer team of employees
- Satisfies NRC Order to:
  - review and disposition safety issues raised by employees
  - ensure employees who raise safety concerns are not subject to discrimination
  - address the root causes of past performance failures

Our Comprehensive Plan Is:

- Comprised of two fundamental parts
  - Provides the process to handle concerns (goes beyond requirements of order - is not limited to safety concerns)
  - Management improvement initiatives
- Being implemented while final areas are being refined

Bottom Line....

- Off to a good start
  - Majority of work force extremely favorable
  - However some members have a "wait and see" attitude
- Management must demonstrate by action that it is willing to do what is right

The Purpose of IOTEC is to ensure that:

- We do business right
  - treat concerned individuals with respect
  - verify that we both listen and respond to submitted concerns
- We do what our comprehensive plan says we must do

Required Qualifications

- Expertise necessary to audit technical reviews of employee concerns
- Monitor corrective actions
- Recognize technical weaknesses in approaches to safety concerns
- Audit and determine adequacy of investigations into H, I & D complaints
- Conduct employee surveys to assess performance

Factors to Examine

- Actions taken or to be taken to create environment where raising concerns encouraged
  - Includes contractors
- Timeliness and thoroughness such concerns reviewed and resolved
  - how informed

Independence

None of IOTEC members has had direct previous involvement with the activities that the organization will be overseeing

Independence Issues

- Has been sticking point at public meetings
- Taken literally, could not have had any prior relationship with NU ever
  - a real hurdle

- combination of skills required and depth of commitment not found in a single company
- LHC a collection of skills put together specifically to satisfy order

Skills Required
- Understanding of nuclear reactor plants
- Understand employee concerns programs
- Investigators
- Full knowledge of the law
- Cultural measurement and enhancement
- Skilled in human resources issues
- Training
- NRC

LHC Summary Experience Matrix & Extent of Prior Involvement
- Richard Dublet - firm which employs him has single employee at CY; no reporting structure exists
- Donald Ferguson - had two week assignment at MP3 in 1984 to review technical documentation
- John Griffin - his company had one individual at MP1 for two months in 1996 to assess work control process
- Don Irwin - provided legal services to NU in 1970s and early 1980s as one of several utilities in a group
- Paul Wood - visited MP3 four times during 1983 - 1985 as part of three member blue ribbon panel to assess PRA process
- Billie Garde - assisted Employee Concerns Task Force in preparing Comprehensive Plan. On site less than 1/3 of time during plan preparation

Bottom Line
- Insignificant prior association when consider total scope of issues team is to address
- Procedures exist to exclude people from past areas of association
- An extremely well qualified team, worthy of everyone's support

Conclusion
- Have head of steam - need to forge ahead
- Work force behind management - but we must still "win our spurs"
  - management "inability to produce" is unacceptable

Mr. Bruce Kenyon then made some closing remarks.

Closing Remarks
- Strong team now in place to lead Millstone to recovery
- Renewed commitment to open, honest dialogue
- Expectation of unit(s) on-line in 1997/98
- NU Board is behind the Nuclear Program 100%

Millstone Nuclear Advisory Committee
- Dialogue with Northeast Nuclear
- Discuss all issues in progress to restart
- Volunteers who are willing to commit time
- Independent, overview of all activities

Areas of Expertise
- Engineering/Operations
- Human Resources
- Local Communities
- Management

Potential Committee Members
- New London Day
- Ex-employees

- Academia
- CRC/CAN
- NEAC
- Business/Industry
- Navy
- Medical community

Where We Are Now

- Formulating charter
- Soliciting volunteers
- Evaluating options for chairperson
- Goal for first meeting in mid-March

Questions from the NEAC followed the Northeast Utilities presentations.

Co-Chair Concannon asked about the restart of Millstone 2. She mentioned at the meeting she attended at Millstone on December 4, Northeast Utilities talked about Millstone 3 and 1 for restart but Millstone 2 was not mentioned. Mr. Kenyon explained that they are endeavoring to restart the units in parallel which means each unit works on a schedule that makes sense for that unit. He also explained the schedules right now are not hugely different and in his mind there is not a lead unit at this time. To work three units in parallel is the most efficient way for the company to bring back three units as opposed working one at a time. He also stated that, down the road, it may be necessary to pick a lead unit and if this is the situation they will do so.

Co-Chair Woollacott asked how Northeast Utilities is going to handle a demand for people, in the engineering area, if they have two or three units restarting together. Mr. Carns stated that one of the things incorporated into the recovery is to have separate groups providing this 50.54(f) program.

Mr. John Markowicz asked some questions to follow-up on a meeting held on February 13, 1997. He explained that he heard Mr. Joe Newell state that he had a concern that was more than a year old. Mr. Goebel stated that they had resolved that concern. It pertained to Mr. Newell having left the company in 1995 and when the concern got run through completion and solved he was no longer with the company to be informed. There was insufficient information to track him down. They have left messages with his answering machine and they are about to send a registered letter. Mr. Markowicz's second question was regarding the QA plan that the ICAVP contractor would follow, whether it would be the contractor's plan or Northeast Utilities plan. Mr. Kenyon stated to his recollection that Mr. Mike Brothers had said that the contractor, being an Appendix B qualified contractor, has a qualified QA plan. Because of this, the contractor, would do its work to that QA plan. Mr. Markowicz requested a copy of prior Northeast Utilities contract history be provided to the NEAC regarding Parsons Power similar to the one received regarding Sargent & Lundy. He also asked if any checks had been done on the accuracy of the individual certifications that have been provided by the contractor. Mr. Goebel stated that yes, financial checks have been made on the stock records held by the company and there are no holders of stock. The badge checks were also done and there was no unescorted access.

Mr. Mark Holloway asked about Unit 1 and how Northeast Utilities expected to have 17 out of 53 systems available for an early spring ICAVP. It was his understanding that before the ICAVP was to take place, half of the systems were supposed to be available on either Group 1 or 2. Mr. Carns explained that the safety and risk significant systems total 36 and that represents half. The system total for unit 1 is 53. It was also stated they are gearing the 22 systems available for core load. Mr. Holloway then asked Mr. Goebel about the employee concerns' plan. He asked about the DPC Plan (Page 5) on the last sentence that says ' the implementing procedure for the program that is under development and what that has to do with the phases of investigation. Mr. Goebel stated that the exact details of the process are being worked on. Northeast Utilities is using the block diagram submitted to the NRC in order to handle the concerns. The detailed procedure will be made available to the employees when it is complete. He

also mentioned there are peers assigned to each unit to serve as an interface between concerned individuals and management. Mr. Holloway asked why this was necessary and if the employees could just go directly through the program (management). Mr. Goebel stated they do not have to go to their peer representatives and there is no requirement for the employee to go to his peer representative. Mr. Holloway's last question was concerning the oversight panel that would be selected through a formal process. He questioned who would be the selector. Mr. Goebel stated that has not been decided yet. They have not decided if they will bring in people from the outside or whether they will have a team from the inside.

Mr. Bill Sheehan asked for a quick briefing on what ongoing training programs there are to keep the operators up-to-date and current with the changes. Mr. Carns stated he cannot give details right now but committed that the next time NU and NEAC meet he will be able to update them with the training procedures.

Co-Chair Concannon asked who is determining the time schedules and assigning the goals of which and how many systems should be worked on. Mr. Carns explained that the recovery officers for each of their units are picking the systems from the maintenance rule, the ones that are risk and safety significant. He said that they are taking the ones that are the most vital for the protection of public health and safety and concentrating on those first. She also asked for the NEAC to receive packages of the NU employee concerns.

Mr. John Markowicz asked if Northeast Utilities definition of independence, as given in the presentations, is what they think 'independence' is, and if this is the definition are they are applying it to the two programs. Mr. Carns stated the definitions that were given in the presentation were taken right out of the orders.

Co-Chair Concannon then opened the floor to the public for questions and comments to Northeast Utilities. The following members of the public spoke:

Don Del Core, Sr., Uncasville
Pete Reynolds, Waterford
Charlie Luxton, Waterford
Susan Perry Luxton, Waterford
Gary Verdone, Waterford
Diane Scully, Niantic
Lois Bailey, Norwich
David Silk, Stonington
Norma Comins
Wilfred Zinavage
Paul Blanch, West Hartford

Co-Chair Concannon made an announcement that the next NEAC meeting will be held on March 20, 1997 at the Waterford Town Hall, Waterford, Connecticut.

Co-Chair Concannon then introduced Mr. Bill Travers, NRC, to give an update on the status of NRC's consideration of the proposals that NU has made on both the ICAVP and the Employee Concerns Program. Mr. Travers explained the NRC directed his organization to put a dedicated management focus to integrate both the inspection and licencing activities that NRC needs to carry out. The staff's principal charter is to do everything they need to do to assess the corrective actions that the company has identified for restart. He then introduced Mr. Philip McKee to update the attendees regarding the Employee Concerns Program.

Mr. Philip McKee, NRC, explained he was providing the status on what the NRC plans to do and where they are on the employee concern order. He explained there are two primary elements of the order; the comprehensive plan and the oversight plan. The comprehensive plan the licensee will implement for the site will apply to all three units. With respect to the comprehensive plan, the order requires the licensee to submit that plan for the NRC's review. The comprehensive plan was submitted January 31, 1997 and he stated there are some elements within this plan that have been addressed and that have to be further developed and prepared. They have begun their process of review. The oversight plan is a plan to provide oversight of the comprehensive plan by the third party organization. He stated the Little Harbor consultants have been proposed. There has been an additional submittal that has provided additional information and people to be included within that proposal. He explained there have been meetings with the licensee and the public to get further details and information on the plan. Along with that, the NRC provided some questions to Northeast Utilities concerning the third party organization. He stated as an example, the NRC identified two individuals they believed did not specifically meet the criteria of the order and they asked for NUs response. The NRC did receive some comments back on February 14 and it did address many of the issues/areas that were covered at the meetings with the licensee and the public. Upon approval, it calls for the third party organization to establish an implementation plan which would be submitted to the NRC for review and approval. Once that plan is reviewed and approved and implementation has begun, the process calls for periodic quarterly reports by the third party organization on their findings and recommendations.

Mr. Travers then explained the NRC's status regarding the ICAVP. He stated the first step in the ICAVP process that was mandated by the NRC in August, is the proposal by the Utility, and NRC's subsequent review and consideration, of the organization that would be used to carry out the ICAVP. The NRC is currently in the process of reviewing the proposals that Northeast Utilities has submitted. He stated that Sargent & Lundy was proposed at Unit 3, on December 18 and again, Sargent & Lundy has been proposed for Unit 1, on January 15. He also stated that earlier this week, NRC received a proposal from the Utility to use Parsons for Unit 2. The NRC's review is in its early stages. The NRC has asked for additional information, with regard to the 'Independence' issue.

Questions from the NEAC followed the NRC presentations.

Co-Chair Concannon asked for the NRC to clarify the policy issued by Mr. James Taylor relating to the Millstone restart review process. This policy indicates that prior to the finalizing the selection of four (4) systems, the staff would offer to the CT NEAC the opportunity to select one or two of the systems using any method that they deemed appropriate. Mr. Travers stated the logistics still need to be worked out but the concept is to include in this process an opportunity for the NEAC to participate with the NRC in the selection of the systems.

Mr. John Markowicz asked the NRC participants to provide him with the criteria and definition of 'independence' for the two programs that the NRC will be using. Mr. McKee stated the NRC is looking for a relative measure of independence in both the ICAVP and Employee Concerns Program. The Utility is looking for an organization that can be viewed as relatively independent and that is competent enough to do this kind of work, but lacking direct involvement with the Utility. Mr. Markowicz asked if sometime in the near future, the NRC can provide in writing the criteria they will be using for the approval process. He also stated that it appears that the concept of a 'waiver' which is a new term that was used approximately a week ago by Northeast Utilities, and the phrase that was used earlier 'a good cause for relaxation', needed an explanation. Mr. McKee explained that the NRC recognizes there may be some wording that is not clear and there may have been unforeseen circumstances that may have to be addressed. Because of this, there may have to be some flexibility on review and approval by the NRC.

Mr. Sheehan asked the NRC to explain about the selection of the number of systems. He stated that the information from the Millstone Independent Corrective Action Verification Program Oversight Inspection Plan that was submitted by Mr. Gene Imbro, on December 19, 1996 said the NRC agreed the

number of systems to be inspected were 4 out of 80. Mr. Sheehan asked how the NRC got the scope of the selection of these four systems. The NRC presenter stated they did take a hard look at the right number of systems and four does not sound like a lot. But he explained from a practical matter there is a lot of effort involved. This effort includes reviewing licensing and design basis, the Utilities effort in the CMP program, the mandated ICAVP order in its multi tiered aspects, and the NRC review concurrent with ICAVP oversight. The NRC will also be picking another couple of systems, independent of ICAVP. They looked at a plan, based on past experience where they typically only do one system, so that should give them a good measure of what efforts the licensee has put into this program.

Co-Chair Concannon asked the NRC to address the Millstone Unit 2 full-core off-load. The NRC presenter stated that the NRC inspectors identified and raised questions regarding licensing bases issues and systems issues. Fundamentally, as a result of the NRC raising concerns about the full-core off-load it was delayed until these licensing design issues were addressed. He stated, as he understands it, these issues have been addressed.

Co-Chair Concannon then opened the floor to the public for questions and comments to the NRC presenters. The following members of the public spoke:

Mr. Jerry Reardon
Mr. David Silk, Stonington
Ms Susan Perry Luxton, Waterford
Ms Geri Winslow, Waterford
Mr. Bill Marston, Old Saybrook

Co-Chair Concannon made an announcement that Sargent & Lundy will be interviewed in Chicago, Illinois at the end of March. It was recommended the NEAC observe that process.

Co-Chair Woollacott made an announcement that he would be attending a meeting at the DPUC in New Britain the next morning, February 21, at 9:00 a.m. Northeast Utilities management will be making a presentation on the prudence review. He recommended attendance at this meeting if the members would like to observe this process.

Discussion was held to have a planning session and then to have a public session at the next NEAC meeting.

Co-Chair Concannon made a motion to adjourn the meeting, this was seconded, accepted and the meeting adjourned at approximately 12:15 a.m.

Nuclear Energy Advisory Council
March 20, 1997
7:00 p.m.

Attendees:

Representative Terry Concannon, Co-Chairman
Mr. Evan W. Woollacott, Co-Chairman
Mr. Kevin T.A. McCarthy, representing the Commissioner of the Department of Environmental Protection, Sidney Holbrook
Mr. John Helm, Sr.
Mr. Mark Holloway
Mr. John C. Markowicz
Mr. Steve Percy
Mr. Butch Rowley
Mr. Frank Rothen
Mr. John (Bill) W. Sheehan

Mr. Evan Woollacott, Co-Chairman of the NEAC called the meeting to order at approximately 7:10 p.m. on March 20, 1997, in the Waterford Town Hall, Waterford, Connecticut.

Co-Chair Woollacott moved the acceptance of the NEAC Minutes of the February 20, 1997 meeting. The motion was seconded by Mr. Sheehan and accepted.

Co-Chair Woollacott then requested Mr. McCarthy give some details on what will be happening at the next NEAC meeting. Mr. McCarthy started by explaining at the next meeting they will be discussing emergency planning and emergency response capabilities of the state emergency response organizations. He then stated they would start the meeting with Northeast Utilities by creating a scenario, explaining to attendees what the participants see and what they do, and who and how to notify the appropriate persons. During this time, they will be increasing the severity of the scenario. Also at this time, the State and the State counterpart of FEMA (Office of Emergency Management, OEM) will be taking steps through the process and then they will go through these steps with the attendees. Mr. Holloway then requested and it was decided that another presentation at the upcoming meeting be done after the tabletop exercise by a specific group of citizens. Mr. Woollacott requested Mr. McCarthy write the agenda for the upcoming NEAC meeting.

The NEAC attendees decided the next NEAC meeting will be held on April 17, 1997, in the Waterford Town Hall, Waterford, Connecticut.

The next topic of discussion was prioritization of recommendations regarding the '1996 Interim Report of the Nuclear Energy Advisory Council'. Mr. John Helm, Sr. stated he was interested with item number 7, on page 8, "assist the legislature in the debate regarding the proposed restructuring (deregulation) of the electric power industry, particularly as it affects nuclear plant operations and safety" and item number 10, on page 9, "study alternative energy sources and possible energy conservation measures". He requested a response from the council and Co-Chair Woollacott stated these two topics were important and it was decided a subcommittee would be formed with members being Mr. John Markowicz, Mr. John Helm, Sr. and Mr. Jelle Z. DeBoer pertaining to the study of alternative energy conservation.

It was decided another subcommittee would be started with concern to item #seven, page 8, "assist the legislature in the debate regarding the proposed restructuring (deregulation) of the electric power

industry, particularly as it affects nuclear plant operations and safety". The members within this subcommittee would be Mr. Frank Rothen and Mr. Evan Woollacott.

Co-Chair Concannon remarked that an idea could be for a NEAC member to occasionally visit Millstone and look at what is happening and talk to the employees. Mr. Butch Rowley volunteered to be the member to do this. He stated he felt it was a good idea and requested the NEAC to map out a procedure for this subject.

It was decided there would be a subcommittee formed with members to include Mr. Mark Holloway, Mr. Butch Rowley and Mr. Bill Sheehan concerning item numbers 1, 2 and 3; on page 8, "monitor Northeast Utilities; restart programs for Millstone 1, 2, and 3 including addressing the "punch list" of measures that must be completed for each plant, with an emphasis on health and safety matters," "monitor the Independent Corrective Action Verification Program," and "monitor the response of NU and the NRC to concerns raised by current and former employees including the actions taken by the third party oversight organization."

It was also decided that Mr. Kevin McCarthy, Mr. Evan Woollacott and Mr. Frank Rothen would be a part of a subcommittee regarding number 8, on page 8, "monitor the status of DOE's process for siting a high-level waste storage and ultimate disposal facility."

Mr. John Markowicz made the following recommendations for consideration by the NEAC: 1) NEAC write a letter to the Connecticut congressional delegation requesting public hearings or meetings be held in Southeastern Connecticut regarding nuclear power plant restart and decommissioning issues; 2) NEAC refrain from participation in the Sargent & Lundy interviews in Chicago, IL; 3) and NEAC seize referring to the ICAVP and the IOTEC as they are named by taking the first word "Independent" out from each of them.

Co-Chair Concannon then requested a motion to bring the meeting to a close. This motion was made, seconded and accepted. She then opened the floor to start the public forum. The following public spoke regarding:

Mr. William D. Moore, Old Saybrook
- (see attached)

Mr. Warren J. Burr
- Mr. Burr suggested to the citizens they buy shares of Connecticut Light & Power, Northeast Utilities stock. By doing so it would allow the shareholder to attend the annual stock holders meeting and to be able to demand the heads of top management be terminated. He also suggested they ban together and bring in new management.

Ms Rosemary Bassilakis, CAN
- Ms Bassilakis spoke about her concern regarding health issues; stating Massachusetts Department of Public Health recently came out with a health study on the people who are located within the Deerfield River Valley (downriver from the Yankee Row Nuclear Reactor) and spoke about the findings within that study. She then stated after reading the 1996 Interim Report of the NEAC, she was glad to see that one of the action items has to do with a health study. Ms Bassilakis suggested the health study needs to involve some type of community group, separate from NEAC. She explained she said this because she believes it is the community who knows where the deceases occur. Another subject she spoke about was the radiological event that occurred in Haddam Neck on 02/19/97. She said after her organization heard about this event they released a 2.206 petition to the NRC, calling for a steep financial penalty, and decommissioning not be allowed to progress unless six months has passed without a radiological event. Ms Bassilakis also spoke about the importance of the community involvement within the decommissioning process.

Mr. Paul Blanch, West Hartford

- Mr. Blanch volunteered to be a part of the subcommittee regarding alternative energies if the NEAC would consider it. He also proposed that this subcommittee should look into energy conservation. He added that he felt the subcommitte try and make recommendations to support the requirements for the State of Connecticut to adopt Federal Energy Policies Act.

First Selectman Thomas Sheridan, Waterford

- First Selectman Sheridan requested the NEACs assistance regarding the Bill 104, which is before the Senate. He explained Bill 104 tries to address high-level waste nationwide. He requested a letter from the NEAC to Congress and Senate to support this Bill.

Mr. Pete Reynolds, Waterford

- Mr. Reynolds commented about the subjects deregulation and alternative energy.

Mr. Robert Former

- Mr. Former gave a presentation on three areas about the ICAVP: configuration (example management plan), control (lack of it thereof) and reliability (human). He also discussed alternative energy sources.

Mr. Donald W. Del Core, Sr., Uncasville

- Mr. Del Core commented about deregulation and restructuring. He talked about the concern the Citizens Regulatory Commission (CRC) has with the safety of nuclear power plants. Mr. Del Core asked the NEAC to look into the recent trends with regard to the new management of Millstone. He also expressed concern regarding a family member who is currently working for Northeast Utilities because of the work he is doing with CRC.

Ms Susan Perry Luxton, Waterford

- Ms Luxton expressed her concern regarding Bill 104, explaining she felt it was a short term solution and short sited.

Mr. Charlie Luxton,

- (see attached)

Mr. David Silk, Stonington

- Mr. Silk commented and expressed his concern about the restructuring and deregulation with Northeast Utilities.

Mr. Jay Gionet, Niantic, a current employee for Northeast Utilities

- Mr. Gionet commented he believes most of the employees at Northeast Utilities honestly believe that Mr. Kenyon wants to get the issues out and get them on the table.

Mr. Markowicz asked the NEAC to reconsider his recommendations raised immediately before the public portion of the meeting. After some discussion, it was agreed the NEAC would remove the word 'Independence' from the ICAVP and in the future look at it as a Corrective Verification Process.

Mr. Markowicz suggested the NEAC write a letter to their State congressional delegation to request public hearings and meetings in Southeastern Connecticut as soon as possible. The motion was made by Mr. Markowicz for the NEAC to write this letter, seconded by Mr. Holloway and accepted.

Mr. McCarthy made the motion to adjourn the meeting, this was seconded and accepted and the meeting adjourned at 10:11 p.m.

Nuclear Energy Advisory Council
April 17, 1997
7:00 p.m.

Attendees:

Representative Terry Concannon, Co-Chairman
Mr. Evan Woollacott, Co-Chairman
Mr. Kevin T.A. McCarthy, representing the Commissioner of the Department of Environmental Protection, Sidney Holbrook
Mr. John Helm, Sr.
Mr. Mark Holloway
Mr. John C. Markowicz
Mr. Frank Rothen
Mr. John (Bill) W. Sheehan
Mr. Trevor Davis

Co-Chair Concannon of the NEAC called the meeting to order at approximately 7:15 p.m. on April 17, 1997, in the Waterford Town Hall, Waterford, Connecticut.

Co-Chair Concannon moved the acceptance of the NEAC Minutes of the March 20, 1997 meeting. The motion was seconded and accepted with one change of the word "cease".

Co-Chair Concannon then introduced the first presenters, the CRC Emergency Planning Subcommittee. The three speakers were Ms Pati Harper, Niantic, Mr. Bill Marston, Old Saybrook and Ms Diane Scully, Niantic. The following consists of excerpts from their presentations:

Glossary:

EPZ - Emergency Planning Zone - The towns within a 10 mile radius of a nuclear power plant. For the Millstone facility the towns are: East Lyme, Fishers Island, Groton, Lyme, Old Lyme, Ledyard, Montville, New London, Old Saybrook, Waterford and Plum Island

FOIA - Freedom of Information Act

PLUME - Airborne cloud of radioactive effluent

NUREG - Nuclear Regulation

Telephone Calls they made to obtain information:

- Connecticut Department of Public Safety - Deborah Ferrari, Lead Planning Analyst
- East Lyme Emergency Planning Analyst
- New London emergency Planning Official
- Waterford emergency planning official
- Lyme, Old Lyme and Old Saybrook emergency planning officials
- Plum Island Federal Research Official
- Northeast Utilities
- Southern Connecticut State University Moore Field House Evacuation Center
- Insurance Industry Underwriters
- Carl Grosman, Author, Instrumental in Emergency Evacuation Research Leading to closing of Shoreham Log Island Nuclear Power Plant
- Transportation Director of Regional Educational Service Center Program
- Office of Public Protection

- Local School Principal

Meetings:

- February 1997 visit to Millstone Information Center
- March 6, 1997 meeting with Waterford Emergency Planning Officials and Northeast Utilities Representatives
- April 1, 1997 meeting with East Lyme Emergency Nuclear Emergency Planning Consultant
- April 5, 1997 meeting with Jane Fleming, Nuclear Emergency Consultant

Documents Read

- Telephone directory emergency planning pages for New London, Norwich, Old Saybrook and Mystic/Stonington
- Office of Emergency Planning at Connecticut's nuclear power plants.
- Millstone Nuclear Power Station Emergency Planning, Rev. 21, dated July 21, 1996
- NUREG-0654 - Criteria For Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants dated 1980
- NUREG-0654, Rev. 1, Supp. 3 - Criteria For Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants dated July 1996 (draft report)

NUREG-0654, Rev. 1, Supp. 3 States:

- "For all but a vary limited set of conditions, prompt evacuation of the area near the plant is much more effective in reducing the risk of early health effects that sheltering the population in the event of severe accidents"

- "Experience gained in reviewing emergency plans and in evaluating numerous emergency preparedness exercise has shown that not all emergency response organizations fully understand the impact of these insights on protective action decisionmaking"

Documents Read

- Price Anderson Act 1957 amended 1975
- Nuclear information and resource service, statement of Donald Ziegler, Ph.D., Old Dominion University, Oyster Creek Nuclear Generating Station Plans for Emergency Response and evaluation dated July 21, 1995

Lessons Learned

- Evacuate affected area immediately upon official notification
- Get monitored at host site for possible radiation exposure

Suggestions & Recommendations

- NUREG-0654, Rev. 1, Supp. 3 should be adopted, time limit for comments is long past due
- Sirens need to be upgraded with separate warning signal for nuclear incident
- A family emergency planning card should be issued in schools and available in libraries and town halls
- Towns in EPZ should have annual meeting to discuss nuclear planning emergency procedures
- Revise page in telephone book with additional information
- Annual emergency questionnaire should be sent to citizens in EPZ
- Educate the public; use Millstone Information Center to disseminate information about evacuation routes as well as protection against radiation exposure
- Schools should educate students & parents with fire drill type training
- Teachers and staff should know what their responsibilities are
- Communication must be improved between towns so potential conflicts can be avoided such as sharing the same evacuation routes, timeliness in informing public, what to do when people work in one town and children are in school in another town.
- Additional host centers are needed
- Letters of agreement need to be more specific

Co-Chair Concannon thanked the CRC speakers and then introduced Mr. Robert Plant, Director of Office of Emergency Management from the State of Connecticut.

Mr. Plant started his presentation explaining the process of what happens within his department and the process of what happens during an emergency. The following items were discussed during his presentation:

State responsibilities and operations

Responsible for preservation of life and protection for property rests with the Governor of the State of Connecticut, Chief Executive Officer

Office of Emergency Management (OEM) - Functions in an Emergency

- Governor's Command Center
- Public Information & Warning
- Mobilization of State Resources
- Communications with Local Governments
- Liaison with Federal Government
- Situation & Damage Reporting
- Coordinating Federal/State Relief

Integrated planning and response

Order of response

First - Town/City

Second - State

NOTE: Town/City and State respond at almost the same time

Third - Federal

Nuclear power plant emergencies

OEM - major missions

- Coordinate actions to mitigate the impact of hazards
- Develop and conduct emergency preparedness planning & training
- Coordinate Governor's response to emergencies
- Initiate and coordinate disaster recovery activities

Role of State Emergency Operations Center (EOC) response phase

- Determine the extent of the disaster area
- Identify affected towns/cities and most severely impacted
- Determine the nature of problems and assistance needed
- Advise the Governor and Sate Agency heads of local conditions and needs

State Emergency Operations Center

Staffing

- Governor and staff
- OEM Director and staff
- State Departments: Department of Environmental Protection (DEP), Department of Public Safety (DPS), Department of Agriculture (DOA), Department of Health (DOH), Consumer Protection, Department of Transportation (DOT)
- Military
- Red Cross
- Utilities
- Coast Guard
- Nuclear Regulatory Commission (NRC)
- Federal Emergency Management Agency (FEMA)
- Environmental Protection Agency (EPA)

Decisions to be made State level

- Does the Governor need to invoke his emergency powers?
- Which towns/cities should be assisted first and to what extent?
- Is it necessary to begin the process of requesting federal disaster assistance?

Governor's authorities

- Implementing emergency plans
- Ordering driving bans
- Request federal assistance

Declaring emergency and invoking powers
- Ordering evacuation
- Activating National Guard
- Ordering clearance of wreckage
- Modifying/suspending statutes
- Seizing and using property

Why Exercise? Exercises are designed to:
- Affirm roles & responsibilities
- Examine coordination of activities
- Verify resource requirements
- Maintain individual proficiency
- Identify need for planning changes

Emergency Management - Radio Communications
- Lowband Radio, Highband Radio, NAWA's System, Electronic Mail, Amateur Radio, Packet Radio, Emergency Alerting System

Emergency Management Communications - Landline
- Telephone, Fax, Computer Modem, Other State Systems

EBS Stations
- WTIC - Hartford, WDRC - Bloomfield, WEZN - Bridgeport, WCTY - Norwich

(Map of Millstone Nuclear Power Station)
(Map of Host Communities Evacuation Routes)

Mr. McCarthy Director, DEP - Monitoring & Radiation Division then gave the following presentation to explain the capabilities, roles and responsibilities for the Department of Environmental Protection, Monitoring & Radiation Division:

Topics covered:
- Incident classification and posture code explanations
- Emergency communications
- Radiological instrumentation
- Emergency response vehicles
- Program areas
- DEP's responsibilities
- Director's responsibilities

Incident Classification System
- General Interest Event
  - Echo: Minor incident, no releases or hazards
- Unusual Event
  - Delta-1: Incident with no unplanned releases
  - Delta-2: Incident with release doses < 5mRem Total Effective Dose Equivalent (TEDE) and/or 25 mRem Committed Effective Dose Equivalent (CEDE - thyroid)
- Alert
  - Charlie-1: Incident with potential release doses between 5 and 50 mRem TEDE and/or 250 and 5000 mRem Committed Effective Dose Equivalent (CEDE - thyroid)
- Site Area Emergency
  - Charlie-2: Incident with potential release doses between 50 and 1000 mRem TEDE and/or 250 and 5000 mRem Committed Effective Dose Equivalent (CEDE - thyroid)
- General Emergency
  - Brave: Core melt sequences with doses > than those in Charlie-2
  - Alpha: Short-term release > 1000 mRem Total Effective Dose Equivalent (TEDE and/or 5000 mRem Committed Effective Dose Equivalent (CEDE - thyroid)

Communications
- Seven (7) radiation Control Physicist, with Two (2) on-call at all times
- Within the D.E.P. there is an Emergency Dispatch Center staffed 24-hr., 7 days a week.

- Each Radiation Control Physicist has a DEP and a Northeast Utilities emergency Response Pager
- Each emergency response vehicle has:
    - A two-way mobile radio with DEP & State Police Channels
    - Cellular telephone
- Independent communications between:
    - Hartford Emergency Operations Center (EOC)
    - Connecticut Yankee Emergency Operations Facility (EOF)
    - Millstone Emergency Operations Facility (EOF)
    - DEP Emergency Dispatch Center

Instrumentation

- There are six (6) Monitoring & Radiation Division radiological emergency response kits strategically located:
    - two (2) located near each nuclear power station
    - one (1) in between the two stations
    - one (1) in Hartford
- Each kit contains instrumentation to assess:
    - Radiation Levels
    - Contamination Levels
    - Airborne Radiation Levels
- Each emergency response vehicle also contains instrumentation to assess:
    - Radiation Levels
    - Contamination Levels
    - Airborne Radiation Levels
- In Hartford there is additional equipment such as:
    - Portable multi-channel analyzers
    - Stationary multi-channel analyzers
    - Nal and G.M. stretch instruments
    - Other miscellaneous emergency response equipment

Vehicles

- There are seven (7) vehicles dedicated to radiological emergency response. All 4-wheel drive. These vehicles contain:
    - Communication Gear (DEP and State Police)
    - Lights and Sirens
    - Radiological Instrumentation
    - Personnel Protective Clothing
    - Safety Equipment

Additional radiation response assistance

- Assistance can be obtained from the following groups, upon request:
    - DEP Hazardous material, Oil and Chemical Spills Division
    - Electric Boat - Radiological Response Team
    - DOE - Brookhaven Radiological Assistance Program (RAP) team
    - NERHC - Other New England States Radiological Emergency Response Teams

Program Areas: Monitoring

- Assess the impact of Toxic Air Pollutants
- Develop and maintain the following:
    - Air monitoring network
    - Air quality calibration and audit program
    - New protocols and methodologies for ambient air monitoring

Program Areas: Radiation

- Diagnostic X-Ray
    - Mammography Quality Standards Act (MQSA)
    - Dental

- General Purpose Radiographic
- Chiropractic
- Podiatry
- Veterinary
- Therapeutic
  - LINAC
  - Teletherapy

Program Areas: Radiation

- Nuclear Emergency Response
  - Nuclear Power Station
  - Transportation - incidents and accidents
  - Research - facilities using radioactive material
- Low Level Radioactive Waste
- Radionuclide National Emission Standards for Hazardous Air Pollutants (NESHAPS)
- Environmental Monitoring
- Decommissioning of radiological facilities

Responsibilities of the DEP-MRD

- Primary
  - Secondary Accident Assessment
  - Radiation Exposure Control Guidance
  - Public Protective Actions
    - Evacuation
    - Shelter
    - Food & Water, etc. usage

Role of the DEP-MRD Director

- Provides a DEP Liaison to the Emergency Operations Facility (EOF) of the affected plant
- Directs Secondary Accident Assessment to confirm utility assessments
- Directs the Field Team Coordinator (FTC) to dispatch and coordinate field teams
- Provide radiological assessments and recommends public protective actions to the Governor (Evacuation, Shelter, etc...)
- Directs DEP staff to notify and request assistance from federal agencies, if necessary
- Recommends preventative plume phase controls for food, water, milk, and livestock feed
- Provides protective action recommendations for visitors in state parks and recreational and commercial boaters and others
- Develops post plume food, water, and milk protective actions

DEP-MRD Director's Responsibility

- When notification has been declared the following activities occur:
  - For Unusual Event: DELTA-1
    - Duty Officer is notified
    - Emergency dispatch by NU & DEP Radiopager
    - 24 Hour Emergency Coverage
    - Call in additional emergency personnel, if necessary
    - Emergency power supply
    - Obtains additional information from the radiopager
    - Contacts the control room, if necessary
    - Informs DEP-MRD Director, if necessary
    - Informs Back-Up Duty Officer
    - Maintains awareness
  - For Unusual Event: DELTA-2
    - All duties performed under DELTA-1
    - Contacts the control room for additional information
    - Contacts other plant personnel/organizations for additional information
    - Notifies the DEO-MRD Director

- Notifies back-up Duty Officer
- Confers with the USNRC, if appropriate
- Maintains awareness

- For Alert: CHARLIE-1
  - Ensure the EOC Liaison Officer has notified the following:
    - NRC
    - DOE - Brookhaven
    - EPA
    - Contiguous State (NY, MA,. RI)
  - Ensure the Duty Officer has placed Field Teams on Stand-by
  - Request a report on federal and contiguous state notifications
  - Ensure personnel are dispatched to all essential locations
  - Brief the Governor
  - Conduct briefings
  - Provide status updates to the Media Center and participate in Media, Conferences, if necessary
  - Prepare for escalation, de-escalation, or close-out of the emergency
- For Site Area Emergency: CHARLIE-2
  - All actions performed under CHARLIE-1 and
  - If a release has occurred
    - Recommend placing milk and food producing animals on stored feed and covered water, if appropriate
    - Direct FTC to dispatch field teams to monitor plum pathways
  - Select appropriate EBS message
  - Obtain the following information on the course of the emergency
    - Plant Status
    - Release data
    - Meteorological data
    - Accident prognosis
  - Recommend changes in protective actions to the Governor
- General Emergency: Bravo or Alpha
  - All the actions performed under CHARLIE-2
  - Consider the use of Potassium Iodide (KI) by state emergency workers & provide a recommendation to the DPHS Commissioner
  - Ensure Field Team Coordinator (FTC) has been advised of the decision to issue KI
  - Continue to reassess protective actions based on information from the following:
    - DEP & Utilities field monitoring teams
    - Utility representative to the State EOC
    - DEP Personnel at the affected facility
    - Utility EOF or Plant Control Room
  - Authorize exposure to emergency workers in excess of guidelines, as necessary to protect the public health and safety
- In the event of any of the posture codes Charlie-1, Charlie-2, Bravo, or Alpha the following routines are also carried out:
  - A functional check of all communication equipment
  - Monitoring of meteorological conditions and obtaining forecast data from N.U.
  - Perform dose assessment using the Accident Dose Assessment Model (ADAM) CODE and other models if necessary
  - Establish plume "footprint" using ADAM
  - Maintain a log to document significant actions and communications
  - Direct activities of Radiation Monitoring Teams engaged in environmental

monitoring and sampling

In Summary the Director of Monitoring & Radiation Division:

- Performs secondary accident assessment
- Provides radiological assessments and prepares protective action recommendations
- Recommends preventative plume phase controls for food, water, milk, and livestock feed
- Develops post plume food, water, and milk protective actions in conjunction with other state agencies
- Directs Field Teams, as appropriate

Mr. Peter Strupe, Director of Emergency Planning for Northeast Utilities was then introduced by Mr. Kevin McCarthy. Mr. Strupe explained he would first describe what would happen on station at Northeast Utilities when there is an event, how they communicate with the State and what language they use. He gave the following presentation:

- Emergency Action Levels
- Emergency Classification Levels
  - Unusual Events
  - Alert
  - Site Areas Emergency
  - General Emergency
- Emergency Notification Radio System (ENRS)
  - Radio Broadcast to State Officials and Community Leadership
  - Acknowledgment - Call back with
  - Within 15 Minutes of Emergency Classification
  - Protecting action recommendation at General Emergency
- Northeast Utilities, Berlin
  - Shelter
  - Evaluation
- 89 Positions
  - Staffed with 4 deep
  - On-call organization
  - Fitness For Duty (FFD)
- Initial and Continuing Training
  - Classroom and drill
- Emergency Facility Staffing
  - Control Room
  - Tech. Support Center
  - Emergency Operations Facility
- Station Emergency Response Organization
  - Fully activated at alert
  - Non-essential personnel are dismissed
  - Drills (annually)

Mr. Strupe, Mr. Plant and Mr. McCarthy then discussed and explained the emergency response actions that several state agencies and the Utility would take.

Co-Chair Concannon opened the floor for questions, comments and discussions from the NEAC attendees and the public. Several members of the NEAC and members of the public asked questions and provided comments.

Co-Chair Concannon then stated the NEAC would go into their business meeting.

Co-Chair Concannon announced that anytime there is any communication between Northeast Utilities and Sargent & Lundy the NRC monitors it and the NEAC has the right to be included.

Discussion was held about the part the NEAC would take towards the participation of the Independent Third Party Oversight Program (ITPOP). It was decided it would be best just to be observers/judge the process and not to be a part of the group.

Discussion was held on three letters written by NEAC to the following receivers: A motion was made to accept the letter to Dr. Shirley Jackson regarding the ICAVP, it was seconded and accepted; A second motion was made to accept the letter written to the congressional delegates regarding having hearings be held inside southeastern Connecticut, it was seconded and accepted with an addition to when the meeting(s) could be held. A motion was made to accept the letter regarding the support of the High Level Nuclear Waste Bill #S104 to be sent to both Senator Dodd & Senator Liebermann. The motion was made, seconded and accepted with one vote opposed.

The NEAC attendees decided the next NEAC meeting will be held on May 15, 1997 first in the Waterford EOC at 6:30 p.m. and then at 7:30 p.m. at the Waterford Town Hall, Waterford, Connecticut.

Co-Chair Concannon made the motion to adjourn the meeting, this was seconded and accepted and the meeting adjourned at 11:55 p.m.

NEAC Meeting
Waterford EOC, Waterford CT
Waterford Town Hall, Waterford CT
May 15, 1997

Attendees:

Representative Terry Concannon, Co-Chair
Mr. Evan Woollacott, Co-Chair
Mr. Lawrence Brocket
Mr. Trevor Davis
Mr. Jelle Z. DeBoer
Mr. Denny Galloway, representing the Commissioner of the Department of Environmental Protection, Sidney Holbrook
Mr. John Helm, Sr.
Mr. Mark Holloway
Mr. John Markowicz
Mr. William (Bill) Sheehan
Mr. Frank D. Rothen

Waterford EOC:
The NEAC members attended a tour of the Waterford EOC Community Center at 6:00 p.m. The Waterford Emergency Operations Personnel gave a presentation to the attendees. This presentation was a general response sequence of events that would occur during a nuclear emergency or drill.

NEAC Meeting:
Co-Chair Woollacott of the NEAC called the meeting to order at approximately 7:15 p.m. on May 15, 1997, in the Waterford Town Hall, Waterford, Connecticut.

Co-Chair Woollacott moved the acceptance of the NEAC Minutes of the April 17, 1997 meeting. The motion was seconded and accepted.

Co-Chair Woollacott then asked if there were any questions for the emergency personnel regarding the tour of the Emergency Operations Center. There was no response at that time from the NEAC attendees. He then thanked the Waterford Emergency Operations Personnel for the presentation they gave earlier that evening.

Co-Chair Woollacott requested for the members to review a letter from Dr. Shirley Jackson, dated April 10, 1997 to the attention of Representative Terry Concannon and Mr. Evan Woollacott.

Co-Chair Concannon explained to the council members Northeast Utilities has asked them if a member of the NEAC would like to be apart of the Millstone Nuclear Advisory Committee. Mr. Sheehan announced that Northeast Utilities had invited him informally to be apart of this committee. He stated he had not given Northeast Utilities an answer because he wanted to discuss it with the NEAC members. The NEAC stated they would learn more about this committee later that evening from Mr. Bruce Kenyon before they made any decisions. Mr. Holloway asked how the role of the Millstone Nuclear Advisory Committee would differ than the normal NEAC role.

Mr. Bruce Kenyon, President and Chief Executive Officer of Northeast Nuclear Energy Committee started his presentation by explaining he was planning to give a brief update on Millstone activities. He explained the purpose of the Millstone Nuclear Advisory Committee is to have a group that is diverse in background. An example would be to have representation of the community and some with nuclear expertise. The committee would consist roughly about a dozen individuals by invitation. He then explained that the group would meet perhaps initially twice a month, typically at the Millstone location. What Northeast Utilities would endeavor to do is work with the committee and have that committee prioritize a listing of issues that they would like to get into on an in-depth basis. Examples such as training, emergency planning or how NU is conducting it's engineering reviews. The meeting would involve typically an investment of several hours. The committee would take the issues individually and go through them in-depth. Mr. Kenyon explained Northeast Utilities would want the committee to be an interactive group, a very questioning group and a group that would examine all pertinent issues in depth. He explained they are in the process in forming the group.

Mr. Markowicz questioned at what time the meetings will be. Mr. Kenyon explained the meetings will be taking place normally during the daytime, unless the group chooses otherwise. Mr. Markowicz, Mr. Sheehan, Mr. Helm and Mr. Holloway expressed interest in participating in the committee depending on the time the meetings will be scheduled.

Mr. DeBoer asked if Haddam should not also have a committee similar to the Millstone committee, having a dialog discussing the decommissioning issues. Mr. Kenyon explained they do have a Citizens Advisory Committee for the Haddam Neck Plant on the issues of decommissioning and it has conducted its first meeting. The framework of this committee is slightly different in that all the Haddam Neck decommissioning meetings are public and the structure is a little different but the purpose is very similar.

Mr. Davis requested that the NEAC be informed, maybe have the agenda sent to them, so members could attend if time permitted.

Mr. Kenyon expressed his appreciation to Mr. Helm and Mr. Markowicz who have devoted and are devoting considerable time in attending all the meetings pertaining to Millstone and CT Yankee.

Mr. Kenyon then gave a brief update on the status of Millstone activities. He stated there has been a lot of information in the newspapers, they have had regular open meetings with the NRC, and a public meeting this week dealing with a variety of issues. He reminded the attendees that this past December Northeast Utilities indicated what their restart strategies and schedules would be. The expectations that were communicated were that one unit would be ready to restart in the third quarter, one unit would be ready to restart in the fourth quarter and one unit would be ready to restart in the first quarter (98). Northeast Utilities is still working to that basic, high level expectation. He stated they have a very committed leadership team that is fully knowledgeable of high standards, industry best practices, how to solve problems and NU is there today, like they were back in December, saying they know what needs to be done and they are part way through the process. They have modified the three units in parallel strategy slightly and they designated Unit 3 as the lead unit. He then explained the logic to how they came to that modified work plan. He also stated, May 27 is the scheduled date for them to begin the ICAVP. Which means that half of the safety and risk significant systems will be passed on to the ICAVP contractor for evaluation. He explained in order for that to take place several things have to happen. One is that Unit 3, which involves many engineering contractors who are doing the evaluation, needs to complete their work by May 18. They believe they will do so. In addition to that, there are individuals on Unit 2, who are looking hard at Unit 3's preparation and thus the Unit 2 individuals will make an independent judgement for him as to whether Unit 3 has properly met the standards. In addition, their oversight organization is evaluating this work and thus oversight will render a judgement to him that the work has been completed.

Mr. Holloway asked with Unit 3 being slated for restart in the 3rd quarter and Unit 2 sometime in the 4th quarter and the Commission voting on the 19th of December would there be any possibility that they would ask the Commission to vote on both plants for restart. Mr. Kenyon stated it was possible, but he did not think was reasonable. He did not think they could ask because in order for the Commission to vote there has to be two fundamental things have to happen. One is Northeast Utilities has to make a convincing presentation to the NRC as the responsible organization for plant operations and safety. The second thing that has to happen is the Northeast Utilities Millstone staff has to do its work and evaluate all of its inspection reports. Mr. Kenyon explained they have to come forward with a recommendation that they believe that the plant is ready to restart.

Co-Chair Concannon then opened the floor to the public for questions and comments. Several members of the public asked questions and provided comments.

Co-Chair Concannon then stated the NEAC would go into their business meeting.

Co-Chair Concannon requested approval to send the letter responding to Dr. Shirley Jackson, dated May 16, 1997 from herself. Mr. Markowicz moved to send the letter, it was seconded by Mr. Sheehan and Mr. Rothen and accepted by the NEAC.

Co-Chair Concannon announced she did get word on May 15, 1997 from the NRC that they are

planning to start the CAVP interview process in Redding, PA on May 27 at 10:00 a.m. That will entail the interviews with Parsons personnel. She asked if any member(s) would like to attend as an observer. She also reported that it looked like the NEAC would receive $15,000 dollars annually starting July 1, 1997.

The following subcommittee's reported on their activities:

- The study of alternative energy conservation - Mr. Jelle Z. DeBoer, Mr. John Helm, Sr. & Mr. John Markowicz

Mr. Helm explained he has requested information from some people and it is forthcoming. He also explained he will be asking Mr. Markowicz to look at some of his work in the near future.

- Restructuring (deregulation) of the electric power industry (particularly as it affects nuclear power plant operations and safety) - Mr. Frank Rothen, Mr. Evan Woollacott

Mr. Woollacott discussed the role of nuclear generation in the restructuring area. He stated he did send a letter out to some members and talked to two other individuals and requested them to have a meeting for some discussion and brainstorming. He then asked permission and for a motion from the NEAC to add two people to this subcommittee, a gentleman whom the Vice President of United Illuminating and Mr. Roger Cults, who works with deregulation. Mr. Sheehan moved to add these two people, seconded by Mr. Rothen and accepted.

Mr. DeBoer suggested to the NEAC to make a subcommittee to research the decommissioning issue. Mr. Trevor Davis and Mr. Lawrence Brocket stated they would like to be apart of this subcommittee also. Mr. Sheehan moved to create this subcommittee, it was seconded by Mr. Holloway, and motion carried.

- Monitor NU's restart program for Millstone, including addressing the "punch list"; Monitor the CAVP; Monitor the response of NU and the NRC to concerns raised by current and former employees including the actions taken by the third party oversight organization - Mr. Mark Holloway, Mr. Butch Rowley, Mr. Bill Sheehan

Mr. Sheehan explained to the attendees he is now in the process in signing the appropriate paperwork so he can obtain unrestricted access to the Millstone. He explained he will be taking an exam in the near future.

Co-Chair Concannon explained that Mr. Steve Percy has resigned from the NEAC. It was decided a letter of regret and appreciation to Mr. Percy from the council would be written. The council then discussed prospective new memberships.

It was decided the next NEAC meeting will be held on June 19, 1997 at 7:00 p.m. in the Waterford Town Hall, Waterford, Connecticut.

Co-Chair Concannon made the motion to adjourn the meeting, this was seconded and accepted and the meeting adjourned at 12:00 a.m.

Nuclear Energy Advisory Council Meeting
Waterford Town Hall, Waterford CT
June 19, 1997

Attendees:

Representative Terry Concannon, Co-Chair
Mr. Evan Woollacott, Co-Chair
Mr. Lawrence Brockett
Mr. Trevor Davis
Mr. Jelle Z. DeBoer
Mr. V. Dwayne Gardner, representing the Commissioner of the Department of Environmental Protection, Mr. Sidney Holbrook
Mr. John Helm, Sr.
Mr. Mark Holloway
Mr. Robert Klancko
Mr. John Markowicz
Mr. Frank Rothen
Mr. Richard Rowley
Mr. William (Bill) Sheehan

Co-Chair Terry Concannon of the Nuclear Energy Advisory Council (NEAC) called the meeting to order at approximately 7:15 p.m. on June 19, 1997 in the Waterford Connecticut Town Hall.

Co-Chair Concannon introduced and welcomed a new member of the NEAC, Mr. Robert J. Klancko. She stated he had been appointed by the Speaker of the State House to take the place of Mr. Steve Percy who recently resigned. She then explained Mr. Klancko has a background in nuclear engineering, is currently running a consultant firm, and is serving a third term as a member of the State Emergency Response Commission (SERC).

Co-Chair Concannon then stated that another council member will be resigning soon and that she expects to have a replacement chosen by the next meeting. Co-Chair Concannon also stated she received a thank you letter from the Citizen's Regulatory Commission (CRC) Emergency Planning Subcommittee for allowing them to make their presentation at the April 1997 meeting.

Co-Chair Concannon then moved for the acceptance of the NEAC Minutes of the May 15 meeting. Mr. Klancko abstained due to his new membership. The motion was seconded by Mr. Sheehan and accepted.

Mr. Mark Holloway next read a message he had sent to Ms. Susan Baranski, Nuclear Communications Officer of Northeast Utilities (NU). The following is a transcription of that message:

> "Recently I viewed a videotape from the May 13 NU community meeting. At one point during a discussion concerning public attendance at NU staff meetings, an individual whom I presume is an NU employee, said that I had been invited to attend an NU staff meeting but they had not received a reply from me. This is not quite accurate. The invitation that I recall that Bruce extended to NEAC and the public in general was an open one with no specifics involved. Several other NEAC members have attended meetings after following up on Bruce's invite. I have never been individually invited to attend any particular meeting, and as such, no reply from me was required. (It would be somewhat difficult for me to attend these meetings anyway, as my current position requires my presence in Newport, RI during normal business hours)"

Co-Chair Concannon then introduced Mr. Kenneth Kostal, Executive Vice President of Sargent & Lundy (S&L) from Chicago, IL. Mr. Kostal was invited to this meeting to present information so attendees would have the opportunity to learn more about the company and the process they are involved in at the Millstone plant. Mr. Kostal began his presentation by explaining he has been with S&L for thirty years. He then discussed the company's history, organization, size and business philosophy. He also made not of the fact that S&L exclusively deals with energy-related activities.

Mr. Markowicz then asked Mr. Kostal the status of the communications plan between Parsons [another firm participating in the Independent Corrective Actions Verification Program (ICAVP) at the Millstone Station] and S & L. Mr. Markowicz explained he had previously heard there was some dialog in progress to provide commonality between the companies so that whatever S&L decisions were made would be provided Parsons and vice versa. Mr. Don K. Schopfer, Vice President of S&L explained the communications protocol will be issued next week with the provided audit plan. The audit plan is being revised as a result of a number of discussions with the NRC concerning system boundaries. Mr. Markowicz next asked about a discussion regarding an overlap between the Tier III system review S&L was scheduled to perform and the Tier III review that Parsons would be conducting. Mr. Schopfer stated there has not been a discussion with the NRC yet about changing their current approach on Tier III. Mr. Gene Imbro of the Nuclear Regulatory Commission (NRC) and current Deputy Director of the ICAVP stated since S&L did some work with the initial design they have been excluded with doing a portion of the review on Unit 3 and that is where Parsons would be utilized.

Mr. Markowicz then asked about the current status of the Deficiency Reports (DRs) process. Mr. Schopfer explained the review process started on May 27, 1997. He explained part of the process is identifying system boundaries and as such they have been requesting necessary information from NU. To date, no DRs have been written.

Mr. Imbro then stated there was an NRC public meeting with NU on the morning of June 19 to communicate criteria and guidance on how to define system boundaries. The NRC explained to NU that the system boundaries as defined by the NRC them go beyond the system boundaries identified by NU. It was also announced that the presentation material, ICAVP information and public documents used in the ICAVP process will be available on the S & L Website at <http:www.slchicago.com/mp-icavp>.

Co-Chair Concannon next asked at what point will the NRC go back to evaluate and determine that NU has completed all items earmarked by "place cards." Mr. Imbro explained the NRC will create a "punch list" of all these items and what must be accomplished by NU in order to "clear them." He then explained the timing of this evaluation will necessarily depend on the completion of the Wave II and Wave III systems by NU.

Mr. Woollacott asked Mr. Kostal if S & L have a schedule as to when they are going to get these things done. He also asked for further clarification with regards to DRs. He asked what S&L's role was relative to the DRs and when does S&L have to refer the DR to the NRC. Mr. Kostal explained the current schedule takes them to about November of this year at which time the report to the NRC should be completed. But, he explained, the schedule will probably be expanded. Mr. Kostal then explained Sargent & Lundy's role for DRs is to write one for anything discovered that does not "match" licensing documentation. From that point, a standard procedure is in place to determine the next step(s) in the process.

This concluded the S & L presentation portion of the meeting.

Mr. Holloway then read a portion of Dr. Shirley Jackson's (Chairman, NRC) speech at the Waterford Town Hall on August 6, 1996. Emphasis was placed on Dr. Jackson's comments regarding the intent and process of the ICAVP and whether or not that intent was currently being met.

Co-Chair Concannon then opened the floor to the public for questions and comments. Several members of the public asked questions and provided comments.

Co-Chair Concannon thanked Sargent & Lundy attendees for their presentation.

Co-Chair Concannon then stated the NEAC would go into it's business meeting.

Co-Chair Concannon stated Mr. Klancko is planning to attend a workshop for teachers entitled, *Decommissioning a Nuclear Power Plant*, to be held on July 23, 1997 in Haddam Neck between 8:30 am and 2:30 pm. She suggested a member of the decommissioning subcommittee would also like to attend this workshop.

Co-Chair Concannon announced the NEAC had written to all members of the Connecticut congressional delegation. The NEAC has heard back form from Senator Joseph Lieberman and

Senator Christopher Dodd. She stated Mark Holloway and herself met with Senator Lieberman on June 16, 1997 in Hartford. She reported they discussed several issues including concern with the decommissioning of the State's nuclear power plants. Co-Chair Concannon and Mr. Holloway explained at this meeting they felt it was important for their delegation in Washington to develop a policy to assist the people of Connecticut during the upcoming decommissioning of the Connecticut Yankee Plant and the delegation needs to become more involved. They are planning to have another meeting in Waterford in August although the specific date has not been set yet. Mr. Holloway stated they also discussed the NRC's record as a regulator in light of the Lieberman-sponsored Government Accounting Office (GAO) report and the difficulty the Utility is also having upholding their responsibilities.

It was then decided the NEAC should have an approximately 15-minute update report at the beginning of each future NEAC monthly meeting so that the members of the public in attendance have a sense of what the Council is accomplishing between meetings.

Co-Chair Concannon next requested NEAC members to begin (as of July 1) keeping track of their mileage to the meetings they in order to begin receiving reimbursement since some members must travel a relatively long distance to attend these meetings and all members are considered volunteers.

It was announced the next NEAC meeting will be held on July 17, 1997 at 7:00 p.m. in the Waterford, Connecticut Town Hall. Co-Chair Concannon requested NEAC members to write down their anticipated questions at this meeting and then fax the questions to Co-Chair Woollacott.

It was decided a conference call would be made by Co-Chairs Concannon and Woollacott to the NRC. The conference call will be to request that the presentation the NRC will give to the NEAC at the July meeting will be more clear, more position-oriented, and better able to convey a sense of confidence in the public attending that the NRC, NEAC, and NU are all working towards a safe restart of the Millstone plants.

Co-Chair Concannon stated that another portion of the July NEAC meeting will be devoted to the selection of two additional systems for ICAVP Review. She has asked Representative Andrea Stillman to select one (if not two) of the systems. It was then decided this would be the first item on the agenda.

Co-Chair Concannon made the motion to adjourn the meeting, this was seconded and accepted and the meeting adjourned at 11:45 p.m.

Nuclear Energy Advisory Council (NEAC) Meeting
Waterford Town Hall, Waterford CT
July 17, 1997

Attendees:

Mr. Evan Woollacott, Co-Chair
Mr. Trevor Davis
Mr. John Helm, Sr.
Mr. Mark Holloway
Mr. Robert Klancko
Mr. John Markowicz
Mr. Kevin McCarthy, representing the Commissioner of the Department of Environmental Protection, Mr. Sidney Holbrook
Mr. Frank Rothen
Mr. Bill Sheehan

Co-Chair Woollacott of the Nuclear Energy Advisory Council (NEAC) called the meeting to order at approximately 7:15 p.m. on July 17, 1997 in the Waterford Town Hall, Waterford, Connecticut.

Mr. Rothen excused himself from the NEAC meeting being held that evening, July 17, 1997. He did this to avoid any conflict that could arise due to him being a Northeast Utilities employee with the selection of systems process on that evenings agenda.

Co-Chair Woollacott requested Mr. Markowicz give a report to the council for the subcommittee that was appointed at the last NEAC meeting. Mr. Markowicz started the report by explaining the subcommittee members consisted of Mr. Markowicz, Mr. Helm and Mr. Sheehan. The subcommittee was directed to meet as a group and provide a recommendation to the NEAC of the systems that would be selected, at random (out of a hat) of the remaining systems that have not been chosen by the Nuclear Regulatory Commission (NRC) for the Corrective Action Verification Program (CAVP) by Sargent & Lundy. Mr. Markowicz explained the approaches the subcommittee took and how they examined the systems that had not been selected yet for random selection. He described the material that was handed out to the attendees written by Sargent & Lundy, Northeast Utilities, Millstone Unit 3 - ICAVP Audit Plan, Revision 3 (Attachment 1). He requested the attendees draw their attention to Section 4.1 - Defining System Boundaries, I&C Interfaces & Electrical Interfaces. He explained the subcommittee felt confident by picking the mechanical systems they obtained a representative sample of the electrical and I&C interface compounds. Mr. Markowicz then explained the subcommittee tried to look at the systems that were risk & safety significant. They were provided with a listing of applicable systems by waves and then a matrix of the systems, their numbers and whether they were safety related, risk significant, if they covered by 50.54 and in what wave did they occur. He explained in the randomness selection the subcommittee would include Wave One, Wave Two and Wave Three systems and they would also in so far as practical try to include as many safety related and risk significant systems as possible. The subcommittee had some dialog with the NRC and NU and were able to consolidate the systems into groups. Mr. Markowicz then explained that within the sealed envelope there were nine major systems, all mechanical, and that nine systems are comprised of twenty-two subsystems. In Wave One, there are nine subsystems, all safety and risk significant. In Wave Two, there are six subsystems, all safety and risk significant and there are seven Wave Three subsystems, all of which are safety significant but not risk significant. The subcommittee did not include structures in the selection. They instead, decided to look at penetrations of the structures.

The NEAC then requested Melodie Peters, State Senator to come up and pick a system out of a hat. The selection was then read as follows:

Auxiliary Building, Heating Ventilation and Air Conditioning (HVAC)- 3314A and
Supplemental Leak Collection and Release System - 33141

The NEAC then requested Andrea Stillman, State Representative to come up and pick another system out of a hat. The selection was then read as follows:

Emergency Diesel Generator (EDG)
EDG Room Ventilation - 3314H
EDG Engine - 3346A
EDG Fuel Oil - 3346B
EDG Generator - 3346A
EDG Lube Oil - 3346A
EDG Starting Air - 3346A
Engineered Safeguards Actuation System Diesel Sequencer - 3405
Station Electrical Service - 4160 - Volts 3343
Electrical and Control Systems

Co-Chair Woollacott then moved for the acceptance of the NEAC Minutes of the June 19, 1997 meeting. The motion was seconded and accepted.

The following subcommittee reports were given:

Mr. Holloway explained he was asked at the June 19, 1997 NEAC meeting to be the point of contact with Senator Lieberman's office. He explained on July 14 he spoke to Ms. Cynthia Lemeck of Senator Lieberman's office on two matters dealing with nuclear issues. Senator Lieberman's office is trying to arrange a mutually agreeable date with Senator Dodd and Congressman Gejdeson to attend a public meeting on Connecticut's nuclear issues. Ms. Lemeck stated she would contact and update him in the near future. The second issue was regarding the recent GAO report and he explained Ms. Lemeck mentioned that one congressional hearing has been promised concerning the GAO report on NRC activities. The dates of this GAO hearing on the NRC report was yet to be determined. Mr. Markowicz stated he will also be following up with that item.

Mr. Holloway explained he was also asked to be the point of contact with the CRC Evacuation Subcommittee. He explained on June 24 he attended a meeting with the CRC Evacuation Subcommittee and emergency planning officials from East Lyme, New London and Waterford. The CRC Evacuation Subcommittee's suggestions and recommendations previously presented at the April 17, 1997 NEAC meeting were discussed with regard to determining applicable agency implementation responsibility.

Mr. Holloway reported for the Restart Subcommittee. On July 1, 1997 he attended a NRC Millstone restart briefing at the Waterford Community Center. He explained the NRC spoke about the CAVP and the restart process.

Mr. Helm gave a brief report about the activities of the Energy Alternative subcommittee. He stated he would be putting together a package of information and making it available to the other subcommittee members.

Mr. Sheehan reported he has attended the Millstone Advisory Council meetings. He also reported he

has taken the testing to receive badging at the Millstone plant.

Mr. Davis reported for the Community Decommissioning Advisory Committee for CY Subcommittee. He stated he attended their last meeting on June 30, 1997. He also stated Mr. DeBoer is having a graduate student review the Yankee Row decommissioning issues.

Co-Chair Woollacott reported Rep. Concannon and he are planning to attend and monitor the meeting between the NRC and Sargent & Lundy in Chicago on August 8, 1997. He also reported the nuclear plant subcommittee had a meeting and discussed they should look at the role of nuclear power in New England. The subcommittee is looking at the likely effects of restructuring on the safety and the operations of nuclear plants.

Co-Chair Woollacott then introduced Mr. William Travers, Director of NRC's Special Projects Office. He explained this office is a temporary organization that is for to specifically focusing on the issues at Millstone. Mr. Travers explained they will not be addressing issues regarding Haddam Neck and he proposed to get the NEAC written responses to their questions concerning Conn. Yankee. He then introduced Mr. Wayne Lanning, NRC, who gave the following presentation:

Questions:

1. Clarify the startup criteria and audits needed before making a recommendation to the Commission to restart any reactor.
2. Please describe in detail the NRC requirements and procedures associated with the Millstone Restart Assessment Plan.

Response:

- Restart Assessment Plan
- NRC Manual Chapter 0350, "Staff Guidelines for Restart Approval"
- 10 CFR 50.54(f) Demand for Information Letters
- NRC orders for third party oversight for employee concerns and Independent Corrective Action Verification Program

NRC Manual Chapter, "Staff Guidelines for Restart Approval"

- Establishes Guidelines for approving restart after shutdown Because of hardware or management issues.
- Provides a basis for Developing restart Assessment Plan.
- Provides a record of Regulatory Actions leading to Restart.
- Provides a Record of Regulatory Actions leading to Restart.

10 CFR 50.54(f) - Demand for Information Letters

Affirm actions taken to ensure future operations will be in accordance with the operating license, regulations and Updated final Safety Analysis Report.

NRC Orders

- August 14, 1996 - Required Independent Corrective Action Verification Program and Third Party Oversight.
- October 24, 1996 - Required Employee Concerns Program and Third Party Oversight

Restart Assessment Plan

- Systematic Approach for Restart Recommendation
  - Defines NRC Management responsibilities
  - Unites NRC Approach
  - Checklist for Staff Activities
  - Inspection Planning and Resource Allocation
- Initial Version Issued September 12, 1996

- Living Document (12/96, 3/97, 7/97)
- Public Input

Major Issues

1. Root Causes
   - Management Skills
   - Leadership
   - Standards
2. Programmatic Issues
   - Corrective Action Program
   - Work Planning and Control
   - Procedure Adherence/Quality
   - Employee Concerns
   - Staff Training
   - Configuration Management Program
3. Equipment Performance
   - Restart/Deferred Equipment Lists
   - Significant Items List

Question:

- What progress has the NRC made in auditing the items on the NU unit 2 and 3 significant items for restart listing? Is this done on a sampling basis? Please explain.

Response:

- Inspection underway this week to review screening criteria and audit the Unit 3 listing.
- Review list of deferred items and select any questionable issues for more detailed examination.
- Sample the completed startup list during future inspections.

Questions:

- What has the NRC audit of this listing revealed concerning the type of NU action which results in the items being listed as closed? Specifically, does the NRC view the action taken by NU as being adequate to ensure the "closed" status is a proper classification?
- What has the NRC audit of the items which appear on the deferred section of the NU Unit 2 and Unit 3 significant items for restart listing reveal? Does the NRC view the "deferred" status as a proper classification for these items?

Response:

- The inspections are not complete at this time.

Major Issues (continued)

4. Self Assessment
   - Nuclear Oversight Effectiveness
   - Management Involvement
   - Staff Assessment
5. Enforcement
   - Significant Enforcement Pending
   - Corrective Actions Implemented Before Restart
6. Licensing
   - Demand for Information Letters
   - License Amendments
   - 2.206 Petitions
   - UFSAR
7. Operational Readiness
   - Emergency Preparedness

- Resident Inspector Assessment
- Operational Safety Team Inspection

Questions:

Please describe and discuss in detail the NRC requirements and procedures associated with any future Operational Safety Team Inspection (OSTI) at Millstone.

Response:

- Inspection Procedure 93802, "Operations Safety Tam Inspection (OSTI)

- Evaluate the readiness of plant hardware, staff and management programs to support a safe plant restart and continued operation of the Millstone units.

Inspection Resource and Scheduling

- Team Leader Jim Trapp, Senior Reactor Analyst
- Assistant team leader
- About 10 Inspectors
- Onsite Inspections in October for Unit 3; January for Unit 2
- Exit Meetings Open for Public Observation

OSTI Scope

- Operations
- Maintenance
- Surveillance
- Technical Support
- Nuclear Oversight and Management Involvement
- NC 0350 Items

Operations - Examples:

- Control of plant operating conditions, tests, and surveillances
- Operator professionalism
- Response to alarms
- Safety systems walkdowns
- Control of jumpers, lifted leads, and other temporary modifications
- Control of safety system tag outs
- Compliance with TS limits and LCOs

Maintenance - Examples:

- Corrective and preventive maintenance are properly planned, controlled and performed.
- Proper documentation of the maintenance performed.
- Backlog of corrective and preventive maintenance.
- Trending of corrective maintenance history.
- Appropriate post-maintenance testing

Surveillance - Examples:

- Observe surveillance tests performed by mechanical, electrical, and instrumentation and control maintenance groups
- Use of current and approval procedures
- Test procedures are adequate
- Test results meet acceptance criteria

Technical Support - Examples:

- Effectiveness of operations, maintenance, I&C, and systems engineers in supporting safe operation of the plant.
- Technical issue resolution
- Proper control over plant configuration
- 10 CFR 50.59 safety evaluations

- Operating/industry experience

Nuclear Oversight and Management Involvement - Examples:

- Management's involvement and effectiveness
- Communications effectiveness
- Worker understanding of management directives, policies, and goals
- Plant restart self-assessment
- Effectiveness of licensee programs (e.g., procedures upgrade, corrective action).
- Performance of and adequacy of QC inspections

Question:

Describe the day in the life of a resident inspector. What does the inspector do, and what reports are required to be made, and to whom?

Response:

Ensure the facility is being operated safely and in conformance with license and regulatory requirements

- Implement resident core inspection program.
- Tour control room: Talk to licensed operators, walk down control panels - observe instrumentation readings, valve alignments and examine status of control room annunciators. Verify proper staffing.
- Attend management morning meeting.
- Tour facility spaces: monitor ongoing work activities; assess management and oversight involvement, and perform in-depth system walk downs.
- Observe security program activities.
- Monitor non-routine plant evolutions and emergency preparedness drills.
- Review licensee temporary modifications.
- Attend various plant briefings, Plant Operating review Committee meetings, oversight exits and licensee self assessment meetings.
- Monitor activities of visiting NRC inspectors.
- Daily conference with regional management.
- Document inspection findings for monthly integrated inspection report for Branch Chief review.
- Receive and follow-up of licensee allegations.
- Read licensee and third party self-assessments. Ensure the utility is taking prompt and effective correction actions for safety concerns.
- Respond to headquarters and regional requests for information.
- Provide prompt on-site response to events.

Questions and comments from the NEAC attendees followed Mr. Lanning's presentation.

Mr. Gene Imbro, NRC made the following presentation:

ICAVP Purpose:

To verify the adequacy of NNECO's efforts to establish adequate design bases and design controls including:

- Translation of Design Bases into Operating, Maintenance, Testing and Surveillance Procedures
- Review of Current Plant Configuration for Conformance with Design and Licensing Bases
  - Unmodified Original Design
  - Currently installed Modifications

- Verification of System Performance
- Review of Corrective Actions for Identified Deficiencies

ICAVP Structure:

Tier I - Verify System meets Licensing/Design Bases and System Functionality

Multi-Discipline review of 4 Systems (As A Minimum)

- Including the Following Disciplines:
  - Mechanical
  - Electrical Power
  - Instrumentation and Control
  - Piping and Pipe Supports
  - Operations
- Electrical Distribution System Review to Support System Functionality (Represents 6 of the 88 Systems)
  - Complete review to the Component Circuit Breaker for Selected System
  - Review of Electrical Load Path Through All Voltage Levels to the Emergency Diesel Generator Electrical Bus (4160 Volts) including:
    - Transformers, Feeder cables, Switchgear, Motor Control Centers & Circuit Breaker Coordination
  - Review of System Interface Requirements
    - Approximately 38 Systems Interface with the 3 NRC Selected Systems
  - Instrumentation and Control System review to Support System Functionality for the 3 Selected Systems (Represents Approximately 5 of the 88 Systems) including:
    - Main Control Boards
    - Emergency Safety Features Actuation
    - Annunciator System
    - Westinghouse 7300 Racks
    - Sequenced Safeguards Signal

The I&C review Will Encompass the Signal Flow Path from the Process Variable Sensor to Control Contacts of the Actuated Component in the Selected System.

Tier 2 - Verify that system design parameters relied on the mitigate the consequences of postulated accidents analyzed in the FSAR are consistent with the performance of the current system configuration.

Critical Performance Characteristics of Approximately 22 Systems Will Be Reviewed For Unit 3

System Include:

- Auxiliary Building Ventilation
- Emergency Core Cooling Systems
- Main Steam and Main Feedwater
- Nuclear Instrumentation
- Spent Fuel Pool Cooling
- Containment Structure

Performance Characteristics Include:

- Safety Injection System Flowrate To The reactor Core
- Containment Isolation Valve Open/Close Time

- Time for Safety Injection Flow to reach Reactor
- Available Capacity of the Refueling Water Storage Tank

Tier 3 - Verify that configuration control processes (other than the design control process reviewed in Tier 1) have not introduced changes that have put the unit in nonconformance with its licensing and design bases.

Processes Include:

- Procedure Control
- Drawing Control
- Vendor Manual Control
- Like-For-Like Component Replacement
- Repair of Piping Systems (ASME XI)
- Master Parts List Control

Historical review Back to Original Operating License on a Sample Basis From Among (All 88 Group 1 and Group 1 Systems)

ICAVP Acceptance Criteria:

Program Objectives: Confirm Licensee Determination that Safety and Risk Significant Systems Meet Licensing/Design Bases

ICAVP Negative Findings Categories:

Level 1 - System Does Not Meet Licensing/Design Bases and Cannot Perform its Intended Function

NRC Action: Would Likely Result in Selection of Additional System(s) for ICAVP Review

Level 2 - Single Train of Redundant System Does Not Meet Licensing/Design Bases and Cannot Perform its Intended Function

NRC Action: Would Likely result in Expansion of ICAVP Scope to Evaluate For Similar Nonconformance Issues in Other Systems

Level 3 - System Does Not Meet Licensing/Design Bases But Able to Perform its Intended Function

NRC Action: Could Result in Expansion of ICAVP Scope to Evaluate For Similar Nonconformance Issues in Other Systems

Level 4 - System Meets Licensing/Design Bases But Contains Minor Calculational Errors or Inconsistencies of an Editorial Nature

NRC Action: Multiple Examples Could Result in Expansion of ICAVP Scope to Evaluate For Similar Errors/Inconsistencies in Other Systems

Corrective Actions To Be Reviewed by the ICAVP Contractor Include

- Findings Identified by the NU CMP and Discrepancies Identified by the ICAVP Contractor on the NRC Selected Systems
- An NRC Selected Sample of Findings Identified by NU from the Remaining 88 Group 1 and 2 Systems

ICAVP Contractor to Verify

- Acceptability of the Corrective Action
- Implementation/Installation of the Corrective Action (Depending on NU schedule)

NRC to Verify

- Corrective Actions required to be Implemented Prior to Restart have been implemented
- Corrective Actions Deferred by NU till After Restart Are Appropriate to Defer
- Technical/Programmatic Adequacy of all Corrective Actions resulting from ICAVP Contractor Identified Deficiencies
- Technical/Programmatic Adequacy of Safety Significant Corrective Actions on a Sample

Bases

ICAVP Status

Unit 2

- NU announced ICAVP readiness on June 30, 1997
- NRC selected 2 systems for review by Parsons
    - High Pressure safety injection including refueling water storage tank
    - Auxiliary Feedwater including condensate storage tank

Unit 3

- NU announced readiness for ICAVP on May 27, 1997
- NRC selected 2 systems for review by Sargent & Lundy
    - Service Water
    - Quench Spray including recirculation spray system
- Sargent & Lundy has identified 5 discrepancies to date
    - Procedural/programmatic in nature
- NEAC to select 2 additional systems for the Unit 3 ICAVP from a list of systems provided by the NRC (Systems to be announced publicly on NU's completion of the Unit 3 CMP)

The NEAC attendees made comments, questions and had discussions with the NRC.

Mr. Philip McKee, Deputy Director for Licensing for the Special Projects Office, NRC then gave the following presentation:

Employee Safety Concerns Program Status - Background

- NRC issues order on licensee handling of employee safety concerns on October 24, 1996
- NNECO proposed Little Harbor Consultants (LHC) as the third-party oversight organization on January 14, 1997
- NNECO submitted comprehensive plan for addressing employee safety concerns on January 31, 1997
- LHC submits proposed oversight plan for NRC review and approval on May 2, 1997

Employee Safety Concerns Program Status - Ongoing Activities

- Holding periodic meetings with LHC and licensee on status of LHC efforts and licensee response to LHC findings
- Monitoring licensee's implementation of the comprehensive plan and LHC implementation of third-party oversight plan
- Developing metrics to assess licensee progress in addressing issues raised by employees
- Developing inspection plan for inspection of licensee Employee Safety Concern Program and processes for resolving employee identified issues.

Co-Chair Woollacott then opened the floor to the public for questions and comments. The following members of the public asked questions and provided comments.

Co-Chair Woollacott thanked the NRC attendees for their presentations.

Co-Chair Woollacott announced the next NEAC meeting will be on August 21, 1997, 7:00 p.m. in the Auditorium of the Waterford High School, Waterford, Connecticut.

Co-Chair Woollacott made the motion to adjourn the meeting, this was seconded and accepted and the meeting adjourned at 11:45 p.m.

Nuclear Energy Advisory Council (NEAC) Meeting
Waterford High School, Waterford CT
August 21, 1997

NOTE: Due to the acoustics on the evening of this meeting the audio tapes were unable to pick up the speakers without echoes. Because of this, the minutes of this meeting are brief and non-descriptive.

Attendees:

Rep. Terry Concannon, Co-Chair
Mr. Evan Woollacott, Co-Chair
Mr. Lawrence Brockett
Mr. Trevor Davis, Jr.
Senator John Fonfara
Mr. Denny Galloway, representing the Commissioner of the Department of Environmental Protection, Mr. Sidney Holbrook
Mr. John Helm, Sr.
Mr. Mark Holloway
Mr. Robert Klancko
Mr. John Markowicz
Mr. Frank Rothen
Mr. Bill Sheehan

Co-Chair Concannon of the Nuclear Energy Advisory Council (NEAC) called the meeting to order at approximately 7:15 p.m. on August 21, 1997 in the Waterford High School, Waterford, Connecticut.

Co-Chair Concannon moved for the acceptance of the NEAC Minutes of the July 17, 1997 meeting. Co-Chair Concannon requested Monica Faraci to change a sentence in the minutes stating the following:

> Mr. Rothen attended the first part of the NEAC meeting held that evening, July 17, 1997. He then excused himself for the remainder of the meeting before the systems selection process began in order to avoid any conflict that could arise due to his being a Northeast Utilities employee.

The motion was seconded by Mr. Sheehan and accepted.

Co-Chair Concannon announced there is a new member to the NEAC, Senator John Fonfara from Hartford, appointed by Senator Kevin Sullivan, President Pro-tem at the Senate. Senator Fonfara is currently the Chairman of Banks Committee and Vice Chair of Energy and Technology.

The NEAC attendees reported the following meetings they have attended since the last NEAC meeting.:

- July 22, 1997 - NRC/Northeast Utilities/Little Harbor associates (Attendees: Mr. Helm, Mr. Markowicz, Mr. Woollacott)
- July 30, 1997 - Northeast Utilities/Parsons/NRC (Attendees: Mr. Helm, Mr. Markowicz)
- August 12, 1997 - NRC/Sargent & Lundy/Parsons/Northeast Utilities (Attendees: Mr. Helm, Rep. Concannon, Mr. Woollacott, Mr. Markowicz)
- August 12, 1997 - NRC Public Meeting (Attendees: Mr. Holloway, Mr. Helm, Mr. Markowicz)
- Rep. Concannon and Mr. Woollacott have been monitoring the conference calls between Northeast Utilities, NRC, Parson's, Sargent & Lundy (August 19, 1997 was the most recent)

Mr. Markowicz recommended NEAC representation at the NRC meetings held in Rockville, MD and King of Prussia, PA. The council concurred.

Co-Chair Concannon then introduced Mr. Bruce Kenyon, President & CEO of Northeast Nuclear Energy Conpany. Mr. Kenyon addressed the following subjects:

- Reported Mr. Michael Morris is the new President, CEO and Chairman of Northeast Utilities. He will have his first day on the job on August 25, 1997.
- Millstone, Unit 1 exercise drill conducted August 21, 1997;
- August 6, 1997 meeting with the Nuclear Regulatory Commission (NRC) and Northeast Utilities. Northeast Utilities presented a briefing book (a new initiative) detailing site wide issues in a comprehensive manner.

Mr. Kenyon then introduced Mr. Mike Brothers, Unit Director - Millstone 3 Northeast Utilities who decribed the following subject:

- The safety conscious work environment

The NEAC attendees made comments, questions and had discussions with Northeast Utilities.

Co-Chair Concannon then opened the floor to the public for questions and comments. The following members of the public asked questions and provided comments:

Mr. Paul Blanch, West Hartford
Mr. Don Del Core, Uncasville

Co-Chair Concannon then stated the NEAC would go into it's business meeting.

The NEAC subcommittees each gave a brief description on their new business.

Co-Chair Concannon stated she would call Sargent & Lundy and look into receiving the information published on the website regarding the current status of the Deficiency Reports (DRs) process at a more timely manner.

Mr. Klancko recommended a seminar regarding decommissioning.

Mr. Holloway reported in writing that Mr. Robert Plant of the State, Office of Emergency Management (OEM) had responded by letter that a meeting with the CRC Evacuation Subcommittee was not possible in the near future. Any changes to the State's nuclear emergency planning have yet to be made.

Much discussion was held regarding the format for a meeting to be held with our Congressmen. A congressional hearing would not be approved by Washington. Consensus developed on a form of a town meeting. Since this would required planning time, it could not happen until 1998. A subcommittee was formed to work on this issue: Mr. Holloway, Mr. Klancko, Mr. Rothen and Mr. Markowicz.

The council directed the subcommittee consisting of Mr. Markowicz, Mr. Helm, and Mr. Sheehan to meet prior to the next council meeting and provide recommendations for the Millstone 2 systems to be selected using procedures adopted at the July NEAC meeting.

A discussion was held regarding looking at the possibility of stock piling Potassium Iodide .

The NEAC attendees made the decision the next NEAC meeting will be on September 18, 1997, 7:00 p.m. in the Auditorium of the Waterford Town Hall, Waterford, Connecticut. It was also discussed to have a tour of Millstone earlier that evening on September 18, 1997.

Co-Chair Concannon made the motion to adjourn the meeting, this was seconded and accepted and the meeting adjourned at 10:15 p.m.

Nuclear Energy Advisory Council (NEAC) Meeting
Waterford Town Hall, Waterford CT
September 18, 1997

Attendees:

Rep. Terry Concannon, Co-Chair
Mr. Lawrence Brockett
Mr. Jelle Z. DeBoer
Mr. John Helm, Sr.
Mr. Mark Holloway
Mr. Robert Klancko
Mr. John Markowicz
Mr. Kevin McCarthy, representing the Commissioner of the Department of Environmental Protection, Mr. Sidney Holbrook
Mr. Frank Rothen
Mr. Bill Sheehan

Co-Chair Concannon of the Nuclear Energy Advisory Council (NEAC) called the meeting to order at approximately 7:20 p.m. on September 18, 1997 in the Waterford Town Hall, Waterford, Connecticut.

Co-Chair Concannon reported some of the NEAC members attended a tour of the Millstone Nuclear Power Plant earlier on this evening. She explained the importance of this was to see what has happened since the NEAC last toured the facility in September, 1996. She reported the NEAC observed motor operated values and locations where the ICAVP requests for additional information was completed.

Co-Chair Concannon explained Co-Chair Woollacott was not able to attend this NEAC meeting because he was in Chicago, IL to observe a meeting with Sargent & Lundy, Northeast Utilities (NU) and the Nuclear Regulatory Commission (NRC).

Co-Chair Concannon reported Parsons Corporation is undertaking the ICAVP at Millstone II. Mr. Markowicz reported he visited Parsons Corp. at the end of May, 1997 and met the team of individuals working on the ICAVP at Millstone II. He then introduced Mr. Dan Curry, VP, Project Director, Parsons Corporation. Mr. Curry introduced his team and then gave the following presentation:

Parsons Corporation
- Founded 1944
- Over 10,000 Employees
- 100% Employee-Owned
- Revenues in Excess of $1.2 Billion
- Operates in 50 States and 80 Countries Worldwide
- More than 2,400 Clients and 8,000 Projects Worldwide

Parsons Power Group Inc.
- Headquarters in Reading, PA
- Over 1,000 employees
- Serving the power industry for over 100 years, providing full EPC services
- Market areas of specialization
    - Generation plants - Fossil, Nuclear, Advanced Technology and Hydro
    - Transmission, distribution and substations

- Operations and maintenance

Parsons ICAVP Team (Attachment 1)

Parsons PP-07.Discrepancy Report Process (Attachment 2)

Millstone Unit 2 ICAVP - Discrepancy Report Status (September 18, 1997):

- 62 Discrepancy Reports Initiated
- 47 Discrepancy Reports approved and issued to NNECo, Nuclear Regulatory Commission (NRC) and NEAC
- 47 Discrepancy Reports posted on WWW
- 9 NU responses received to date
- 9 NU responses posted on WWW
- 2 Discrepancies considered invalid, issued, posted and closed
- 3 Discrepancy Reports completed: NU response and Parsons review

Questions and comments from the NEAC and public attendees followed Mr. Curry's presentation.

Mr. Rothen excused himself from the NEAC meeting during the selection of systems being held that evening, September 18, 1997. He did this to avoid any conflict that could arise due to his being a Northeast Utilities employee.

Co-Chair Concannon requested Mr. Markowicz give a report to the council for the subcommittee that was appointed at the June, 1997, NEAC meeting. Mr. Markowicz started the report by explaining the subcommittee members consisted of Mr. Markowicz, Mr. Helm and Mr. Sheehan. The subcommittee was directed to meet as a group and provide a recommendation to the NEAC of the systems that would be randomly selected for the Corrective Action Verification Program (CAVP) review by Parsons. Mr. Markowicz explained the approaches the subcommittee took and how they examined the systems that had not yet been chosen for random selection. He explained the process they followed was to solicit information from NU relative to the waves in which the systems were allocated and also some descriptive information on the characteristics of the systems. They then received information from the NRC, about the systems which had not yet been selected for review, and how they were categorized into various system groupings. As a subcommittee they reviewed that information, asked some questions, received some clarifications and then put the systems into the categories that were recommended. As a result, seven categories of systems where produced. These include twenty systems that fall under the maintenance rule. Under the maintenance rule there are fourteen of those twenty systems that are both safety and risk significant and there are seven that are safety significant but not risk significant. He then explained the general categories that have been selected are as follows:

- Low Pressure Safety Injection
- Containment Heat Removal
- Emergency Diesel Generator and Support Systems
- Closed Cooling System for Reactor Related Heat Loads
- Radiological Release Control Systems
- Control on Air Conditioning and Safety Related Ventilation Systems
- DC Power Electrical Systems

Two safety and significant systems for the CAVP review by Parsons at Millstone II

The NEAC requested Ms Susan Perry Luxton, a CRC member from Waterford, to pick a system out of a hat. The selection was read as follows:

2314B - Containment/Enclosure Building Purge

2314G - Enclosure Building Filtration

2390C - Enclosure Building (Focus primarily upon the ability to control post-LOA radiological release

by maintaining a negative pressure)

The NEAC requested Tony Sheridan, First Selectman of Waterford to pick another system out of a hat. The selection was read as follows:

2346A - Emergency Diesel Generator

2346B - Emergency Diesel Generator Fuel Oil
2315E - Emergency Diesel Generator Room Ventilation
2343 - 4160 Volt AC and Fast Bus Transfer
2405 - Engineered Safeguards Features Actuation System (Emergency Diesel Generator Load Sequencer only)

Co-Chair Concannon moved for the acceptance of the NEAC Minutes of the August 21, 1997 meeting. The motion was seconded and accepted.

Co-Chair Concannon then made a brief statement regarding the release of a report on Tuesday, contracted by the DPUC and the response to the report by the executive body in Connecticut. She stated that the report has led to a lot of concern, worry and many telephone calls from citizens, about what they heard and saw in the press. She explained, first and foremost, she thought the message that must be got across as there is no risk to the health and safety of the public, at this time. The reason for this report was to determine the prudence of the CT Yankee operation. She explained this prudence factor is very important in determining who pays what during decommissioning. The DPUC received the report from Mr. Joosten on June 17, 1997 and that report had very little comment. Subsequently, NU responded to many of the concerns and Mr. Joosten also acquired more documents and spent more time looking into the issue. Consequently, his rebuttal was released on September 15, 1997, and on the 16th there was a press conference in Hartford, CT. She explained the purpose of this report was to enable the DPUC to go to court with a strong case to minimize the cost to the rate payer of decommissioning of CT Yankee. The amount of cost that was projected by NU is $427 million and that was the reason the DPUC got Mr. Joosten involved. She explained this report is not a scientific document and stated at this point in time it would be ill-advised to say the health and safety of the public is in jeopardy.

Co-Chair Concannon then introduced Mr. Ted Feiganbaum and Russ Mellor, Mr. William Ackilson, Deputy Regional Administrator (NRC), Bill Raymond, the Resident Inspector of Haddam Neck and John White, Branch Chief of Radiation Safety.

Mr. Holloway explained he was looking at the US NRC response to two questions NEAC presented prior to their July, 1997 meeting. He read the following two questions: What is the NRC position on the DPUC refile testimony on the CT Yankee docket 97-913-000? The testimony details the excessive radiological contamination of the Haddam Neck site as well as the inflated decommissioning cost estimates. Is the NRC currently considering issuing violations for the contamination? What is the status of the NRC investigation? Mr. Holloway stated he was not satisfied with their response and felt the response the NEAC received, did not adequately address the requests.

Co-Chair Concannon stated within Mr. Joosten's report he mentioned he met with a number of people at Haddam Neck and also met with members of the NRC who are currently investigating some of the same issues Mr. Holloway spoke about. She asked if the NRC would like to comment.

Mr. Ackilson, stated that over the past several months the NRC has been doing a number of things to understand the situation in Haddam Neck. Their primary focus is to ensure there is no threat to public health and safety or to the workers at the site. This includes doing surveys, taking measurements, reviewing records,

interviewing station personnel, observing facilities, equipment and reviewing/evaluating past practices. They have found nothing that poses a threat to public health and safety for the members of public and workers in the plant. They determined that many of the activities that have been reported were documented by CT Yankee, reviewed and followed-up by the NRC, and are matters of public record that have been documented in NRC inspection reports. He gave an example that some of the activities ranking the 1979 failed fuel problem, had been the subject of NRC sanctions. Continuing to examine the situation, any inadvertent contamination resulting from spills that the NRC is aware of have been remediated. He stated there has been no impact on public health and safety and none of the events that involve spills appear to have exceeded NRCs limits. However, looking back at some of the past practices raises questions about CT Yankees operating and radiological program so they are continuing their review including, the of the State of Connecticut report. He explained the NRC has very strict requirements that when a spill occurs the facility has to clean it up, stabilize it, document it and report it so it can be inspected. He explained that with regards to the prior question regarding site contamination, the NRC has increased attention on radiological controls at Haddam Neck. He did state that the inspection of the licensee's performance in November, 1996 in connection with activities that resulted in an unplanned radiologic exposure of two workers to high levels of airborne activity reveals substantial deficiencies in Connecticut Yankee's ability to effectively manage, control and monitor radiological work.

He then explained the question (#9) regarding Millstone is the same question the NRC is asking itself. He explained there are some differences between the plant's older design but they are going to look at lessons learned from their review as it relates to Haddam Neck and other plants as well.

Questions were asked from the NEAC attendees if there is any reason to believe that there are any radiological risks to the general public as a result of operations or activities at the Haddam Neck site. The Northeast Utilities and NRC attendees stated they are not aware of any radiological conditions offsite that are posing any undue risk to the public health and safety.

Mr. DeBoer asked if there has been, or will be, any samples taken below river/water level. Mr. McCarthy stated the State of Connecticut DEP has taken river/water samples, which includes sediment. The sediment is along the shore in most cases. He explained if there is any indication of radioactive material, the survey process would be expanded.

Kevin McCarthy reported on what actions the State of Connecticut DEP is taking. He described the exact areas where the DEP has taken water and sediment (sand) samples as follows: Hurd State Park, Haddam Island, Haddam Meadow State Park, Discharge Canal, Salem River mouth (boat launch area), Hadlyme Ferry Slip (easterly side), & Selden Cove. He explained these samples where taken to find out if there is a problem "right now." The DEP is continuing the Haddam Neck sampling program of other areas that could have been the recipients of materials during the history of the Haddam Neck Plant. The DEP is trying to determine where the recipients are and DEP is making an effort to first survey the soil waist high and on the ground. They are trying to determine if there is an immediate threat if one was to walk on the surface. They will then go back to those areas, go into that ground and take samples of the soil.

The NEAC attendees asked questions and made comments to the NRC and Northeast Utilities.

Co-Chair Concannon opened the floor to the public for questions and comments. The following members of the public spoke:

Ms. Susan Perry Luxton
Ms Rosemary Bassilakis
Mr. Donald Del Core, Sr. (see attached)

Mr. Paul Blanch
David Silk

Co-Chair Concannon then announced the NEAC will have their business meeting. Discussion between the NEAC was held regarding upcoming meetings being held in the next few weeks. Other discussions were held regarding what agendas should be made for the upcoming NEAC meetings. Co-Chair Concannon announced the next NEAC meeting will be on October 22, 1997, at 7:00 p.m., in the Haddam High School Auditorium, in Haddam, Connecticut.

Co-Chair Concannon made the motion to adjourn the meeting. This was seconded and accepted and the meeting adjourned at 11:45 p.m.

Nuclear Energy Advisory Council (NEAC) Meeting
Haddam-Killingworth High School
October 22, 1997

Rep. Terry Concannon, Co-Chair
Mr. Evan Woollacott
Mr. Lawrence Brockett
Mr. Jelle Z. DeBoer
Mr. Denny Galloway, representing the Commissioner of the Department of Environmental Protection, Mr. Arthur J. Rocque, Jr.
Mr. John Helm, Sr.
Mr. Mark Holloway
Mr. Robert Klancko
Mr. John Markowicz
Mr. Frank Rothen
Mr. Bill Sheehan

Co-Chair Concannon of the Nuclear Energy Advisory Council (NEAC) called the meeting to order at approximately 7:15 on October 22, 1997 in the Haddam-Killingworth High School, Higganum, Connecticut.

Co-Chair Concannon moved for the acceptance of the NEAC Minutes of the September 18, 1997 meeting. The motion was seconded and accepted with an abstention from Co-Chair Evan Woollacott.

The NEAC members reported their involvement in various activities in the past month. Co-Chair Woollacott reported he had attended a meeting in Chicago, IL to observe the review between Sargent & Lundy, Nuclear Regulatory Commission (NRC) and Northeast Utilities (NU) regarding the ICAVP on September 18, 1997. Co-Chair Concannon presented a proposal for a new format to the NEAC meetings. Comments and discussion was held between the NEAC members. Co-Chair Concannon moved for the acceptance of the proposal for a new format. The motion was seconded and accepted.

Co-Chair Concannon reported the first presentation would be given by Dr. Edward Wilds, Ph.D., Radiation Safety Manager from the University of Connecticut (UConn), Storrs, Connecticut. His presentation was on the "Fundamentals of Radiation".

Dr. Wilds started the presentation by explaining the various forms of radiation. He described and spoke about ionizing radiation: alpha, beta and gamma. He then described the specific effects ionizing radiation has on the human body.

Questions and comments from the NEAC and public attendees followed Dr. Wild's presentation.

Co-Chair Concannon reported the next presentation would be an updated site characterization report on Connecticut Yankee. She introduced Mr. Gary Bouchard, Unit Director of Operations at Connecticut Yankee, Mr. John Haseltiny, Engineering Director at Connecticut Yankee and Mr. Richard J. Sexton, Manager Health Physics at Connecticut Yankee.

Mr. Richard J. Sexton gave the following presentation:
- C.Y. Site Characterization Overview:
  - Purpose
  - Process
  - Methodology
  - Status
- Goal of Connecticut Yankee Decommissioning

Safely and cost effectively remove or decontaminate plant material to allow the unconditional use of the site

Purpose of Site Characterization

- Identify
  - Type of radioactive material
  - Location
  - Level of radioactivity present
- Estimate the volume and type of waste material
- Identify significant radiological and chemical hazards requiring consideration during decommissioning planning

Site Characterization Process

- Step 1 - Historical assessment
- Step 2 - Scoping survey
- Step 3 - Characterization survey
- Step 4 - Final status survey

Historical Assessment

- Radiological history of CY assembled with the intent of defining areas where additional evaluation is required
- Process
  - Review facility design
  - Review site records and reports
  - Interview past and present employees
- Assessment nearly complete

Land Area Survey Technique/Monitoring Radiation Survey - (Attachment 1)

Historical Site Assessment Results - (Attachment 2)

Scoping Survey

- Specific areas targeted based on:
  - Historical site assessment
  - Decommissioning cost and schedule impact
- Approach
  - Systems
  - Structures
  - Land areas
- Designed to establish baseline conditions - not detailed characterization survey

Site Characterization

- Iterative process which builds on existing data
- Provides data for detailed decommissioning planning
- Validates effectiveness of decontamination activities
- Supports final survey process

Final Status Survey

- Confirms that no licensed material remains on the site in excess of NRC release limits
- Survey and sampling statistically based and analyzed to demonstrate compliance with release limits
  - NRC unconditional use criteria - <25mrem/year
  - Survey methodology - NUREG 5849 and MARSSIM

How Are Land Areas Assessment?

- Scanning - Radiation detector slowly moved over surface
- Soil Sampling - Samples collected at various location & depths and analyzed in a laboratory
- In-Situ Gamma Spec. - Used to identify very low levels of plant related radioactive material
- Water Sampling - Well water and groundwater

Scoping Survey Status, Revision #5 10/28/97 - (Attachment 3)

Scoping Survey Status, Revision #5 10/28/97 - (Attachment 4)

Soil Sampling Status, Revision #3 10/28/97 - (Attachment 5)
Off-Site Assessment Status
- 19 off-site locations identified to date
- 11 locations have surveys completed or are in progress
- 3 of 19 off-site location identified by concerned citizens with no history of CY material
- One location identified as having trace levels of plant related radioactivity
    - Dose to member of public conservatively estimated at 1 mrem/year
    - No detectable increase in radiation levels
- CT DEP started well water sampling program for CY neighbors

Break-down of Average Annual Dose

- Radon Gas	198 mrem (exposure at 1/4 of EPA guidelines)
- Natural Potassium - 40	39 mrem
- Cosmic Radiation	28 mrem
- Terrestrial Radiation	28 mrem
- Medical X-Rays	40 mrem
- Nuclear Medicine	14 mrem
- Consumer Products	10 mrem
- Other*	3 mrem
- Total	360 mrem

Questions and comments from the NEAC and public attendees followed Mr. Sexton's presentation.

Mr. Richard Toohey, Ph.D., CHP Program Director of Oak Ridge Institute for Science and Education (ORISE) was introduced and he gave the following presentation:

ORISE - Oak Ridge Institute for Science and Education
Our mission is to develop and provide critical research and operational capabilities in workforce health and safety, national security, environmental assessments, science education, technical training, and associated management systems for the U.S. Department of Energy and other government agencies.
ORISE is operated by Oak Ridge Associated Universities (ORAU) - Home page: http://www.orau.gov

ESSAP - Environmental Survey and Site Assessment Program
- Independent verification survey contractor for DOE and NRC
- Facility and site survey design and performance
- Environmental assessments
- Analytical laboratory capability
- Program appraisal and review

Other ORISE Resources Available:
REAC/TS - Radiation Emergency Assistance Center/Training Site
- Physicians experienced in radiation medicine for consult

RIDIC - Radiation Internal Dose Information Center
- Detailed dose assessment for medical, occupational, and environmental exposures

ORISE Staff Available:
William L. ("Jack") Beck, CHP, Program Director, ESSAP
Eric W. Abelquist, CHP, Assistant Director, ESSAP
Richard E. ("Dick") Toohey, Ph.D., CHP, Program Director, RIDIC
Ronald E. Goans, Ph.D., M.D., Medical Director, REAC/TS

ORISE Objectives at Connecticut Yankee
1. Inspect survey program
2. Verify CY scoping survey

3. Provide independent expertise for community

Summary of ORISE Activities as of 10/21/97

1. Review CY survey procedures; found them in agreement with accepted standards and satisfactory for objectives of scoping and characterization surveys
2. Field measurements performed on site agree with CY results
3. Soil samples collected for laboratory analysis
4. Some recommendations for further improvements in survey methods will be made
5. Detailed report will be presented at November meeting

Comparison of CY and ORISE Measurements - graph (Attachment 6)

Questions and comments from the NEAC and public attendees followed Mr. Toohey's presentation.

Mr. Gary Bouchard, Unit Director of Operations at Connecticut Yankee gave a brief update summarizing what has been going on at Connecticut Yankee. He explained one of the largest projects going on at the site is the characterization of CY. Questions and comments by the NEAC and public attendees followed Mr. Bouchard's update.

Co-Chair Concannon then announced the NEAC will have their business meeting.

The following subcommittee reports were given:

Mr. Helm announced there is an energy newsletter being published by University of Connecticut and he will be writing a section for the Alternate Energy subcommittee's final report regarding this publication.

Mr. Holloway explained he was asked to be a liaison with the CRC regarding evacuation emergency planning. He reported there has been correspondence between FEMA and the CRC detailing the 21 recommendations and questions to FEMA. He also reported Mr. Trevor Davis has forwarded some questions and suggestions concerning Haddam Neck that he had and they have also been forwarded to FEMA.

Discussion between the NEAC attendees was held regarding the subject of potassium iodide (KI).
Co-Chair Concannon made the motion to have speakers make a presentation to discuss the issue of potassium iodide. The motion was seconded and accepted.

Co-Chair Concannon explained she composed a letter from the NEAC to Dr. Shirley Jackson, Chairman, NRC requesting a representative from the NRC at each CYDAC meeting.

Discussion was held regarding different agenda items for the upcoming NEAC meetings.

Co-Chair Concannon announced the next NEAC meeting will be on November 20, 1997, at 7:00 p.m., in the Waterford Town Hall Auditorium, in Waterford, Connecticut.

Co-Chair Concannon made the motion to adjourn the meeting. This was seconded and accepted and the meeting adjourned at 11:45 p.m.

PROPOSED CHANGES TO NEAC MEETING FORMAT

Following input from members of the public, and in an effort to accomodate their concerns while bearing in mind the many and various assignments of the Nuclear Energy Advisory Council, the following changes are being proposed for the format of future public meetings of the council.

Some of the proposed changes are based on the experience derived by the Advisory Panel which was created following the accident at the Three Mile Island-Unit 2 facility when loss of reactor coolant resulted in serious damage to the reactor fuel. The panel was in existence for 13 years till TMI-2 was placed in long-term storage. The independent advisory panel consisted of 12 elected officials, scientists and members of the public and included those who held anti-nuclear, pro-nuclear and neutral positions. In many ways it was similar to NEAC, but they did not have the extra responsiblity of monitoring/participating in the many meetings/communications between the NRC/licensee/ICAVP contractors that is part of our work load. They were reimbursed for travel expenses.

PROPOSALS:

1)Set a 3-hour limit for the meetings: This will benefit council members, staff, presenters and the public. The public are more likely to attend and remain till end, if they know there is a limit to the proceedings.

2)Public comment and question period: a)To follow reports from NRC/NU/Agencies etc. We have been doing this in order to facilitate public participation,
b)Speakers to stay on the topic of the meeeting,
c) 3-5 minutes/speaker, depending on the number that have signed up to speak.

3)Formal statements from the public: Should a member of the public wish to make a formal statement at a meeting, he/she can request ahead of time to be included on the agenda by contacting either of the co-chairs or the administrative assistant at DEP, indicating the subject matter of the statement.

4)Agenda setting: Public participation will be sought when this is being done at the end of the meeting.

5)Special meetings: At the request of the public, occasional meetings can be held when they can bring their various concerns & issues to the table. If possible, we will ask appropriate persons/ experts to be present to answer their questions. We would need to know ahead of time, the nature of the matters to be addressed.

6) Maintain structured informality: As has been our wont.

The basic agenda would continue as per usual:

1) Minutes
2) Individual council member reports of related activities since the last meeting.
3) Official presentations/reports
4) Public comment
5) Council meeting: Sub-committee reports
Old business
New business
Adjournment

Nuclear Energy Advisory Council (NEAC) Meeting
Waterford Town Hall
November 20, 1997

Rep. Terry Concannon, Co-Chair
Mr. Evan Woollacott, Co-Chair
Mr. Jelle Z. DeBoer
Mr. Kevin McCarthy, representing the Commissioner of the Department of Environmental Protection, Mr. Arthur J. Rocque, Jr.
Mr. John Helm, Sr.
Mr. Mark Holloway
Mr. Robert Klancko
Mr. John Markowicz
Mr. Bill Sheehan
Mr. Dennis Welch, represented Mr. Frank Rothen

Co-Chair Woollacott of the Nuclear Energy Advisory Council (NEAC) called the meeting to order at approximately 7:05 p.m. on November 20, 1997 in the Waterford Town Hall, Waterford, Connecticut.

Co-Chair Woollacott asked for a motion for the acceptance of the NEAC Minutes of the October 22, 1997 meeting. The motion made, seconded and accepted.

Co-Chair Woollacott introduced Mr. Bruce Kenyon, President and Chief Executive Officer of Northeast Utilities (NU). Mr. Kenyon commented on the status of the recovery efforts at Millstone Station and efforts to improve the safety conscious work environment. He explained they are looking at achieving physical readiness on Unit 3 either in late December or early January which would be a very substantial accomplishment for Northeast Utilities. He further explained having reached that milestone, the next goal will be then to heat up the plant in preparation for operations and spend time in January testing operations. That will then set the stage for the NRC inspections in February. Also in January, NU will be closing most if not all of the site issues that are important to support Unit 3's start-up. He reported they are looking at a March Commission meeting. Mr. Kenyon stated he feels they have made a lot of progress with the safety conscious work environment. He explained there are four major objectives that they need to satisfy: The first is the willingness of employees to raise concerns. He reported he thinks they have reached a satisfactory state there. The second is the ability of line management to handle concerns that are raised (corrective action program). The third objective is an effective employee concerns program and the fourth objective is in the area of problem solving. He explained they are still working and making progress with these objectives.

Mr. Kenyon then introduced Mr. Mike Brothers. Mr. Brothers addressed the status of Unit 3 and explained the overall recovery strategy. He explained the Units have a three-problem recovery strategy: regulatory, organizational and physical. He gave a list of the site issues that NU is currently assessing.

Questions and comments from the NEAC followed Mr. Kenyons' and Mr. Brothers' presentation.

Mr. Markowicz asked about the overall status of training and asked about the review of the trainee discipline event done by Little Harbor. Mr. Kenyon answered that all of the programs, except one have been restarted. There are a number of programs that aren't restarted. However, the ones that are necessary to support have started operations. He explained that Little Harbor's trainee review discipline matter had not found retaliation, but that the company could have done better to avoid a chilling effect.

Mr. Holloway asked about the discharges into the bay that had been reported in the media. Mr. Welch answered by reporting on the investigations and action undertaken by his group. He explained that the discharges had been identified

and reported to DEP and they were characterized as two types of violations. One type resulted from discharging New London city water which chlorine level exceeds DEP limits. He further explained the other resulted from discharges that were emitted from the wrong pipe.

Mr. Markowicz asked about the public health risk. Mr. Welch answered that the confidence is very high and there is no public health risk. Mr. Kenyon stated that the risk bears no relation to the rhetoric is being used.

Co-Chair Concannon introduced Dr. Travers, Jacque Durr and Gene Imbro. The NRC provided a status update of DRs using the attached (Enclosure A).

Questions and comments from the NEAC followed the NRC's presentation.

Mr. Holloway stated that there were approximately 455 valid Discrepancy Reports (DRs), and asked the NRC if the ICAVP began too soon. Dr. Travers said "No" and explained that there had been a very detailed review that included looking at patterns occurring among the DRs.

Mr. Sheehan asked if there was any disputed Restart Assessment Plan (RAP) items and whether the NRC was finding improvement. Dr. Travers responded that there had not any been and that the quality of the packages has been very good. Mr. Durr answered that the NRC has seen a change for the positive but that they are still looking at criteria.

Mr. McCarthy asked if the NRC staff was informing and updating the Commission. Dr. Travers responded that they provided updates on a quarterly basis and follow these updates with meetings.

Co-Chair Woollacott noted the enormity of the ICAVP effort and that it was only a small part of the work needed to start-up. He asked if the ICAVP was on the critical path. Dr. Travers responded that Onsite Safety Team Inspection (OSTI) was the critical item.

Co-Chair Concannon then announced the NEAC would have their business meeting. Co-Chair Concannon and Mr. Markowicz reported the meeting they attended with the American Nuclear Society where they made presentations on NEAC involvement in the Millstone recovery (Enclosures B and C). Co-Chair Concannon also reported that she would be traveling to Las Vegas in December for the Council of State Governments conference on High-level Waste Transportation which will include a visit to Yucca Mountain and a meeting in Rockville, Maryland with the NRC in December 12, 1997.

Co-Chair Woollacott asked for a motion to accept the restructuring/deregulation of electric power subcommittee report to be submitted to the legislature. The motion was moved and seconded. The motion was later tabled for discussion at a later date. After considerable debate the NEAC agreed that the subcommittee report would be revised as necessary by Co-Chair Woollacott to achieve a consensus. The NEAC accepted the resignation of Richard "Butch" Rowley.

The NEAC scheduled the next meetings for January 8th at the Waterford Town Hall, Waterford, Connecticut and for January 22nd in the Legislative Office Building, Hartford, Connecticut.

Co-Chair Concannon made the motion to adjourn the meeting. This was seconded and accepted and the meeting adjourned at 10:45 p.m.

APPENDIX 3

State of Connecticut

HOUSE OF REPRESENTATIVES

STATE CAPITOL
HARTFORD, CONNECTICUT 06106-1591

REPRESENTATIVE TERRY CONCANNON
THIRTY-FOURTH DISTRICT

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VICE-CHAIR
APPROPRIATIONS COMMITTEE

MEMBER
PUBLIC HEALTH COMMITTEE

MEETING: NRC AND SARGENT & LUNDY -55 E. MONROE ST. CHICAGO
APRIL 8/9 1997

The meeting began at 11 a.m on April 8, in an S&L conference room on the 24th floor.
Present were:

Eugene Imbro:	NRC - Deputy Director, ICAVP
John Nakoski:	NRC - Program Coordinator, ICAVP
Peter Koltay:	NRC - Team Leader, ICAVP (MP3)
Tony Gody:	NRC - Asst. Team Leader, ICAVP (MP3)
Harold Eichenholz:	NRC - Site Representative
Andy Du Bouchet:	NRC/Contractor - Mech. Comp.
Michael Shlyamberg:	NRC/Consultant- Mechanical Systems
Jim Leivo:	NRC/Contractor - Instrumentation-Control
Raymond Cooney:	NRC/Contractor - Electrical Power Systems
Bryan Erler:	S & L - Sr. V.P., Project Director
Don Schopfer:	S & L - V.P., Verification Team (VT) Manager
A.K.Singh:	S & L - Chairman Internal Review (IRC) Committee
Anthony Neri:	S & L - System Review Lead (SRG)
Robert Querio:	S & L - O&M and Testing Lead (ORG)
Raj Raheja:	S & L - Accident Mitigation Lead (ARG)
Tom Ryan:	S & L - Programmatice Review Lead (PRG)
Craig Sellers:	Erin Engineering/S & L - V.P. Systems Engineering

Following an introduction by Gene Imbro, an extensive presentation was made of the ICAVP Audit Plan developed by Sargent & Lundy as its proposal for executing the Corrective Action Verification Program. On April 7, the company had received conditional approval from the NRC as the proposed contractor pending completion and submittal of the certifications of financial independence by S&L and NU's corporate officials. The NRC had concluded that S&L has the technical expertise and nuclear design experience necessary to conduct the review.
May 27th is the tentative date for the commencement of the ICAVP at Millstone 3 and it is expected to take some 14 weeks.
From the start I observed a focused and diligent group. Members of the NRC questioned the plan in detail and addressed areas which were considered to be less comprehensive. For example, systems which interface with the systems being

reviewed were recommended to be included in the review.
The format for communications in order to keep them open, direct and public was clarified and the implementation of a web site hyperlink located through the S&L home page was announced: ***http://www.slchicago.com.*** S&L will not solicit opinions from the NRC, NU or the NEAC.
Document control: A non-technical person is to be assigned by NU at Millstone to facilitate location of documents for the ICAVP team. The documents are being shipped to Chicago where there is a Millstone Document Room set up @ Sargent & Lundy. Most of the team will be based in Chicago. On location near Millstone, will be the Physical Configuration Review subgroup (CRG) of the SRG, which will perform the physical and functionnal 'walkdowns'in the vertical slice review.
All of the above NRC and S&L personnel were present for the entire presentation and discussion, which lasted all of 4/8, the morning of 4/9 and the afternoon of 4/10 with the exception of Mr. Erler, who left for brief periods to attend to business.
The group leaders made comprehensive presentations with the aid of overheads in the order: SRG, ORG, ARG and PRG.
I was not present for the 4/10 discussion which focused on the manner in which Discrepancy Reports (DRs) will be addressed.
As a result of the thorough questionning carried out by NRC members, revisions will be made to the audit plan/project manual for Millstone 3, and likewise, Millstone 1. S&L will submit the revised plan for Millstone 3 to the NRC by 4/28, and the approval letter could be expected from the NRC by 5/24, pending resolution of any further comments.
Independent Oversight Team (IOT): An matter still not fully addressed. It will not exist as proposed by S&L in the audit plan. It is possible that the NEAC will carry out this role, and it is clear that we must address this in short order with NU whose request it was originally.
I was pleased to note that the NEAC was referred to frequently in the context of keeping us 'in the loop' and fully informed. Briefings will include the NEAC.
I was permitted to ask questions at certain intervals, and I did so, generally to clarify my understanding of matters under discussion.

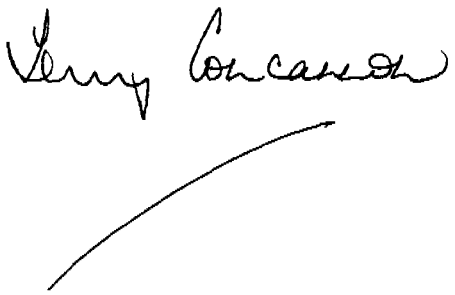
I did make some recommendations including:
1) That the addition/substitution of any and all ICAVP personnel by S&L be approved by the NRC. I wanted clarity on this, and received it.
2) That the financial statements made by each ICAVP participant be in the public domain. This was agreed to.
3) The avoidance of vague and undefined terminology. Agreed to.

Schedule: Providing the ICAVP commences at the end of May, the NRC will perform an inspection in Chicago in July for 2 weeks, to confirm that the audit plan is being implemented as proposed by S&L and understood by the NRC. The NEAC will be invited to observe this, preferably near its conclusion(due to our time/fiscal constraints)

INTERVIEWS: Some 45 professional and experienced persons were being interviewed for the ICAVP, including the S&L project and group leaders A team of 2/3 NRC representatives interviewed each person for approx. 30 minutes each. A copy of the initial questionnaire is included in the Project Manual. Each person's educational and professional background, in addition to his experience was determined. Some of these persons are being subcontracted by S&L on the basis of their expertise.
The interviews took place on the afternoon of 4/9 and the morning of 4/10. I sat in on some of them as an observer, and found them to be comprehensive.

In addition I met Kenneth Kostal, an Exec. V.P. of S&L, and he indicated the importance of this project to S&L, to its reputation and to the nuclear industry as a whole. He is willing to come to Waterford for a public forum, and I indicated that the June meeting of the NEAC might present him with a good opportunity for this. Pursuant to the agreement of the NEAC membership, it is an opportunity that we could offer to the public. I also met the CEO of S&L, Paul Wattelet, who likewise conveyed his deep interest in the ICAVP which is a first in the industry. S&L has 1800 employees.

On the evening of 4/9 I had to return to Connecticut. My overall impression was that it was a worthwhile venture on my part. I had had the opportunity to observe a significant step in the ICAVP process, and I believe that every person involved is making sure that the verification program will be carried out thoroughly and competently in the awareness of its importance to the nuclear industry from all aspects.



MEETING REPORT

PURPOSE: NRC and Parsons Power Audit Plan Review and Interviews

LOCATION: Parsons Power Conference Room, Green Hills, PA

Dates: May 27 and 28, 1997

As the representative of the State of Connecticut Nuclear Energy Advisory Council (NEAC), I attended two days of meetings between Parsons Power and the NRC. Attendees are recorded on the attached sign-in sheet. The general schedule for these meetings consisted of a series of presentations by Parsons Power officials (organization chart attached), assigned to the Millstone 2 Corrective Action Verification Program (CAVP). Also included on the agenda were NRC interviews of Parsons Power CAVP personnel.

The meeting commenced at 11:00 A.M. on May 27, with introductions and general comments by Gene Imbro (NRC Deputy Director) and Dan Curry (Parsons Power Project Director). Eric Blocher (Parsons Power Deputy Project Director) provided an overview of Parsons approach to conducting the Millstone 2 audit.

Bruce Deist (Parsons Power Tier 1 System Review Lead) then presented the Tier 1, System Vertical Slice Reviews (SVSR) briefing including the overview, process and workbook. Ed Toll (Parsons Power Tier 1 Mechanical Lead) discussed in detail SVSR objectives and process.

The NRC discussed with Parsons Power the process for identifying and resolving the intersystem boundaries for Tier 1 systems. For example, a heat exchanger might be composed of Wave 1 and Wave 2 mechanical components, and precisely defining interface boundaries is necessary. It appears that establishing these boundaries for each Tier 1 system may be addressed at public (observation only) meetings in Connecticut between the NRC, Parsons Power, and Northeast Utilities (NU). It was also observed that the NRC was interested in establishing a practical level of definition and process consistency between Parsons Power and Sargent and Lundry (S&L), the CAVP contractor for Millstone Units 1 and 3.

Ken Mayers (Parsons Power Tier 1 Instrumentation and Controls (I&C) Lead) briefed SVSR Tools and Instructions. This prompted an extensive discussion about the sequence of "Site Interviews" and written Requests for Additional Information (RAI's). The NRC indicated a preference for RAI's to precede any attempts at Site Interviews. This was different from process flow diagrams presented by Parsons Power. The NRC also noted the public request for raw data (Preliminary Findings). The NRC also recommended confirming system performance calculations with measured operating data, as available. For consistency with S&L, Parsons Power agreed to rename "Findings" as Discrepancy Reports. Finally, the NRC asked for additional data/justification for sample size selection criteria that Parsons Power might consider during the audit.

At the end of Day 1, the NRC and Parsons Power rescheduled interviews from later in the week to late in the evening in order to provide me an opportunity to observe. I participated in the interview of two senior engineers/managers that included questions regarding education, experience, technical skills and conflict of interest. I also attended a wrap-up meeting with the NRC at the end of a very long day, and visited the office space reserved for NEAC at Parsons Power.

The second day meeting started at 7:30 A.M. with a briefing by Peter Koltay (NRC Team Leader, Unit 3) on NRC inputs and questions. He reiterated several points made by the NRC on Day 1, and provided insights the NRC had developed in working with S&L. He also noted that the public

has requested copies of Parsons Power QA audits. The NRC also indicated that "placeholders" for unimplemented corrected actions resulting from Discrepancy Reports will be maintained, reviewed, and monitored by the NRC subsequent to Parsons Power finishing the CAVP.

Wayne Dobson (Parsons Power Tier 3 Lead) conducted a detailed briefing of the Tier 3 process modeling and procedural process. Since the Tier 3 review covers site-wide procedures, the NRC noted that unresolved redundancy existed between S&L and Parsons Power work plans. It was also noted that Parsons approach to process modeling had the potential to wander outside of the NRC regulatory purview. It was suggested that Parsons corrective action verification should commence earlier than proposed and RAI's should precede any structured data gathering (i.e., site interviews).

John Hilbish (Parsons Power Regulatory Lead) briefed Project Procedure 7 (PP07), Evaluation of Findings. The NRC responded that Potential Discrepancies and Discrepancy Reports will be made public. The NRC also wants a low threshold for potential discrepancies together with Parsons assessment of associated safety significance.

Eric Blocher (Parsons Power Deputy Project Director) provided a Communication Plan briefing. He noted differences with the S&L plan. It was agreed that the NRC and NEAC would be provided advance (24 hour) notice of all meetings (non-administrative) between the NRC and Parsons Power. An update to the S&L plan would be provided to Parsons Power for use in finalizing the Parsons' Communications Plan.

I departed Green Hills at 1:30 P.M. Parsons Power is 250 miles and approximately 5 hours driving time from Millstone Point, Waterford, Connecticut.

OVERALL: The meetings I observed were focused, comprehensive and extremely professional. The NRC presented a strong desire for CAVP thoroughness and consistency and for an arms-length relationship between Parsons Power and NU.

Parsons Power appeared to be well qualified technically and eager to perform the Millstone 2 CAVP to the highest professional standards. I was afforded every opportunity to ask questions and provide input, and I appreciated schedule adjustments for my benefit by the NRC and Parsons Power.

John Markowicz

State of Connecticut

NUCLEAR ENERGY ADVISORY COUNCIL

REPRESENTATIVE TERRY CONCANNON
Co-Chair
EVAN WOOLLACOTT
Co-Chair

Room 4035
Legislative Office Building
Capitol Avenue
Hartford, CT 06106

September 22, 1997

To: Nuclear Energy Advisory Council

From: Evan Woollacott

Subject: NRC Inspection of Sargent & Lundy ICAVP Progress

Participants

Nuclear Regulatory Commission	**Sargent & Lundy**
Steve Reynolds, Chief, ICAVP Oversight	B.A. Elder, Project Director
Tony Gody, Unit 3 ICAVP System Lead	D. . Schopfer, Verifcation Team Manager
R. Cooney, Electric Power Contractor	A.A. Neri, SRG Lead
Jim Leivo, Instrumentation and Controls	R.E. Kropp, CRG Lead
Rich McIntyre, Unit 2, ICAVP System Lead	R.D. Raheja, ARG Lead
Michael Shzymberg, Mechanical Systems	T.J. Ryan, PRG Lead
Andy Dubouchet, Mech Comp & Structural	K. M. Bass, ORG Lead
Brian Hughes, ICAVP staff	

NEAC

Evan Woollacott

I represented NEAC on September 18, 19 at Sargent Lundy during the final two days of the NRC evaluation. My review was basically of a process nature. Highlights follow:

- The Operations Review Group [ORG] is lagging behind the other groups. This was initially noted during the July NRC review. Subsequent to that, this group was reorganized. It appears that the ORG work is on the critical path for the Sargent & Lundy Plan.

- NU's failure to process Requests For Information [RFI] in a timely fashion is delaying the Sargent & Lundy work. As of the meeting there were 60 RFI's that were sent to NU between 4 & 7 weeks ago, with no answer received.

Also, There are many RFI's still to be issued by S&L. Both will have impact on the resulting schedule.

- There appears to be an NU document control problem resulting in S&L not receiving the latest modification of the documents requested. Also, the analyses submitted are overlapping and do not identify the Analysis of Record. This causes Sargent & Lundy additional work and adversely affects the schedule.

- NRC initially expressed concern about apparent lack of communications between the various S&L groups. This was handled through discussion, and it was found that there was adequate communication between & among the S&L teams.

- Based on information received, it appears that S&L is presently about six weeks behind its planned schedule. As there is still more discovery work needed, one would expect to see further slippage. In addition, there has been some increase in scope since the issuance of the original contract. Whether the ICAVP falls into the critical path for the Millstone III start-up schedule is not known. However, it should be carefully monitored.

OBSERVATIONS:

- This is the first time in NRC, NU, and S&L experience that such a detailed review as the ICAVP has ever been conducted. This has created problems for NRC because there is no set protocol. Do they treat S&L as a Licensee and issue findings. And, what would NRC do if the finding was not attended to by S&L?

- Sargent & Lundy obviously had a learning curve, and some of the evaluations accomplished may not have been necessary to fulfill its independent review responsibilities. Procedures had to be developed where there were none, and then tested in actual use.

- The maze of data that must be developed and/or collected is so great that it is taxing NU's ability to respond.

- All these put together have and will substantially affect both schedule and ICAVP costs.

- To the extent possible, there should be a critical look at the resulting package to determine the benefits received ~~and~~ to identify those areas that should be looked at for Unit 1, and to assess investigative areas that may not prove beneficial to the ICAVP process.

- In saying all of the above, it is recognized that this is a most difficult and time consuming process where all participants are blazing new trails.

- I was sincerely appreciative of the professionalism demonstrated by the NRC team during the two week investigation. In addition the S&L response was also most professional.

CONNECTICUT NUCLEAR ENERGY ADVISORY COUNCIL

MEMORANDUM

December 8, 1997

TO: Terry Concannon, Co-Chairman

FROM: John L. Helm, Sr.

SUBJECT: NRC Meeting with Parsons Power at their offices in Reading Pennsylvania, on Friday December 5, 1997. Concerning an CAVP review of Selected Millstone Unit 2 Systems.

ENCLOSURE: List of Attendees

Richard McIntyre of the NRC gave a summary of the current status of NRC's inspection of Parsons Power's progress in conducting a CAVP review of the selected Millstone 2 systems. It was brief and favorable. Steve Reynolds, NRC Branch Chief, added a few words.

In the question period following the NRC presentation, I asked if they had found any significant open items or areas of weakness, that some might attempt to exploit at the upcoming open meetings with the technical staff and NRC commissioners. The NRC representatives avoided answering this question by stating that with several inspection efforts yet to be carried out, it was to soon for such a determination.

All in all, I believe the NRC was satisfied with Parsons Power's work. The fact that the meeting only took half an hour confirms this.

Very truly yours,

John L. Helm, Sr.

John L. Helm Sr.

cc: Evan W. Woollacott, Co-Chairman
128 Terry's Plain Rd.
Simsbury, CT 06070

APPENDIX 4

APPENDIX 4 A

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

July 15, 1997

Don Schopfer, Verification Team Manager
Sargent & Lundy
55 E. Monroe Street
Chicago, IL 60603

Dear Mr. Schopfer:

During a June 19, 1997, meeting with the Connecticut Nuclear Energy Advisory Council (NEAC), the NRC stated in response to questions from NEAC that the Independent Corrective Action Verification Program (ICAVP) contractors would provide a preliminary assessment of the potential significance of the discrepancies identified during the performance of the ICAVP at the Millstone Nuclear Generating Station. In addition, during a teleconference on June 26, 1997, with representatives from Sargent & Lundy (S&L), Parsons Power Group Inc. (Parsons), the NRC, and NEAC participating, the NRC stated that it would provide additional guidance to the ICAVP contractors regarding assessing the potential significance of identified discrepancies. The enclosure provides four levels of potential significance that the NRC staff has determined shall be used by the ICAVP contractors when assessing the significance of all discrepancies they identify during the performance of the ICAVP at the Millstone site.

You are requested to modify your procedures for documenting discrepancies discovered during the implementation of your ICAVP audit plan to reflect the added requirement for conducting a preliminary assessment of the potential significance. You should base your assessment on the information that is readily available at the time the discrepancy is identified and the technical judgement of your organization. The discrepancy reports should include a brief discusion of the rationale for the selection of the significance level. The NRC recognizes that as new information becomes available or after the licensee completes its review of the discrepancies, the actual significance of the discrepancies may change. However, when implementing this requirement, a reasonable effort should be made to classify each of the identified discrepancies to one of the four significance levels provided in the enclosure at the time the discrepancy report is prepared.

In addition, the NRC requests that any discrepancies that may already have been documented before incorporation of this requirement into your procedures be updated to reflect your preliminary assessment of their significance. When updating the existing discrepancies, you should base your assessment on the information that you have readily available at the time you are updating the discrepancy and the technical judgement of your organization.

While the NRC requires the ICAVP contractors to provide a preliminary assessment of the potential significance of the discrepancies, it is important to reaffirm that Northeast Utilities (NU) remains the organization with the primary responsibility for assessing each of the discrepancies you identify during the ICAVP for impacts on the operations and maintenance of its licensed facilities.

If you have comments or there are further questions on assessing the significance of discrepancies identified during the implementation of the ICAVP at the Millstone site, please contact me at (301) 415-1490.

Sincerely,

Eugene Imbro, Deputy Director
ICAVP Oversight
Special Projects Office
Office of Nuclear Reactor Regulation

Enclosure:
Criteria for Categorizing the Relative Significance
of Discrepancies Identified by the ICAVP

cc w/encl: See next page

APPENDIX 4B

Sargent & Lundy
Millstone 3

Discrepancy Report Summary

- 955 Preliminary DRs initiated
- 699 Valid Preliminary DRs issued to NRC/NU/NEAC
- 110 Preliminary DRs considered invalid
- 146 Preliminary DRs in process
- 212 NU Resolutions entered into database
- 129 NU Resolutions reviewed by S&L
  - 104 Accepted and Closed
  - 24 Not accepted - Returned w/ Comments
  - 1 Pending review of implementation of NU corrective action

Discrepancy Report Summary

- Of the 104 Acceptable and Closed resolutions
  - 47 Confirmed Discrepancies
  - 29 Previously Identified by NU
  - 28 Non-discrepant conditions

- Of the 47 Confirmed Discrepancies

  1 Level 3

  46 Level 4

Discrepancy Report Summary

NRC Significance Level for the 699 Issued Preliminary DRs

- 0 Level 1
- 1 Level 2
- 224 Level 3 47 Responses inprocess
- 474 Level 4 165 Responses inprocess

Discrepancy Report Summary

	Issued	NU Resp.	Closed
Tier 1	577	140	61
Tier 2	46	37	25
Tier3	76	35	18

DR Type & Level Summary (Confirmed DRs)

Discrepancy Type	Level 3	Level 4
Calculations	1	13
Component Data	0	1
Corrective Actions	1	3
Design Change Process	0	0
Drawings	0	8
Installation Implemenmtation	0	8
Installation Reqiurements	0	2
Licensing Documents	0	8
O&M and Testing Implementation	0	0
O&M and Testing Procedures	0	2
Procedure Implementation	0	0
Testing Implementation	0	1
Testing Requirements	0	0

Discrepancy Reports

- Status as of January 9, 1998

253 Preliminary Discrepancy Reports (DRs) Initiated

170 Valid DRs Issued to NNECo, NRC, NEAC

6 DRs determined to be invalid during review process

Discrepancy Reports

- Response Status as of January 9, 1998

80 NU Responses Received

54 Comments on NU Response Approved and Issued

34 DRs Considered Open (follow-up or pending)

20 DRs Closed

12 DRs Closed as Invalid - (Previously Identified by NU or Basis Invalid)

8 DRs Closed as Confirmed Discrepancies

APPENDIX 5

State of Connecticut

Nuclear Energy Advisory Council (NEAC)

Rep. Terry Concannon
NEAC Co-Chair

John Markowicz
NEAC Member

NEAC's Charge

- Hold regular public meetings to discuss safety and operation of CT nuclear plants, and advise the governor, legislature and municipalities within 5-miles of plant on these issues
- Work with federal, state and local governments and the companies operating such plants to ensure public health and safety
- Discuss proposed changes and problems arising from operation of plants
- Communicate, through reports and presentations, with plant operators about safety and operational concerns
- Review current plant status with the NRC

NEAC Sub-Committees

- Alternative Energy and Conservation
- Decommissioning
- Impact of Electric Industry Deregulation on Nuclear Power Plants
- Emergency Planning
- High-Level Radioactive Waste Storage

In addition, a team of "Millstone Monitors" observes the progress of the restart program on site

The Formation of NEAC

- NRC placed all Millstone units on "Watch List" in January 1996 -- first time for any CT nuclear plant
- State Legislators responded to concerns about public health and safety
- Drafted legislation to create an impartial entity to hear public concerns, evaluate issues and report on the health of the CT nuclear power environment
- Nuclear Energy Advisory Council (NEAC) Legislation passed in June 1996, and was signed by Governor Rowland

NEAC Organization

- Membership - 14 uncompensated volunteers, from varied backgrounds and perspectives to provide diversity, credibility and balance
- Support - clerical assistance from the Dept. of Environmental Protection - $15,000/year travel funds
- Meetings - monthly, usually at Waterford Town Hall
- Agenda - presentations on all aspects of Millstone restart and Connecticut Yankee decommissioning
- Public Comment - one or more question/comment periods at each meeting
- Communications Protocol - through the co-chairs

NEAC Accomplishments

- First interim report to Governor and CT General Assembly in January 1997 -- next report due in February 1998
- Recommendations to federal and state agencies, as well as to the utility, have met with some success
- Major achievement of NEAC has been the creation of an effective dialogue between the Council, the utility, state agencies, and the public
- NEAC will continue to evolve, and will remain in existence as long as the legislature and public believe there is a need for our service

State of Connecticut

Nuclear Energy Advisory Council (NEAC) Activities

John Markowicz

Site Visits

- Millstone (2)
- Connecticut Yankee
- Waterford Emergency Operations Center
- Sargent & Lundy, Chicago, IL (2)
- Parsons Power, Reading, PA

Monitor all Noticed Public Meetings

- At Least 47 (and most during normal working hours):
  - NRC: 13
  - NRC/NU/S&L/PP/LHC: 25
  - NU (Millstone): 6
  - NU (Haddam): 3
- Representative on the Millstone Advisory Council, and liaison for the CY Community Decommissioning Advisory Committee

NEAC Activities

- Site Visits
- Third Party Corrective Action Verification Program (CAVP)
- Monitor All Noticed Public Meetings
- Correspond with Federal and State Officials

Third Party Corrective Action Verification Program (CAVP)

- Challenged NRC "independence" criteria for CAVP contractors
- Graded criteria requested and implemented for CAVP discrepancy reports
- Four members designated primary and alternate observers
  - communications protocols
  - telecons and non-public meetings
- Officially included by NRC in Millstone Restart Assessment Plan

Correspond With Federal and State Officials

- NRC Chairman regarding "independence" criteria for selection of third party CAVP contractors
- Connecticut congressional delegation regarding local public oversight hearings
- Connecticut congressional delegation regarding high level radioactive waste storage site
- NRC Chairman and Connecticut congressional delegation regarding civil penalty moneys being applied to public health and safety projects in communities near commercial nuclear power plant sites

APPENDIX 6

Memorandum

DATE: December 15, 1997

TO: Evan Woollacott and Terry Concannon, CoChair, NEAC

FROM: Bill Sheehan

RE: MONITOR WATCH IN MILLSTONE 3 CONTROL ROOM

1. On December 13, 1997 I spent an hour in the control room of MILLSTONE 3 observing the control room watchstanders. Routine shutdown testing and monitoring were in progress on instrumentation and control systems and the Diesel Generator Systems.

2. The following comments are germane:

a. Watchstanders were formal in their communications with each other.

b. Evolutions were conducted in a professional manner.

c. Watchstanders were not afraid to delay an evolution if too much else was going on to properly moniter the progress of the evolution. This delay was generally in the matter of minutes.

d. Two of the control room personnel had not heard of NEAC.

3. In conversation with personnel on watch I determined, at least in this watch section, morale was good but the crew was anxious to get to restart. Recent management changes has made them unsettled, however. There was a comment that you would come in not knowing if your boss was still going to be there.

4. I hope to make more of these weekend visits in the future.

Bill Sheehan

Memorandum

DATE: December 22, 1997

TO: Evan Woollacott and Terry Concannon, CoChair, NEAC

FROM: Bill Sheehan

RE: MONITOR WATCH IN MILLSTONE 3 CONTROL ROOM

1. On December 21, 1997 I spent an hour in the control room of MILLSTONE 3 observing the control room watchstanders. Watchstanders were recovering from an unexpected loss of the nonprotected bus during testing of the electrical systems.

2. The following comments are germane:

a. Watchstanders were formal in their communications with each other.

b. Evolutions were conducted in a professional manner.

c. The power loss was apparently caused by an error in the procedure or an error on the part of the Generation Test Group performing the procedure. Recovery was hampered because the labels on the switches did not match the names stated in the bus recovery procedure. The watchstanders drafted a condition report on the procedure errors found. Further testing on the unprotected bus was suspended pending resolution of the problem.

d. Watchstanders commented that recovery was smoother because the bus had been lost the day before(Saturday, Dec 20, 1997) when a member of the test group accidently tripped a breaker during conduct of the test.

3. While discussing the error conditions with watchstanders, I became concerned that

a. Operations (at least in this section) still hasn't taken ownership of problems. A senior watchstander commented to me that the procedural problems will "Set THEM(the generation test group) back" in getting the plant ready for restart.

b. There are still switch/breaker label nomenclature problems that have not been corrected.(Fortunately, this was the side under maintenance, not the side providing protection).

c. The bus was lost twice during the same test(although the causes appear to be unrelated).

I have discussed this observation with Mike Brothers.

4. I plan to make more of these weekend visits in the future.

Bill Sheehan

Memorandum

DATE: January 5, 1998

TO: Evan Woollacott and Terry Concannon, CoChair, NEAC

FROM: Bill Sheehan

RE: MONITOR WATCH IN MILLSTONE 3 CONTROL ROOM

1. On January 3, 1998 I spent an hour in the control room of MILLSTONE 3 observing the control room watchstanders. Watchstanders were preparing for the Integrated Leak Rate Test(ILRT), a major leak rate test of the containment structure.

2. The following comments are germane:

a. Watchstanders were formal in their communications with each other.

b. Evolutions were conducted in a professional manner.

c. While isolating some accumulators for the ILRT an alarm was received indicating valve "chatter" on one of the valves. Since the alarm was a group alarm, it was not immediately known which valve was a problem. The Unit Supervisor properly elected to get persons to observe the valves while they were being operated to determine if it was a valve or valve indication problem. These valves had been replaced but the "limit switches" had not yet been set/checked according to the Unit Supervisor.

d. An Instrumentation and Control Worker briefed the Unit Supervisor on his planned work to support the ILRT. He was planning to remove Instrumentation on some temporary equipment that were sensitive to the upcoming test. He commented that he would pull the instrumentation slowly in case it is a "wet" well instead of a "dry" well to minimize the amount of water spillage. These systems were not on the primary side of the Reactor Plant. The Supervisor concurred in this approach.

3. While discussing the above items with the Shift Supervisor, he stated that the "skids" were temporary recirc systems for the steam generators and the drawings were not clear if the instrumentation was "wet" or "Dry". I was surprised that a valve had been turned over to Operations without complete indication testing and that there was not proper information on the recirc jumpers to know if instrumentation was "wet" or "dry".

4. I have discussed this observation with Mike Brothers.

Bill Sheehan

Memorandum

DATE: January 19, 1998

TO: Evan Woollacott and Terry Concannon, CoChair, NEAC

FROM: Bill Sheehan

RE: MONITOR WATCH IN MILLSTONE 3 CONTROL ROOM

1. On January 18, 1998 I spent an hour in the control room of MILLSTONE 3 observing the control room watchstanders. Watchstanders were preparing for the Emergency Core Cooling System(ECCS) flow test and lining up secondary systems to bring them into an operational status..

2. The following comments are germane:

a. Watchstanders were formal in their communications with each other.

b. Watchstanders were very careful in conducting the various lineups(see comment below)

c. An operator conducting a valve lineup of the secondary sampling system reported the following deficiencies:

1) A valve was labeled "880" but according to the lineup procedure and the print it should be labeled "350".

2) Valve SST994 was in a "Locked Open" position. According to the valve lineup procedure and the procedure listing all "Locked" valves in the plant it should not be a locked valve. A check of the Print in Control and the P&ID Listing however, the valve should be locked open. The Unit Supervisor submitted a CR on the deficiency.

d. While discussing the above items with the unit supervisor, the operator commented in a sarcastic manner that "... the plant is ready for startup."

e. Another operator requested a second check on the valve lineup he was conducting because one of the valves did not respond the same way the remaining valves did when he manipulated them. This line up did not require a second check by the procedure. The unit supervisor provided another watchstander to conduct the second check.

f. There were two persons from oversight observing plant evolutions.

3. Based on the above comments, the following observations are germane:

a. At least one of the watchstanders in this section does not really understand what the "Physically Ready for Restart" declaration really meant. Management has put out explanations that the declaration does not mean all work is done, but this meaning may not be clear to all. Subjectively, I got the impression that the watchstander felt it was just another management feel good declaration and management may not appreciate just howmuch remains to be done.

b. The fact that there was an error on valvelineup operations sheet should not be unexpected. I just hope that management has a mechanism to efficiently handle the resulting CR s on systems that have not been under the CAVP microscope. I would classify the CR commented on above as a Level 4 because the actual plant condition agreed with the print and the P&ID list even though it did not agree with the valve lineup sheets.

c. I was impressed with the operators care and concern to be sure that the lineups were done correctly the first time and documenting any difficulties. Management's message to "...do it right" has certainly gotten through.

4. I have discussed this observation with Mike Brothers.

Bill Sheehan

Northeast
Utilities System

Millstone Offices * Rope Ferry Rd.

P. O. Box 128
Waterford, CT 06385-0128
(860) 447-1791

January 28, 1998
SP-98-30

Representative Terry Concannon
76 Timms Hill Road
Haddam, CT 06438

Mr. Evan W. Woollacott
128 Terry's Plain Road
Simsbury, CT 06070

Dear Representative Concannon and Mr. Woollacott,

We have had some subsequent discussions with Mr. Sheehan regarding our January 23, 1998 letter to you regarding Mr. Sheehan's Unit 3 Control Room observations. This letter provides some additional clarifying information on Mr. Sheehan's observations and supersedes the original letter of January 23, 1998.

We recently received copies of the letters from Mr. Sheehan regarding observations performed in the Unit 3 Control Room during December and January. Specifically, this letter will respond to the four letters dated December 15 and 22, 1997, and January 5 and 19, 1998. We would first like to thank the Nuclear Energy Advisory Council and Mr. Sheehan not only for the time spent in observing these aspects of our recovery effort, but also for sharing the insights with us.

One troubling observation stemmed from the December 22nd observation in which the operating crew demonstrated a lack of ownership of problems affecting operation of the unit. The specific instance noted related to a problem with another department's procedure which disrupted some testing being performed in the Control Room. A senior watchstander noted that the problem would "set THEM (the other group) back" in getting the plant ready for restart. This occasional lack of ownership has been a weakness within the Operations department for some time, and one on which we have been concentrating heavily. Recent performance by some of the Shift Managers indicates significant progress is being made in this area, however, progress has not been consistent among the shifts. This continues to be a major focus of senior Operations department management, and the observation by Mr. Sheehan serves to emphasize the need to do so.

Another weakness noted was discrepancies between labels on control board switches and plant procedures. A Condition Report was generated as a result of the incident you observed. More globally, a walkdown of the main control boards was recently performed which identified a number of issues with informal or uncontrolled labels. These are being corrected in accordance with our plant labeling program. Discrepancies between control board labels and procedures are being addressed as part of our procedure validation process.

This theme of labeling discrepancies was also noted in the letter dated January 19th, when a difference was discovered between a valve line-up and a valve label in the field. It was subsequently determined that this item was, in fact, not a discrepancy. The valve line-up and valve label were in agreement. The valve in question had been listed in a different plant area in the valve line-up sheet and this momentary confusion was quickly resolved. The line-up sheet plant area will be corrected.

In the letter dated January 5, it was noted that two problems arose during preparations for the Containment Integrated Leak Rate Test (ILRT). The first problem was discussed as item 2.d in Mr. *Sheehan's January 5, 1998 letter.* Item 2.d concerned the removal of instrumentation from a steam generator recirculation skid (equipment used only in shutdown conditions). An Instrumentation & Controls worker had briefed the Unit Supervisor on how he (the worker) would pull the instrumentation slowly in case it was a "wet" vice "dry" well; the Unit Supervisor concurred with this approach. Although the skid

was isolated and tagged out, and appropriate safety precautions were taken by the worker, the issue was that the worker did not know if these wells were "wet" or "dry". Since this level of detail is not shown on drawings for this type of equipment, the Loop Calibration Reports will be updated to add the type of well (dry) so that this situation will not recur in the future. The other observation relating to equipment being returned to Operations with incomplete indication testing is clearly on target. While our Corrective Action Program does not indicate an adverse trend in this area, we will certainly continue to monitor this.

As for the item regarding an interaction with an Operator (a Plant Equipment Operator), we are concerned that the individual's demeanor appeared to be sarcastic ("another management feel good declaration"). Not having the benefit of the context in which the individual's statement was made, it is possible that it reflected some frustration regarding the long duration of the current outage and the extent of the recovery effort. As you fully appreciate, the Operations organization is the focal point for the Mode 4 readiness effort. Virtually all the work necessary to begin prepping the plant for the next step--Mode 4-- has been completed, and we are, indeed, beginning to fill systems in preparation for the mode change. It is certainly correct that much work remains to be completed before the unit can be safely restarted. The letter has been forwarded to the Millstone Unit 3 Director. He will discuss this issue with Operations and stress the use of professional demeanor (no sarcasm) while on shift. However, he will additionally note that a concern, even if raised in a sarcastic manner, is still a concern and must be given appropriate management attention. This will be done in a way which will promote the raising of issues or concerns, consistent with our efforts to establish and maintain a Safety Conscious Work Environment.

We would like to close by again extending our thanks for taking the time to visit our Control Room, and sharing your insights with us. They are certainly valuable in helping us move towards our goal of excellence in operations.

If you have any questions, please contact me.

Very truly yours,

RM Kacich

R. M. Kacich
Director, Special Projects

nc

cc:
J. (Bill) W. Sheehan

APPENDIX 7

APPENDIX 7A

Appendix 7a: Suggestions and recommendations presented to NEAC at the April 17th meeting by the Emergency Planning Subcommittee of the Citizens Regulatory Commission.

- Educate the public; use Millstone information center to disseminate information about evacuation routes as well as protection against radiation exposure
- Schools should educate students and parents with fire-drill type training
- Teachers and staff should know what their responsibilities are
- Communications must be improved between towns so that potential conflicts can be avoided, such as sharing the same evacuation routes, timeliness in informing the public, what to do when people work in one town and children are in school in another town
- NUREG 0654, Rev. 1. Supp. 3 should be adopted, time limit for comments is long past due
- Sirens need to be upgraded with separate warning signal for nuclear incident
- A family emergency planning card should be issued in schools and available in libraries and town halls
- Towns in EPZ should have annual town meeting to discuss nuclear planning emergency procedures
- Revise page in telephone book with additional information
- Annual emergency questionnaire should be sent to citizens in EPZ
- Additional host centers are needed
- Letters of agreement need to be more specific

APPENDIX 7B

Connecticut Office of Emergency Management
Att: Robert Plant
360 Broad St.
Hartford, CT 06105

July 22, 1997

Dear Mr. Plant,

The Citizens Regulatory Commission (CRC) Emergency Planning subcommittee has been involved in numerous discussions over the past several months with officials from various federal, state and local agencies concerning nuclear emergency planning. As you might recall, our subcommittee presented information, including suggestions and recommendations, to the state Nuclear Energy Advisory Council on April 17, 1997. You also presented information to the council at that time and suggested that our subcommittee contact your office about any of our recommendations that would fall under the cognizance of Office of Emergency Management (OEM).

After meeting with emergency planning officials from East Lyme, New London and Waterford on June 24, 1997, it was determined that items that would be under direction of OEM include:

1. **Increasing the total number of evacuation reception centers.** The number of these centers available to the public should reflect a realistic appraisal of the number of expected evacuees. At present, FEMA has informed us that only 20% of the affected population would travel to the designated centers. OEM should begin educating the public as to the importance of traveling to these reception centers and thereby increase the likelihood that more than 20% of the affected population would utilize these facilities. OEM should also begin the process of setting up additional evacuation reception centers to meet the real needs of the public.

2. **Increasing the radiation monitoring devices at evacuation host centers.** For example, as discussed at the April 17 meeting, the evacuation host center at Southern Connecticut State University has only two of these devices presently on hand. It would be impossible to adequately check the number of expected evacuees within the mandated 12 hour period with only

two of these monitoring devices. OEM should conduct a survey of all evacuation host centers and purchase additional radiation monitors to insure that each host center can process the number of expected evacuees within 12 hours of arrival.

3. **Combining of nuclear emergency exercises.** There are presently several nuclear planning exercises which are used to test the capability of the various parties to respond to nuclear accidents. Annual exercises, bi-annual exercises and six year exercises are all included in the emergency response testing mix. Unfortunately, each of these drills tests only a certain sample of the general populations ability to respond to a nuclear accident event. For example, in the six year exercise scheduled for 1997, only one school in each town of the EPZ will be participating in the exercise. This does not give a realistic picture of the types of problems that would occur in a real emergency. In order to properly plan for a real accident scenario, all schools, hospitals, emergency reception centers, etc. should simultaneously participate in the exercise. This is the only way to coordinate planned evacuation routes, verify reception center capacity, check radiation monitoring and test the procedures for returning evacuees to their homes. Even if the exercise is only a "table top" drill, all concerned parties should be involved. OEM should work towards implementing full participation in these exercises.

Recent NRC correspondence states that the NRC will fund the purchase of potassium iodide, but it's the individual state's responsibility to stockpile and disperse this chemical in the event of a nuclear emergency. We would like the state of Connecticut to provide the public information, including the pros and cons, for the storage and dispersal of potassium iodide. The Commissioner of Public Health and the DEP should state their rationale for not presently stockpiling potassium iodide and also indicate what future policy will be in this regard.

The Citizens Regulatory Emergency Planning subcommittee would like to set up a meeting with OEM and the DEP within the next few weeks to pursue these and other courses of action needed to upgrade nuclear emergency planning. Please call me at (860) 739-4713 to discuss this further.

Pati Harper

Pati Harper

Chairperson, CRC Nuclear Emergency Planning Subcommittee
22 Sapia Dr
Niantic, CT 06357

Copy to:
Commissioner of Public Health
Department of Environmental Protection
New London Day Editorial Department
Nuclear Energy Advisory Council
East Lyme Emergency Planning Director
New London Emergency Planning Director
Waterford Emergency Planning Director

APPENDIX 7C

STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC SAFETY
DIVISION OF FIRE, EMERGENCY AND BUILDING SERVICES
Office of Emergency Managemant

July 30, 1997

Ms. Pati Harper
Chairperson. CRC Nuclear Emergency Planning Subcommittee
22 Sapia Drive
Niantic, Connecticut 06357

Dear Ms. Harper:

Your letter of July 22, 1997 was carefully reviewed by myself and staff specializing in the Nuclear Safety Emergency Preparedness Program.

We in emergency management solicit and appreciate recommendations and constructive criticism. We make a continuous afford to acquire planning information from exercise evaluations, critiques of training drills and observations of third parties such as the Citizens Regulatory Commission. All feedback is analyzed for feasibility and conformance to regulations.

As you know this plan is closely regulated by federal authorities. Therefore, this office cannot unilaterally introduce changes. A formal review and revision process is accomplished with federal authorities annually.

Because the current plan has been approved, you may be assured that it is considered to be a workable and practical concept. Even so, we reexamine it annually and make changes after review and approval by the federal authorities.

You recommendations will become part of the revision process. Work on revising plans and procedures will commence after we obtain feedback from the current phase of exercises ending in October.

We appreciate receiving your comments and please feel free to offer suggestions or observations at anytime. Unfortunately, the press of events precludes a meeting in the near future. We should revisit this as part of our regular process late in the year.

Sincerely,

Robert A.Plant
Director

RAP/tru
cc: Deputy Commissioner Luther
OEM-REP
cf

Phone (860) 566-3180
360 Broad Street, Hartford, CT 06105
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APPENDIX 7D

QUESTIONS FOR FEMA AND OEM

1) The Connecticut Office of Emergency Management (OEM) has stated that more radiation monitoring devices are needed at evacuation reception centers. How many additional devices are required? How is their purchase funded? When will the monitors be purchased and delivered to the reception centers?

2) There have been significant changes in the population demographics in Connecticut as well as a large increase in tourism. Is there any plan to add more evacuation reception centers to increase the present number as a result of these changes? If so, when? If not, please explain why additional centers are not required. (Presently at least six towns use the field house at Southern Connecticut State University as a reception center)

3) According to NUREG 06354, there needs to be full participation of all local and state emergency planning officials in exercises like the one which occurred on August 21, 1997. Please explain how this applies to New London not participating in the August 21, 1997 exercise.

4) What is FEMA's justification for NUREG 06534 being so outdated? It was written in 1979. Haven't conditions changed since that time? Why hasn't evacuation planning changed also?

5) The NRC has recommended that Potassium Iodide (KI) be stockpiled and dispensed in areas within 5 miles of nuclear power plants. The NRC will fund the purchase of this chemical for states and localities who include KI as part of their emergency planning. Does the OEM plan to proceed with a request to the NRC for funding the purchase of this chemical for the state of Connecticut? If so, when? If not, please explain why not.

6) How were the evacuation procedures "tested" on the August 21, 1997 exercise with respect to the area schools? How is it adequate to look at only one school per town? Were any day care facilities part of this exercise? A FEMA employee had previously stated that it is not economically feasible to look at every school in all the towns. Shouldn't public safety override economic concerns?

7) At the Nuclear Energy Advisory Council meeting on April 17,1997, several questions were presented to OEM's Robert Plant, which have to this date not been answered. These include: How are teachers who accompany buses evacuating school children to reception centers transported to other reception centers to pick up their own children? What is being done to inform parents that picking up their children at school during an evacuation is not the recommended procedure?

8) Has there been any information provided to area school superintendents with regard to holding evacuation training seminars for educational personnel? What about including parents and PTA and PTO organizations in this training?

9) Does FEMA feel that the radiation monitoring of incoming evacuees at the reception centers is important? If so, why does FEMA accept an estimate that only 20% of an evacuated areas population will arrive at designated reception areas? Why doesn't FEMA insist that towns and cities institute public nuclear emergency planning educational programs so that more than 20% of the evacuated population will use these reception centers?

10) If a nuclear emergency with significant radioactive fallout occurs during a period when the ground is snow covered, how is the contaminated snow removed before the evacuated population can return to their homes? How and where is this contaminated snow disposed?

11) It is our understanding that the local emergency "volunteers" that participate in the nuclear emergency drills are paid for their participation. Would they also be paid if this were an actual emergency? Is it reasonable to expect volunteers to participate during an actual emergency?

12) During the exercise held on August 21, 1997, what was the status of the following at all of the evacuation reception centers :

a) Adequate number of working radiation monitoring devices and trained personnel to operate them?
b) Separate male female/shower facilities?
c) Holding tanks for contaminated shower water?
d) Sufficient space for all evacuees?
e) Adequate parking for arriving vehicles?
f) Radiation monitoring for arriving vehicles?

13) The agreements Massachusetts has with it's various evacuation transportation agencies are much more specific than the agreements Connecticut has with it's transportation agencies. FEMA should already be aware of this. Is there any communication in place so Connecticut can utilize the Massachusetts agreements to tighten up their agreements? If not, why not?

14) The August 21, 1997 exercise estimated that it would take approximately 6 1/2 hours for evacuees to reach designated reception centers. What percentage of the affected population was used to determine this estimated travel time? NUREG 0654 states that the evacuated population must be tested for radiation contamination within 12 hours of exposure. Would it be possible to test the total number of evacuees in the 5 1/2 hours that remain after arrival at the reception centers?

15) An addendum to NUREG 0654 was issued for comment in July 1996. Have the changes recommended in this addendum become official policy? Were these changes used as part of the August 21, 1997 exercise?

16) Most emergency management personnel have expressed the belief that the likelihood of a serious nuclear accident occurring is remote. Does FEMA believe that this is the proper attitude for emergency planning personnel to hold? How can people who don't believe these types of emergencies will occur plan accordingly for a worst case scenario? (Note: Nuclear emergency planning is partially funded by utility companies)

17) Where prisons, nursing homes and L&M hospital participants in the August 21, 1997 exercise? Was the evacuation of these facilities included in the 6 1/2 hour evacuation estimate?

18) Is there any nuclear emergency evacuation planning for the casinos?

19) Does FEMA review the emergency information contained in local telephone directories?

20) If the state will not stockpile Potassium Iodide (KI), can local town and municipal officials request KI from the NRC for stockpiling?

21) A concerned citizen has posed questions concerning the discharges of radioactive effluents from nuclear power plants. Questions such as: What is the current allowable REM radiation exposure limit and how do these limits effect unborn children? Is there any advance public or NRC notification when planned radioactive effluent discharges from plants occur and how does the NRC enforce guidelines that govern these discharges?

Chairman, Regional Assistance Committee
Federal Emergency Management Agency
401 J. McCormack Post Office and Court House
Boston, MA 02109-4595

September 9, 1997

Dear Sir:

On August 21, 1997, Federal Emergency Management Agency (FEMA), in conjunction with the Connecticut Office of Emergency Management (OEM), the Nuclear Regulatory Commission (NRC), Northeast Utilities and local emergency planning officials, conducted an emergency planning exercise for the towns in the emergency planning area surrounding the Millstone Nuclear Power Station.

On August 27, 1997, a preliminary post-exercise briefing was held by FEMA and the NRC at the East Lyme Community Center. At that time, the CRC Emergency Planning Subcommittee attempted to ask several questions pertaining to this exercise. We were informed that public questions were not permitted at this briefing and that any questions should be submitted in writing to FEMA. We are therefore forwarding the attached questions. We request that FEMA, as soon as possible, provide a specific written answer to each question on the attached list. Your anticipated response should be forwarded to:

Pati Harper
22 Sapia Dr.
Niantic, CT 06357

If you have any questions concerning this request, please call Pati Harper at (860) 739-4713 or Mark Holloway at (860) 739-4440.

Pati Harper

CRC Emergency Planning Subcommittee Chairperson

cc:
State Senator Melodie Peters
Paul Choinere, New London Day

APPENDIX 7E

Federal Emergency Management Agency
Region I
J.W. McCormack Post Office and Courthouse Building
Boston, Massachusetts 02109

September 24, 1997

Ms. Pati Harper
22 Sapia Drive
Niantic, CT 06357

Dear Ms. Harper:

This is to acknowledge receipt of your questionnaire presented to me during the Millstone Nuclear Power Plant Public Meeting held on August 27, 1997, and your letter dated September 9, 1997. The questions have been discussed with and faxed to the State of Connecticut's Office of Emergency Management (CTOEM), the U. S. Nuclear Regulatory Commission (NRC) and Federal Emergency Management Agency (FEMA) Headquarters.

In order to provide comprehensive answers to your questions, coordination with the aforementioned agencies is necessary. To expedite our responses, we have agreed that each organization will respond to you directly. We are working together to assure that each question will be answered thoroughly. Enclosed is a matrix indicating which questions will be addressed by each organization.

Your inquiry is important to us, and we will provide you with a response as soon as we can.

Sincerely,

Daniel C. McElhinney
Regional Assistance Committee Chairperson
Federal Emergency Management Agency, Region I

Enclosure

cc:
Barry Zalcman and Falk Kantor, U. S. Nuclear Regulatory Commission
Ihor Husar, Federal Emergency Management Agency
Robert Plant, Director, Connecticut Office of Emergency Management

Question	FEMA	NRC	CTOEM
1	Secondary		Primary
2			Primary
3	Primary		
4	Primary		
5			Primary
6	Primary		Secondary
7			Primary
8			Primary
9	Primary		
10		Primary	
11	Secondary		Primary
12	Primary		
13	Secondary		Primary
14	Primary		
15	Primary		
16	Primary		
17	Secondary		Primary
18			Primary
19	Primary		
20		Primary	
21		Primary	

APPENDIX 7F

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

November 13, 1997

Ms. Pati Harper
22 Sapia Drive
Niantic, CT 06357

Dear Ms. Harper:

This is in response to questions you raised at the public meeting held by the Federal Emergency Management Agency (FEMA) on August 27, 1997, following the emergency preparedness exercise at the Millstone Nuclear Power Station, and in a subsequent letter to FEMA on September 9, 1997.

As indicated in the letter to you on September 24, 1997, from Daniel C. McElhinney, Regional Assistance Committee Chairperson, FEMA Region I, three questions in the questionnaire titled, "CRC Evacuation Subcommittee Questions for FEMA and OEM," were assigned to the U.S. Nuclear Regulatory Commission (NRC) for response. Responses to these three questions - Questions 10, 20, and 21 in the questionnaire - are attached. Responses to the other questions are being provided by FEMA and the Connecticut Office of Emergency Management.

We appreciate your interest in emergency preparedness at Millstone and hope that the enclosed responses to your questions fully address your concerns. Please let us know if we at the NRC can be of further assistance.

Sincerely,

Charles L. Miller

Charles L. Miller, Chief
Emergency Preparedness and
Radiation Protection Branch
Division of Reactor Program Management
Office of Nuclear Reactor Regulation

Attachment: As stated

cc: IHusar, FEMA HQ
DMcElhinney, FEMA RI
RPlant, CT OEM

Question 21: A concerned citizen has posed questions concerning the discharges of radioactive effluents from nuclear power plants. Questions such as: What is the current allowable REM radiation exposure limit and how do these limits affect unborn children? Is there any advance public or NRC notification when planned radioactive effluent discharges from plants occur and how does the NRC enforce guidelines that govern these discharges?

Response: Doses from effluents from nuclear power plants are limited to 0.005 rem (to the whole body) annually. This dose is to the maximally exposed individual. The significance of this dose is suggested by the fact that the doses received from nature range from about 0.1 to about 2 rem annually; the average dose from nature is about 0.3 rem annually. Thus, the permissible dose from nuclear power plant effluents is far less than the house-to-house variation in the radiation doses from nature.

The principal concerns with prenatal exposure are increased risk of cancer and mental retardation. The National Academy of Sciences (BEIR-V) states that the increased cancer risk from prenatal exposure has not been established, but postulates a risk possibly as high as 1.5 in a million for the permitted dose from nuclear power plant effluents. For the average American this means an increase in cancer risk from about 0.2 to about 0.2000015. The risk of mental retardation exceeded 10-percent for instances where doses exceeded 50 rem in the 8 to 26 weeks gestational age period. Mental retardation was not seen where the irradiation occurred outside the gestational age interval and there was no statistically significant increase where the doses did not exceed 50 rem. It is concluded that the risk of mental retardation from the doses from nuclear power plant effluents is essentially zero.

The public notice of radioactive releases from nuclear power plants comes during the licensing process. Once the plant goes into operation, very small amounts of radioactive material are released continuously. It cannot be otherwise because there must be ventilation in the various buildings where people work and the release of trace quantities of radioactive material into these areas cannot be prevented. Of course, there are provisions for notification of offsite officials and other protective measures if there were to be the threat of a hazardous release.

The system used by the NRC to ensure compliance with the effluent release limits are necessarily complex. The following is a brief summary, intended to show that the controls are effective. It starts with a design review during licensing that ensures that each plant has effluent treatment systems installed that enable the plant to be operated within the limits. The licensing review also ensures that all important release points are properly sampled and monitored so the quantities released are known. The licensing review also includes assurance that the land use patterns and other characteristics of the local area are properly characterized so the doses can be calculated conservatively. Finally, the licensing review ensures that an adequate environmental monitoring program has been established to confirm the effluent monitoring program. The maintenance of these systems and operations are required in the licensing process. Once the license is issued and the plant is in operation, surveillance is maintained by NRC inspectors to ensure that the requirements are met. The resident inspectors are stationed on-site and they are supported by periodic and special inspections by radiation specialists. Finally, off-site measurements are made to detect any significant inadvertent or unreported release.

Responses to CRC Evacuation Subcommittee Questions
Assigned to the Nuclear Regulatory Commission

Question 10: If a nuclear emergency with significant radioactive fallout occurs during a period when the ground is snow covered, how is the contaminated snow removed before the evacuated population can return to their homes? How and where is this contaminated snow dispersed?

Response: In the event of a nuclear emergency with significant release of radioactive materials to the environment, Federal resources would be mobilized to assist State and local governments in decisions concerning public health and safety. In particular, a Federal Radiological Monitoring and Assessment Center (FRMAC) would be established near the accident site to coordinate the Federal response effort. After the initial assessment has been made and immediate protective measures such as evacuation or sheltering have been taken, a more comprehensive evaluation would be undertaken with the objective of deciding what additional measures are needed. Federal, State, and private organization monitoring teams would perform radiation surveys of the affected areas and an extensive sampling program would be undertaken to support decisions concerning protective measures such as the extension (or relaxation) of the initial protective measures, restrictions on drinking water and other food and dairy products, reentry of the evacuated population, and decontamination of the affected areas. The magnitude of the problem would depend on many factors such as the nuclides released and their quantity, the extent of the area contaminated, weather conditions, and the terrain. The return of the evacuated population and the decontamination strategies employed would be the result of a careful, deliberate process based on sound environmental measurements and analysis. Contaminated snow would be just one of the environmental factors taken into consideration and, if left in place, would be treated as part of the general environmental contamination situation. Short-lived nuclides would be reduced by radioactive decay. High levels of contamination could be fixed in place in areas to which access is controlled or removed for disposal in designated waste storage facilities. Contaminated snow, if removed from selected areas, would eventually become a contaminated water problem and as such could be treated by special means such as evaporation to concentrate the radioactive material or the radioactive material could be removed from the water by a process known as ion exchange. Whether there is snow or not, a number of decisions over a period of time would be necessary after the event has occurred to develop and implement the best reentry and decontamination strategies to ensure public health and safety.

Question 20: If the state will not stockpile Potassium Iodide (KI), can local town and municipal officials request KI from the NRC for stockpiling?

Response: The Nuclear Regulatory Commission (NRC) is currently considering a revision to the policy regarding the use of potassium iodide (KI) as a supplemental protective measure for the general public in case of a severe reactor accident. One proposal being considered includes the recommendation that the Federal government would fund the purchase of KI at the request of the States for those States who choose to use KI as a supplemental protective measure. The proposed policy also includes the recommendation that local jurisdictions who wish to incorporate KI as a protective agent for the general public should consult with the State to determine if such arrangements are appropriate. Under the proposed policy, the Federal government would purchase KI but interested State and local governments would be responsible for maintenance, distribution, and subsequent costs. The final policy on the use of KI for the general public, when it is approved and issued, will address implementing and funding details for State and local governments to obtain KI.

APPENDIX 7G

Chairman, Regional Assistance Committee
Federal Emergency Management Agency
401 J. McCormack Post Office and Court House
Boston, MA 02109-4595

October 10. 1997

Dear Sir:

On September 9, 1997 the CRC Emergency Planning Subcommittee sent a letter to FEMA forwarding a series of questions concerning nuclear emergency planning. On September 30. 1997, FEMA replied with a letter which included a matrix detailing whether FEMA, the NRC or CTOEM had primary or secondary responsibility for responding to the before mentioned questions. FEMA also stated that the appropriate agencies had been forwarded these questions and would be responding in the future. Thank you for your prompt attention to this matter and we look forward to receiving answers to these important questions.

Since our original letter of September 9, we have received two additional nuclear emergency planning concerns from a resident of Haddam Neck, CT. These concerns are specific to the Connecticut Yankee Nuclear Power Station and the Haddam Neck area. We are sending these, as enclosure (1), so they may be addressed by FEMA or forwarded to the applicable agency for resolution.

Your response should be forwarded to:

Pati Harper
22 Sapia Dr.
Niantic, CT 06357

If you have any questions concerning this request, please call Pati Harper at (860) 739-4713 or Mark Holloway at (860) 739-4440.

Pati Harper

Pati Harper

CRC Emergency Planning Subcommittee Chairperson

1. Haddam Neck's geography makes the planning for emergencies unique, but compensation for this has not been sufficient. Haddam Neck is a peninsula and CY is at the end of it. Furthermore, Haddam Neck is across the river from the rest of the town to which it belongs, Haddam, and has no direct access by bridge (over 12 miles via streets). FEMA regulations provide for only one emergency management director per town. An exception should be made in this case so an additional director from Haddam Neck can provide for the dramatically different needs of this peninsula community.

2. Geography of the State's Emergency Planning Zones is the second concern. Haddam Neck sits at the corner of three Emergency Planning Zones: Haddam Neck is part of Zone II (Middletown); East Hampton is part of Zone III (Rocky Hill); and East Haddam is part of Zone IV (Colchester). Since these three communities are the closest to CY, coordination of emergency planning should be under one zone to be most effective.

APPENDIX 8

DETAILED SUBCOMMITTEE REPORTS

Decommissioning

Decommissioning refers to activities that follow the permanent shutdown of a nuclear facility. In essence, the plant is systematically torn down, its components removed, and its site decontaminated to such a degree that it can be returned to its original "green field" status.

The decommissioning process is assumed to be inherently safe, mainly because the plant is no longer operated and its high level radioactive waste has been stored. However, this view is highly oversimplified. Even after removal of the highly contaminated radioactive plant components, irradiated fuel assemblies are expected to remain on site for decades, either in a spent fuel pool or in dry storage casks. The fuel assemblies will continue to emit radiation and generate heat. Although it may be possible to remove most radiogenic materials from the soils on site, those particles that have likely entered fractures in the bedrock and groundwater will remain and continue to travel for decades. Furthermore, pollution caused by radioactive particles that have traveled to and accumulated in groundwater and sediments outside of the plant boundaries are not addressed in the decommissioning process.

It should be obvious, therefore, that Connecticut Yankee and the region surrounding it will, for a very long period, retain a memory of the fission processes that have taken place there for 28 years.

Connecticut Yankee is among the first nuclear power plants to undergo decommissioning after recent amendments were made to NRC regulations. On August 28, 1996, the NRC adopted its Final Rule on decommissioning. The NRC summary states that "the final amendments clarify ambiguities in the current rule and codify procedures that reduce the regulatory burden, provide greater flexibility, and allow for greater public participation." (Federal Register, July 29, 1996, vol. 61, No.146). In justifying its actions, the NRC concludes that "the activities performed by the licensee during decommissioning do not have significant potential to impact public health and safety, and these require considerably less oversight by the NRC during power operations." (See Appendix 11A for a brief summary and comparison of the past rule and some notable amendments made).

When a plant is being decommissioned the public is asked to put its trust in the safety procedures established by plant management, with some oversight by the NRC. Although the NRC has deemed the

potential risk to be not significant, decommissioning does pose some potential risk to workers and the public living in the plant's vicinity, especially in its early stages.

History has shown many faults with the quality of safety at Connecticut Yankee. The plant has, for instance, experienced "significant" fuel failure events. A great deal of contamination occurred as a result of these events, both in the plant and in some of the surrounding areas. Connecticut Yankee's management had early warning of these fuel failures but the NRC allowed them to continue operating the plant, and they chose to do so with leaking fuel. This decision increased the safety risk and permitted radioactive contamination to occur. The plant ran while safety margins were clearly insufficient and despite repetition of various incidents, management did not make the necessary corrections.

The public is presently asked to trust NU's handling of the decommissioning process despite this dismal record. What is further unsettling, is that this effort will be carried out at a time when the NRC seeks to reduce the "regulatory burden" imposed on licensees and to provide them with more "flexibility". (see Appendix 11A).

All of Connecticut's nuclear facilities were shut down in 1996. When NU realized the severity of its problems at its plants, it hired Mr. Kenyon to clean the Augean stables at Connecticut Yankee and Millstone. Much appears to have been accomplished during his relatively short tenure. However, a major problem persists because opinions differ on the price of safety. Opponents of nuclear power believe that safety needs to be assured at any price, while plant management argues that for an industry to be economically viable a balance needs to be struck between cost and safety. The general public has been placed between these extremes. It depends for its safety on utility management who will ultimately determine the degree of safety as a function of economics.

In the past NU management has taken shortcuts, accepting the possible consequences related to public safety. This is true not only with regard to plant operations but also to the decommissioning of the Rowe nuclear plant in Massachusetts (see Appendix 11B). Appendices 11B and 11C show how different the opinions are with regard to the decommissioning process at Rowe Yankee. Appendix 11B is an abstracted version of the Citizen Awareness Network history of the decommissioning. Appendix 11C is NU's response to the subcommittee's request for analysis of Appendix 11B.

NEAC members should draw their own conclusions from a comparison of these documents. But one thing is clear: NEAC should find a way to make sure that no illegal or unsafe activities occur during the decommissioning of nuclear plants in Connecticut. A repeat of Rowe's history should be avoided.

Nuclear Plants in a Restructured Electric Utility World

The Role of Nuclear Power in New England. Although the recent shut downs of plants have reduced New England's reliance on nuclear power, nuclear plants still represent the largest single share of installed generating capacity in the region. New England does not have any indigenous supplies of fossil fuels. It is at the end of the pipeline, and transportation costs make the State's fossil fuel costs among the highest in the nation. In addition, there has been for many years a worldwide concern about the price and reliability of oil. Increased demand for natural gas for utility use may result in substantial gas price fluctuations, particularly during the winter season. Nuclear power must remain as a viable alternative as we look to a proper fuel balance for Connecticut and New England.

To the extent that existing nuclear plants can provide safe, reliable, and economic energy, operating plants should continue to run, and shut-down plants should be restarted as soon as possible to avoid an adverse effect on the economy of the State and the region. At the same time, prudent decisions made by utilities to decommission nuclear plants on economic grounds should not be penalized in legislation restructuring the utility industry. This might lead to higher operating costs, which could lead to cost pressures that could threaten the safe operation of nuclear power plants.

The Importance of Nuclear Power to Connecticut's Environment. In the discussion of the future of nuclear power, limited emphasis has been placed on the importance of nuclear plants in minimizing air pollution. Connecticut could not meet federal ozone standards even if all stationary sources of pollution were to be shut down. If the State's nuclear plants were to be replaced by fossil generation, our situation would be even worse.

Many people consider carbon dioxide the most troublesome pollutant associated with energy production, due to its role in promoting global warming. Although engineering improvements can reduce the discharge of most fossil fuel pollutants to the atmosphere, there is no process available to significantly

reduce the amount of carbon dioxide. In contrast, operating nuclear reactors release no carbon dioxide. Nuclear energy accounts for 89% of all avoided carbon dioxide emissions by U.S. electric utilities between 1973 and 1995. In total, more than two billion tons of carbon emissions have been avoided in the U.S. alone through the use of nuclear energy.

In a restructured utility world, open competition could harm the environment because, in the absence of other information, the decision as to which generating technology to use would be made on price alone. A company entering the deregulated world would work to be the low cost producer. The new, highly efficient, combined cycle gas-fired units would be selected first. It may well be that emission-free sources such as nuclear, solar, wind, and hydropower will suffer in a restructured utility market due to their costs.

In addition, one of the major reasons for going to nuclear power plants in the first place was to reduce our dependence on foreign oil. This was, and is, consistent with State energy policy. As the emphasis on our quality of life subsequently grew, it was realized that a nuclear reactor produces no sulfur dioxide, nitrous oxides, carbon dioxide, or particulates. Although nuclear plants release some radiogenic elements, on balance environmental, economic, and energy policy reasons indicate that nuclear power remain a viable source of power for Connecticut and New England. The innate environmental and economic benefits of nuclear power, and its importance for fuel diversification may add some compelling health and monetary reasons for continued operation of nuclear plants in New England.

Nationally, there has been some discussion about an emissions or carbon tax that would be applied to all fossil emissions. The subcommittee does not recommend that Connecticut consider such taxes, because they would give a competitive advantage to power producers in other states that do not have such taxes. If such taxes are to be imposed, they should be national in scope. On the other hand, a restructuring bill could include labeling requirements, as were contained in the 1997 bill. This would enable consumers to know the mix of energy sources (nuclear, fossil, and renewable) used to produce the electricity they purchase and allow them to base their supply decision on non-price factors without affecting the competitive nature of the market.

Effect of Restructuring on the Safe Operation of Nuclear Plants. As a result of the Three Mile Island incident, the NRC mandated that extensive engineered safeguards be added to all nuclear plants in the

country to ensure that safety systems would be initiated automatically, if needed. But inaction by both the NRC and NU resulted in situations that could have endangered the health and safety of plant operators and the general public. The failures of both the NRC and NU at Millstone and Connecticut Yankee are well documented. In the recent past we have witnessed a strong emphasis on safety by the NRC and the plant operators. Will this continue in a restructured world where price competition will govern the selection of generation sources? Assurance of safe operations requires more than engineered safeguards and monitoring by the NRC. We must have a safety conscious work environment, fostered by the utility.

In a regulated industry, the DPUC could protect a utility from its own poor management and shelter it in situations where safety was lax. In contrast, deregulation will require nuclear power to compete with all suppliers without the protection provided under current regulations. Should a utility in a deregulated world fail to maintain a proper safety environment for its nuclear operations, then, like any other company in a competitive market, it would have to suffer the consequences. There would be no recourse to an economic regulator. The NRC has recently established new guidelines for the operation of nuclear plants in a deregulated environment. Many people believe that with the NRC's independent monitoring controls in place, nuclear plants can be operated safely in this environment. But the current Millstone experience has taught us many lessons, including the need for an independent monitor, reporting to the state legislature.

The Role of Securitization in a Restructured Utility Industry. A major issue in the restructuring debate is the treatment of stranded costs, notably the embedded costs of generating plants that exceed the costs of plants using newer technologies. The subcommittee recommends the use of securitization, to reduce these stranded costs once the ratepayers' responsibility for them is determined. Currently ratepayers pay these costs through rates that reflect the utility's cost of capital. With securitization, bonds are issued at a lower interest rate, with the proceeds used to reduce the utility's stranded costs. The bonds are backed by a charge imposed on all electricity consumers, regardless of their electric supplier. With the reduction in stranded costs, the utility's ability to compete is improved allowing it to maintain an emphasis on safe operations. Use of the securitization method would also reduce rates by decreasing the utility's cost of capital.

Decommissioning Funding. Under current law, part of the electric rate is dedicated to the costs of decommissioning nuclear plants. The money is invested, under strict regulations, in a trust to be used only for decommissioning. With the limited number of plants that have been decommissioned to date, it is difficult to say with certainty what the actual decommissioning costs will be. The NRC has recently expressed a concern that restructuring the electric industry could jeopardize funding for decommissioning. It has sought assurances that there be sufficient funds available for decommissioning when each plant closes, regardless of the structure of the industry.

One way of addressing this concern is to establish a separate "wires charge" to cover prudent decommissioning costs. With these costs handled separately, there would be less incentive to resort to cost cutting that could adversely affect the safe operation of nuclear plants, thereby jeopardizing public health and welfare. The use of a separate charge for decommissioning costs would provide a source of funds independent of the financial health of the utility and the economic competitiveness of the plant. In addition, if a plant closed prematurely the unfunded decommissioning costs could be securitized to reduce the ultimate costs borne by ratepayers.

It should be noted that NU and UI currently fund, through rates, decommissioning costs for nuclear plants located outside of New England in which they have partial ownership. The subcommittee recommends that other states follow Connecticut's initiatives, to provide a consistent decommissioning plan throughout New England.

Alternative Energy

With all of the four nuclear generating plants in Connecticut shut down, one permanently (to be decommissioned) and the other three having been shut down for more than two years for problem resolution, safety concerns are an issue. Many people are asking whether there are alternatives and whether they are practical. They are raising questions such as:

- What about renewables?
- What about solar?
- What about wind power?
- What about biomass?
- What about hydropower?
- What about conservation?

This paper considers the relative merits of Connecticut's existing nuclear energy systems and the most frequently suggested alternatives. It states conclusions as to how well each alternative fulfills five requirements that any Connecticut-based energy system should meet. The paper discusses the nature of the greenhouse gas emissions and their significance as a key issue in determining the kinds of technology that are likely to become dominant in the future. The paper concludes that, when running normally at a typical industry capacity factor, nuclear plants best meet the five requirements and describes the bases for these conclusions.

Requirements. The following are basic requirements for an electrical energy system for Connecticut. The system should:

1. Meet the electric energy needs of the state's inhabitants at a reasonable cost and with high reliability;
2. Have a minimal effect on public health and provide a satisfactory environment for operating and maintenance personnel;
3. Have a minimal effect on public safety;
4. Be clean, i.e. (a) it should generate minimal quantities of wastes, (b) liquid and gaseous discharges should not be harmful, and (c) solid wastes should be easy to dispose of and not be harmful; and
5. Be economically competitive.

Energy Systems. The energy systems that are presently in practical use fall into the following categories:

- Fossil fuel burning
- Nuclear fission
- Renewables, such as solar and hydropower
- Earth thermal energy, and
- Fuel cells

Fossil Fuels. Fossil fuel burning systems include all systems that derive heat energy at high temperatures by burning hydrocarbons (substances primarily composed of carbon and hydrogen). These substances are

extracted (mined) from deposits in the earth formed millions of years ago from decaying organic materials. These fuels, primarily coal, oil, and natural gas, supply about 85% of the world's commercial energy, about 8 million tons of oil equivalent per year.

The key issue for fossil fuel burning systems is the discharge of gases (primarily carbon dioxide) into the atmosphere contributing to the greenhouse effect. The effect can be minimized by using a fuel that has relatively little carbon, such as natural gas, but there would still be a substantial discharge of carbon dioxide, which is believed to be a very significant factor in producing the greenhouse effect.

As this subcommittee's report was being written (December 1-10, 1997) representatives of 170 nations were meeting in Kyoto, Japan to determine a global policy and plan for controlling the emissions of greenhouse gases. These gases (most notably carbon dioxide) have been widely viewed as being responsible for global warming and other forms of climate change. The likely outcome of this meeting will be in a treaty agreeing to a greenhouse gas emission reduction plan, which may ultimately proscribe increases in carbon dioxide emissions into the atmosphere.

The greenhouse effect explains why a car parked in the sun becomes much hotter than the air surrounding it. Some of the sun's energy that strikes the car is reflected away but much enters through the windshield and windows. This energy causes the car's interior to heat up, and release radiant energy. This energy has a lower wavelength than the sun's energy. Most of this energy bounces off of the windows and is trapped in the car.

The same phenomenon makes the earth habitable. The earth's atmosphere acts like the windshield and windows in the car. Energy from the sun comes through the atmosphere and heats the earth. The earth reflects some of the energy back, but at a lower frequency that does not easily get out through the atmosphere. The result is that the earth warms up. If it were not for this effect, the earth would be much colder than it is and human life could not exist.

The concern is that there is evidence that strongly suggests that carbon dioxide is enhancing the greenhouse effect. Historically, the concentration of carbon dioxide and the earth's surface temperature have moved together for centuries. With the growth of industrial civilization, both carbon dioxide concentration and surface temperature have risen rapidly, and are expected to go much higher. Although a causal relationship between carbon dioxide concentration and surface temperature has not been conclusively proven, there is enough evidence to create an intergovernmental political consensus that action must be taken to restrict carbon dioxide emissions.

The problem is that even the cleanest, highest efficiency fossil fuel burning system discharges substantial quantities of carbon dioxide. Replacing nuclear plants with fossil plants means exchanging a system that has near zero direct emissions of carbon dioxide with a system that is a major producer of this gas. For example, a natural gas-fired plant that is the same size as Connecticut Yankee will emit the same amount of carbon dioxide as 329,000 cars that are driven 10,000 miles per year with fuel efficiency of 18 miles per gallon. Replacing the state's nuclear plants with fossil fuel burning plants will have to overcome objections with regard to this phenomenon.

In addition to their carbon dioxide emissions, fossil fuel burning systems result in an appreciable level of sickness and loss of life, thereby violating the second and third requirements described above. Some authors have claimed that such systems, although accepted by the public in practice, pose a far greater risk to public health and safety than nuclear systems (*The Health Hazards of Not Going Nuclear*; Reference Petr Beckmann, p. 161). For this reason, the subcommittee does not consider fossil fuel-burning systems to be a viable replacement for the existing nuclear system.

Nuclear Systems. Nuclear systems are what we have. The nuclear fission system consists primarily of light water reactors (109 in the United States and over 400 worldwide) that meet about 10% of the world's electricity demand. Except for 4(c), they more closely conform to the five requirements than other systems. With respect to requirements (2) and (4) they are superior to fossil systems by a factor of 100 and greenhouse gas discharges are zero. Although coal is the most minimum cost electric power generating

system, nationally, a new efficient nuclear plant could approximate the coal fired generating cost. In Connecticut (and New England) nuclear power could have a significant economic advantage when running with a typical nuclear capacity factor.

Renewables. Renewables take a variety of forms. Solar energy can be used directly for heating or to create electricity using photovoltaic cells. Other forms of solar energy include wind, hydropower (in the form of falling water or tidal flows), seawaves, and biomass (wood and other forms of vegetation). All except sea waves have demonstrated practicality in some applications. Photovoltaics work well in space and in a wide variety of other applications. But, considered as potential replacements to the Millstone Nuclear Units, these sources cannot meet requirements (1) and (5) due to the diffuse sunlight in Connecticut and low conversion efficiencies.

The inability of direct **solar energy** to fulfill requirement (1) is the consequence of dilute sunlight in Connecticut and the low efficiency of current technologies in converting this energy into a useful form. The dilute nature of sunlight in the state is clear from the following:

Location	Solar Quantity (watts/square meter)
Above atmosphere	1,400
Overhead at noon in the tropics	950
U.S. Average	200
Albuquerque, NM	240
Hartford, CT	160

In the United States, the average intensity of light over an area of about ten square feet is equal to two 100-watt bulbs. In Hartford, the energy from sunlight over this area is equal to one 100 watt bulb and one 60 watt bulb.

Renewable energy technologies are also constrained by low conversion efficiencies. In the case of **photovoltaics**, the overall system efficiency of existing technologies is about 10%. To replace Millstone 3 with a Connecticut photovoltaic plant would require more than 22 square miles of cell surface and about 45 square miles of land. Similarly existing **biomass** technologies, for example those using wood, convert only about 6.5% of the energy to a useful form. At this efficiency, using biomass to meet half of the nation's energy needs would take the entire country's landmass. Moreover, for biomass to be practical the fuel supply must be sustainable. In New England the sustainable yield of firewood is about one half cord per acre per year. The Energy Advocate newsletter estimates that replacing a power plant as big as Millstone 3 with wood-burning plants that use sustainably harvested wood would require 11,000 square miles of forest, more than double Connecticut's land area.

While **wind** can be converted to mechanical or electrical power using windmills, the feasibility of this technology is limited by the dilute nature of wind energy in most locations. California has 16,000 windmills sited in favorable locations, but they only meet 1% of the state's electricity needs. In 1974, the Swedish Power Board estimated that 1,500 windmills mounted on 200 foot towers would be needed to replace a single 1,000 MW nuclear power plant.

Hydroelectric plants essentially meet all of the requirements. But they are not a viable replacement for the nuclear plants due to the scarcity of suitable sites for new or expanded dams. While the James Bay hydropower development project in Canada could have replaced much of generating capability of Millstone, it was stopped for environmental reasons. The main concern has been that the project would cause widespread flooding of Indian lands. A more recent concern, which applies to all large hydro projects, that the dams' hydraulic turbines would slaughter aquatic life. There has also been a concern about having the state (and the region) rely so heavily on a foreign energy source .

Earth Thermal Energy. Another energy source sometimes considered renewable is earth thermal energy, which extracts heat directly from the earth in a form, such as geothermal power, that can drive a thermodynamic cycle to produce electricity. Earth thermal plants essentially meet all of the above requirements and should be used where they can. But the feasibility of this technology depends entirely

upon being located where geothermal energy can power a thermodynamic cycle, which is not the case in Connecticut.

Fuel Cells. Fuel cells convert the chemical energy of a fuel directly into electrical energy using a controlled, continuous process known as electrochemical oxidation. The cells can be powered using fossil fuels such as natural gas or renewables such as gas produced from biomass.

A fuel cell's desirable attributes are direct conversion of fuel to electricity and its resulting high efficiency. Its deficiencies are its low power density, its need for expensive metals such as platinum as a catalyst, and its need for hydrogen-rich fuel. This fuel can be hydrogen, which is expensive, or methane, which is a greenhouse gas. As a result, this technology is incapable of replacing fossil-fuel burning or nuclear energy technologies on a large scale, because it does not meet requirement (1), nor requirement (4) if methane is used as a fuel. Although fuel cells can not be considered for large-scale power production at this time, considerable research has been done on the technology in recent years, led by innovations by Connecticut industry. The state should consider fostering fuel cell use in automobiles, commercial buildings, and individual homes. The environmental benefits would be important to Connecticut's quality of life.

The technologies described above are improving slowly. Raising the efficiency of solar collection devices could become important in meeting the state's energy needs while abating greenhouse gases. Renewable sources and fuel cells should form a greater percentage of the energy portfolio. But, until these gains are made, nuclear energy is likely to emerge as the most effective option for meeting electricity needs and controlling the greenhouse gas problem.

APPENDIX 9

COUNCIL OF STATE GOVERNMENTS

2nd JOINT MEETING OF THE REGIONAL RADIOACTIVE TRANSPORTATION COMMITTEES

Rep. Terry Concannon was one of 2 legislators from the 10 states in the Northeast Region invited to observe this conference on radioactive transportation which took place in Las Vegas, December 9-10. A visit to Yucca Mountain scheduled for conference participants on December 11, was an additional important feature.

The radioactive waste transportation committees from the Northeast, Midwest, South and West regions reported on their current status. DOE presented the key issues of the national transportation program. Rail transportation .v. highway transportation was discussed, as was the possibility for privatization.

The current U.S. program for the transportation of non-commercial used nuclear fuel and other high-level radioactive material was presented. This includes; navy fuel, weapons fuel, university and research reactor fuel, and foreign fuel(as a result of the nuclear weapons nonproliferation policy, highly enriched uranium will be received back from 41 countries). All but 4 (MN,ND,SD,WI) of the 48 contiguous states are included in the possible routing for these shipments.

Other significant transportation includes the transuranic wastes from weapons production to the Waste Isolation Pilot Project (WIPP) near Carlsbad, NM, and the commercial spent nuclear fuel.

The January 31, 1998, deadline for acceptance of radioactive material by DOE is still in effect.

Clearly, it is important to establish consensus between the states/regions in developing positions where transportation, mode and route selection, training of personnel, cask acquisition and testing, and a response to the privatization proposal are concerned. Break-out sessions took place among the 4 regions, reports were made and common positions compared.

This is an important on-going project in which Connecticut needs to be involved, especially with the decommissioning of Connecticut Yankee about to take place.

YUCCA MOUNTAIN:

8 kilometer U-shaped access tunnel completed in April 1997 after 2.5 years.
Extensive testing, including hydrological and thermal under way.
Work has not started on the repository, and will not till the license is approved by the NRC

2001: Site will be recommended as a repository if it proves to be viable and scientifically sound.
2002: The Dept. of Energy is scheduled to submit its License Application to the NRC upon the approval of Nevada, or Congress (in the event that Nevada submits a Notice of Disapproval),

Spent Nuclear Fuel(SNF) and High Level Waste(HLW) containers have been designed.

The development of an interim storage area in Nevada was approved in S.104 and H.R. 1270 - The Nuclear Waste Policy Acts of 1997. Deadlines are specified. The estimate is that it would take 4 years to establish once the design is approved. H.R. 1270 directs DOE to operate a repository at Yucca Mountain by 1/17/2010, if it is determined to be suitable.

The tour of the Yucca Mountain facility presented an opportunity to see the project, to learn of the comprehensive nature of the engineering and scientific studies and to appreciate, first-hand the enormity of the undertaking. We walked through to a side alcove, the Upper Tiva Canyon Alcove, where a detailed explanation was given by the engineer in charge. He emphasized the hydrological and thermal testing. The enterprise is unique and I felt reassured that it will not come to pass unless all eventualities have been thoroughly examined and tested, and all issues have been resolved.

APPENDIX 10

CONNECTICUT ACADEMY OF SCIENCE AND ENGINEERING

Statement of Inquiry Form

Title of Inquiry: CYN: Cancer Incidences Near the Connecticut Yankee Nuclear Plant

Date Inquiry Accepted: July 9, 1997

Date Response to Inquiry Due:

STATEMENT OF INQUIRY (Revised) **[8/20/97]**

Citizens living in the vicinity of the Connecticut Yankee nuclear energy plant have increasingly expressed concerns related to the reported and possible other emissions of radiogenic elements into the atmosphere, the Connecticut River, and Long Island Sound. Much of the information on which these concerns were/are based, however, contains no scientific data and has little or no statistical significance.

To assist the Nuclear Energy Advisory Council with its analysis of public safety in proximity to nuclear energy plants, the Academy is asked to study and make an initial report on cancer incidences in regions with relatively high exposure from the Connecticut Yankee plant in Haddam, using data from the Connecticut Tumor Registry.

Connecticut Yankee's selection is based on the fact that it has been intermittently active for several decades, and was finally closed in the fall of 1996. The relatively long and specific interval during which radiogenic emissions could have occurred may provide a reliable database of tumor incidence despite the fact that the radiation half-life of many of the elements probably released extends well beyond the closing date.

OBJECTIVE: Determine if statistical relationships exist between cancer incidence and radioactive emissions to the atmosphere from the Connecticut Yankee plant.

METHOD:
1. Use emission records and meteorology data records in plume transport models to calculate frequency and intensity of exposure and dose in an x,y grid across the state.
2. Use the Connecticut Tumor Registry to plot frequency and timing of cancers in an x,y grid across the state. Standardize the Tumor Registry data by the appropriate population parameters.
3. Compare the results of 1. and 2.
4. Interpret the results.

Inquirer's Name: The Honorable Terry Concannon
Mr. Evan Woollacott

Title or Position: Co-Chairs, Nuclear Energy Advisory Council

Address: Room 4035, LOB
Capitol Avenue
Hartford, CT 06106

Responding Committee: ad hoc TB: EV No.: 139

Key Respondent: Professor David R. Miller Date accepted: 8/12/97

Procedure Code: a____ b____ c_X__ d____ Study No.: 139 Committee No.: 174
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CONNECTICUT ACADEMY OF SCIENCE AND ENGINEERING

Statement of Inquiry Form

Title of Inquiry: CYN: Cancer Incidences Near the Connecticut Yankee Nuclear Plant

Date Inquiry Accepted: July 9, 1997

Date Response to Inquiry Due:

STATEMENT OF INQUIRY

[11/19/97]

Citizens living in the vicinity of the Connecticut Yankee and the Millstone nuclear energy plants have increasingly expressed concerns related to the reported and possible other emissions of radiogenic elements into the atmosphere, the Connecticut River, and Long Island Sound. Much of the information on which these concerns were/are based, however, contains no scientific data and has little or no statistical significance.

To assist the Nuclear Energy Advisory Council with its analysis of public safety in proximity to nuclear energy plants, the Academy is asked to study and make an initial report on cancer incidences in a region predominantly downwind (and possibly downstream, if that differs) of the Connecticut Yankee plant in Haddam, using data from the Connecticut Tumor Registry.

Connecticut Yankee's selection is based on the fact that it has been intermittently active for several decades, and was finally closed in the fall of 1996. The relatively long and specific interval during which radiogenic emissions could have occurred may provide a reliable database of tumor incidence despite the fact that the radiation half-life of many of the elements probably released extends well beyond the closing date.

To examine the significance of the results, the cancer incidences downwind (downstream) of the Connecticut Yankee plant should be compared to that of a region in Connecticut with similar demographic characteristics, as far removed as possible from any man-made nuclear energy source.

Inquirer's Name: The Honorable Terry Concannon
Mr. Evan Woollacott

Title or Position: Co-Chairs, Nuclear Energy Advisory Council

Address: Room 4035, LOB
Capitol Avenue
Hartford, CT 06106

Responding Committee: ad hoc TB: EV No.: 139

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APPENDIX 11

APPENDIX 11A

APPENDIX A

Decommissioning Process according to the past rule:

1. Licensee submits a detailed Decommissioning Plan and Supplemental Environmental Report.
2. NRC reviews the plan and prepares a Safety Analysis Report and an Environmental Assessment.
3. Upon approval by the NRC, the licensee is permitted to decommission according to the approved plan. No major decommissioning can be performed until approval of the plan. The opportunity for a (formal) public hearing is part of the approval process.
4. If the licensee wants a reduction in requirements due to permanent cessation of operations, it must obtain a license amendment for a Possession Only License. (All license amendments provide the opportunity for a public hearing.)
5. The licensee must:
    - Provide assurance that adequate funds will be available through completion of decommissioning.
    - Provide a site specific cost-estimate and adjusted financial assurance mechanism.
    - Before approval of the decommissioning plan, licensee use of funds would be determined on a cost-specific basis for premature closing.

Decommissioning process according to the new rule:

1. No major decommissioning activities can be undertaken until 90 days after submittal of the Post Shut Down Decommissioning Activities Report (PSDAR). *[The PSDAR replaces the former Decommissioning Plan. The PSDAR contains a description of planned decommissioning activities, a schedule for those activities, an estimate of expenses, and an explanation of CY's conclusion that the environmental impacts associated with the planned activities are bounded by previously issued Environmental Impact Statements.]*
2. A meeting to inform the public as to the PSDAR is held, 30 days after which major decommissioning activities can begin. *[This is an informal version of what was previously available to the public. What is significant about this change is that the NRC claims that the new rule "allows for greater public participation" when it, in fact, strips the public of any effective participatory role in the decommissioning process. In the past for instance, if citizens supported putting the plant into SAFSTOR (delaying dismantlement to allow for radioactivity to decay), they could petition for an adjudicatory hearing at which time they could present their arguments, cross-examine, call witnesses, etc. This is no longer legally viable.]*
3. The licensee must notify the NRC if it seeks to undertake any activity which significantly deviates from the PSDAR. The NRC will be forthcoming in defining significant deviations which would require notification. If a major deviation from the PSDAR is reported to the NRC, no public hearing or 90 day waiting period is required. *[There is the potential that this may introduce a risk to workers and/or the*

public for which there is no legal recourse. For instance, the NRC uses the decision to remove steam generators intact vs. cutting and segmenting them as an example of a significant deviation. This particular example is notable in light of the fact that workers at Rowe received unexpectedly high exposure to radioactivity as a result of management's decision to cut and segment steam generator baffles. Worker safety was severely and needlessly compromised when management chose the most hazardous of their available options. It may be important to remember, therefore, that similar events could occur at CY for which the public has little of no voice.]

4. Part 50 of Technical Requirements was amended to expand the scope of activities allowable under an old operating license to include decommissioning activities. *[According to the old rule, a licensee had to amend their license after ceasing operations. This automatically triggered the opportunity for a formal public hearing which the new rule precludes.]*
5. A license termination plan must be submitted to the NRC, but is less detailed than under the past rule. The licensee doesn't need to provide for a dismantlement plan, and the plan can be as simple as a site survey plan. The approval process provides for a formal public hearing. However, if the spent fuel is either moved off site or to an Independent Spent Fuel Storage Facility (ISFSF), the remaining facility is similar to a materials facility and a less formal meeting is more appropriate. *[If the spent fuel at CY is to remain in storage in the fuel pool, then that area of the plant will be defined as an ISFSF, and the remaining areas a materials facility. It should be noted that these two areas at CY would be regulated under two different licenses: Part 72 and Part 50 licenses respectively.]*

APPENDIX 11B

OUTLINE OF YANKEE ROWE DECOMMISSIONING HISTORY

2/92 Yankee Rowe shuts down its operation.

8/92 NRC grants Yankee Atomic Electric Company (YAEC) a change in license from an operating license to a "possession only license". YAEC states its intention to put the reactor in SAFSTOR (long-term on-site cool down).

9/92 YAEC submits a proposal to the NRC to be allowed to strip the reactor prior to submission or approval of a decommissioning plan. This "pre" formal approval of decommissioning is called the early Component Removal Project (CRP).

[Prior to January of 1993, the NRC rules held that major decommissioning of a nuclear power station could not begin before the submission and approval of a decommissioning plan. It was undisputed that this approval process would include NEPA (National Environmental Policy Act) compliance, and preparation of an Environmental Impact Statement.]

11/92 CAN makes a formal written objection to rapid dismantlement and requests a community hearing from the NRC. The NRC responds that a meeting will be held to inform the community of the reactor's plans.

1/93 The NRC modifies its decommissioning rule to allow YAEC to strip the Yankee Rowe reactor prior to Commission approval of a decommissioning plan. The rule changed without public notice or comment period, both of which are required by law. The rule change also eliminated the availability of public hearings on the decommissioning plan after CAN made two requests for such a hearing.

6/93 The NRC holds a public meeting to inform citizens of YAEC's intention to commence rapid dismantlement of major components from its reactor prior to submission or NRC approval of a decommissioning plan. CAN states that this meeting is not an appropriate or adequate response to their request for a formal hearing on decommissioning alternatives.

7/93 NRC project manager Fairtile offers CAN a teleconference with the NRC to address concerns.

8/6/93 NRC teleconference with CAN. CAN presents its concerns: 1) NRC breaking its own regulations by allowing YAEC to dismantle the reactor without a pre-approved plan; 2) NRC permitting YAEC to use decommissioning funds to remove the components while under a Possession Only License; 3) NRC justifying dismantlement on the basis of precedents set at operating reactors such as Millstone.

8/93 NRC writes to YAEC stating that they will "raise no objection" to the removal of the four steam generators and the pressure vessel, and the shipping of highly irradiated parts to a

radioactive waste dump in Barnwell, South Carolina. CAN again objects to the CRP, asks for an immediate halt of such activities, and for a formal public hearing.

9/93 CAN submits eight allegations to the Inspector General of the NRC, David Williams, of illegalities connected with the Yankee Rowe CRP. The Inspector General begins an investigation.

10/93 CAN again requests a hearing on the CRP, and obtains legal counsel to take the NRC to court for the illegal decommissioning of the reactor.
Franklin County Commissioners object to NRC permission of CRP, and write the NRC to express concerns.

4/94 CAN's attorneys file suit in Federal District Court against the NRC to seek relief of violation of the right to due process, and violations of NEPA, the Atomic Energy Act, and the Administrative Procedures Act. Due to a technicality, the court was forced to send the case to the First Circuit Appellate Court in Boston.

5/94 CAN's attorneys file for a review of administrative action in U.S. Court of Appeals for the First Circuit.

6/94 NRC Office of Inspector General (OIG) releases its report: Decommissioning the Yankee Rowe Nuclear Power Plant: NRC Policy at a Crossroads. Instead of taking any significant action, the OIG concludes that the legality of the CRP will be determined by the Appellate Court ruling in CAN vs. NRC.

8/6/94 Franklin County Commissioners host NRC Decommissioning hearing (not adjudicatory). YAEC, Mass. Dept. of Public Health, 20 NRC representatives, CAN, and local citizens attend. This meeting is a requirement for the approval of the decommissioning plan which Yankee submitted in February 1994 after the removal of major components. NRC refuses to discuss the CRP.

1/95 CAN attorney appears before the U.S. Court of Appeals to argue the CAN case. Yankee Atomic joins the NRC as an intervenor, and both present arguments.

7/95 The U.S. Court of Appeals, First Circuit, establishes CAN's right to an NRC hearing on safety and environmental issues raised by the decommissioning of Yankee Rowe. The early component removal project was rejected by the Court. The NRC was found to be in violation of the National Environmental Policy Act, the Atomic Energy Act, and the Administrative Procedures Act. The Appellate Court opined that as long as radioactive materials remain on site, the issue is not moot. It therefore remanded the case to the agency for remediation.

7/95 The NRC releases its Draft Rule on Decommissioning on the day of the Appellate Court decision. The rule codifies the Rowe experiment eliminating requirements that the operating

license be amended (which triggers a relevant hearing opportunity). The Draft rule therefore eliminates any opportunity for a meaningful hearing, as well as NEPA requirements.

9/95 NRC Commissioners meet, issue an order halting the decommissioning at Rowe, and post a notice in the Federal Register offering the opportunity for an adjudicatory hearing. With legal counsel, CAN submits five contentions to the NRC. CAN challenges YAEC's decommissioning plan for its failure to choose methods that would minimize radiation doses to workers and the public in a cost-effective manner. CAN questions the accuracy of YAEC's cost estimates, the radiation dose estimates for workers, and the non-specific quality of the plan. The contentions call for the preparation of a new supplemental Environmental Impact Statement (SEIS) on the decommissioning of the Rowe reactor. [According to NRC regulations, the plan is the sole instrument to protect the health and safety of the workers and the public. The codification of decommissioning deregulation at Rowe undermines NRC regulation of decommissioning safeguards and standards.]

The commissioners submit CAN's contentions to the NRC Licensing Board.

2/96 Atomic Safety Licensing Board (ASLB) pre-hearing before a three judge panel at NRC headquarters, Rockville, Maryland. Prior to the pre-hearing, the NRC Commission issues a ruling upon the contentions CAN submitted. The ruling pre-judges many of the issues as "inconsequential", and poses a standard for evaluating radiation exposure which demands that CAN prove that exposures during the rest of decommissioning will be greater than the estimated total for the entire decommissioning process. The Commission requires this even though it is aware that over 95% of the radionuclide inventory has been removed. Although the ASLB dismissed many contentions, CAN is granted standing in the proceeding to represent worker and public health and safety concerns.

3/96 CAN appeals ASLB decision to the Commissioners.

3/96 CAN uncovers "new" information and discrepancies in the utility's records, and submits data concerning worker exposures to the Commissioners. The Commissioners rule that CAN's worker exposure contentions and the controversy over the choice of decommissioning options has merit, and remands their case to the Licensing Board for review and possible litigation. However, the Commission again placed CAN's task in the context of attempting to prove that exposures of the remaining decommissioning would be greater than estimated for the entire project, barring consideration of exposures under the CRP and additional "minor" continuing activities.

7/96 The Licensing Board accepts CAN's contention concerning excessive worker exposure for litigation. In granting this contention, the Board set precedent by:

- giving CAN standing to represent worker's health and safety interest
- allowing a public interest group to question the dose estimates of a corporation, and decommissioning choices based on those estimates

- allowing CAN access to YAEC documents previously withheld on the premise that they contained "proprietary information" and "trade secrets".

8/96 NRC releases Final (new) Decommissioning Rule which codifies the Yankee Rowe decommissioning procedures, which were found to be illegal in the First Circuit Court. Precedents set by the new Rule are as follows:

- no hearing on the issue of whether the NRC can save financial costs and increase worker and public safety by long-term on-site cool down for 30 years, allowing radioactivity levels to substantially decline
- no adjudicatory hearings for decommissioning (except in narrow circumstances after the majority of decommissioning has taken place)
- avoidance of NEPA compliance by describing decommissioning as not comprising a major federal action

8/96 CAN enters the discovery period in which Yankee's records on worker exposures during decommissioning are examined with the help of Dr. Marvin Resnicoff, Senior Associate for Radioactive Waste Management Associates. Information is obtained which challenges YAEC's dose estimates, and procedures for calculating "decommissioning doses" for the workers and the public. YAEC estimated 570 person rem for all decommissioning, while Dr. Resnicoff found that workers had incurred almost 900 person rem, and could be exposed to over 1200 person rem before the site can be released for unrestricted use.

YAEC's techniques for underestimating worker exposures include:

- categorizing decommissioning activities as "operation" and "maintenance"
- exclusion of worker exposures at other facilities that decontaminated Yankee's decommissioning wastes
- under-estimation of exposures to the public and non-YAEC workers along the transportation routes
- under-estimation of exposure for worker exposure on-site
- under-reporting of worker exposure for inhalation and hot particles
- the lack of adequate site characterization to clarify what remains to be done to return Yankee Rowe to a "green field". [The NRC is allowing YAEC to leave 15 millirem a year behind above background, as well as leave radioactive contamination in the sediment of the Deerfield River. The NRC has recently ruled that it is allowable for utilities to leave 25 millirem above background behind, with the possibility of up to 100 millirem a year.]

9/96 NRC Licensing Board rejects CAN's contention for a hearing. CAN appeals the decision to the NRC Commissioners who also reject CAN's appeal.

10/96 CAN decides that a further appeal for a hearing would prove to be moot. Even if it were granted, the Commission would only stay the approval of Yankee's decommissioning plan for two weeks, which is time enough for YAEC to remove the reactor vessel.

1997 The future of decommissioning: CAN believes that the new NRC decommissioning rule which codified the Rowe experience is a violation of CAN vs. NRC. CAN will request a hearing for the decommissioning of Ct. Yankee in Haddam, and use the NRC hearing to raise significant safety and environmental concerns that have been set aside by the NRC, including:

1. Decommissioning is no longer a major Federal Action requiring NEPA compliance.
2. There are no adjudicatory hearings except after the site has been stripped. There is one meeting by NRC staff to inform the public of the rapid dismantlement, which can start 60 days after the submission of a partial plan. There is no requirement that the plan be specific.
3. Since decommissioning is seen as a benign action, there is no resident NRC inspector to oversee decommissioning.
4. the illegality of NRC's new rule that permits the shipping of waste off-site immediately, rather than storing it on-site and allowing its radioactivity to decay substantially.
5. the fact that Northeast Utilities does not have sufficient funds to clean up the site.
6. inadequacy and deficiencies in the decommissioning plan.

Since the Appellate Court decision in CAN vs. NRC confirms that decommissioning is a major federal action requiring NEPA compliance, CAN will challenge the new rule on that basis. Major component removal (CRP) should not be authorized before the submission and approval of a complete decommissioning plan by the NRC, since it would undermine NEPA compliance. NRC should retain its distinct categories between reactor operations and cessation. Adjudicatory hearings should remain to afford the public the possibility for a hearing prior to decommissioning.

The attempt to streamline the process for the utility and deregulate NRC requirements abdicates the NRC's responsibility to protect the health and safety of workers, the public, and the environment, and also undermines citizen due process. The exposures to workers during rapid dismantlement are comparable to standard operation, and substantially larger than originally predicted. The information gained during Yankee discovery raises serious concerns about the inadequacy of the NRC's GEIS (Environmental Impact Statement) for decommissioning. This document is the underpinning for the new rule. Therefore, CAN will challenge the GEIS through the hearing process.

APPENDIX 11C

Northeast
Utilities System

Millstone Offices • Rope Ferry Road

P.O. Box 128
Waterford, CT 06385-0128
(860) 447-1791

October 21, 1997
SP-97-216

Professor Jelle Zielinga deBoer
Department of Earth & Environmental Sciences
Wesleyan University
265 Church Street
Middletown, CT 06459-0139

Dear Professor deBoer,

Thank you for your letter of September 19, 1997, seeking Northeast Utilities' comment on the material you provided to us on the subject of decommissioning.

As you are likely aware, the regulatory process utilized by the U.S. Nuclear Regulatory Commission (NRC) with respect to the decommissioning of the Yankee Rowe Plant was substantially revised by the agency in 1996, and replaced with an entirely different scheme. As a result, the process followed in the Yankee Rowe case has limited relevance to the regulatory process which is being followed with respect to the decommissioning of the Haddam Neck Plant or other nuclear power reactors. Attached for your information and use (Enclosure A) is a copy of the NRC's revised decommissioning rule (62 Fed. Reg. 39278, July 29, 1996), which outlines the regulatory process to be followed in the decommissioning of Connecticut Yankee. As contemplated by the NRC's revised rule, a public meeting is scheduled for October 27, 1997, during which the NRC is expected to describe the regulatory process for decommissioning and to receive comments from members of the public regarding health and safety issues and protection of the environment during decommissioning as outlined in the Post Shutdown Decommissioning Activities Report (PSDAR) for the plant (Enclosure B). Connecticut Yankee will also discuss its plans for decommissioning the plant. Also attached for your information is a copy of the NRC's press release with respect to this meeting (Enclosure C).

You also asked that we provide you with an analysis of the decommissioning procedure utilized by the Yankee Rowe plant. As you may know, the procedure adopted by Yankee Atomic Electric Company for the Rowe plant was the DECON decommissioning option under which decommissioning of the facility (other than the spent fuel pool) is to be completed relatively promptly after the facility ceases operation. Major accomplishments in connection with the decommissioning of the Rowe Plant include:

- Successful and safe completion of steam generators and pressurizer removal and disposal in 1993
- Successful completion of segmentation of the reactor vessel internals in 1994
- Successful and safe removal of the reactor vessel in 1996 and transportation of the vessel to disposal at the Barnwell, South Carolina low-level waste facility in 1997
- For all decommissioning activities, worker radiation exposures of less than 520 person-rem to date, well below the original estimate of 744 person-rem estimated in the Rowe Decommissioning Plan, and well below the generic estimates on the basis of which the NRC has concluded that early dismantlement is an acceptable decommissioning alternative
- Successful completion of over 1.39 million safe work hours to date
- Safe completion of 240 low-level waste shipments, shipping 105,000 cubic feet of waste of the total estimated volume of 136,000 cubic feet
- Preparation and submission of a License Termination Plan in 1997

Another example of a recently completed nuclear plant decommissioning is that of the Fort St. Vrain plant in Colorado. Among the major accomplishments at this facility were:

- Decommissioning of the facility under budget ($187 actual million vs. $189 million budgeted)
- Completion of decommissioning safely and on schedule (October 1996 vs. November 1996 contract requirement)
- Completion of 511 waste shipments within the estimated waste shipment volume (289,600 cubic feet actual vs. 290,000 cubic feet estimated)
- Completion of decommissioning well under the estimated dose exposure estimate (380 person-rem vs. 433 estimated person-rem)
- Termination of the NRC power reactor (Part 50) license in 1997
- Successful completion of passive (dry cask) storage of spent fuel

The Connecticut Yankee Atomic Power Company has also selected the DECON decommissioning option for decommissioning the Haddam Neck Plant. In light of the exemplary performance of Yankee described above in carrying out that option in connection with the Rowe plant, it seemed to us to be a logical choice to turn to that organization in utilizing key personnel in carrying forward the same decommissioning option at the Haddam Neck Plant.

There are two additional points we would like to offer. Beyond our obligation to comply with all NRC requirements governing the decommissioning process, we remain committed to be very open and forthcoming with any information relating to ensuring public health and safety. We point to our handling of issues concerning soil contamination and our ongoing site characterization work, including the decision to retain the Oak Ridge Institute for Science and Education, as an example of how we approach issues of concern to the public. Also, you may know that the NRC has decided to retain a full time, experienced Resident Inspector at the site throughout at least the end of the 1998 fiscal year (September 30, 1998).

I trust that this information has been helpful to you. Please do not hesitate to contact me if you have questions or would like additional information.

Very truly yours,

Richard M. Kacich
Director, Special Projects

RMK:nc

Enclosures:
A. NRC Final Rule on Decommissioning of Nuclear Power Reactors (39278) dated July 29, 1996.
B. CY letter (CY-97-075) to NRC, "Haddam Neck Plant Post Shutdown Decommissioning Activities Report (PSDAR)," dated August 22, 1997.
C. M. B. Fairtile (NRR) memorandum to S. H. Weiss (NRR), "Forthcoming Meeting to Solicit Public Comments on the Haddam Neck Plant PSDAR", dated September 12, 1997.

cc:
L. H. Levy
R. A. Mellor

CONNECTICUT NUCLEAR ENERGY ADVISORY COUNCIL

MEMORANDUM

December 8, 1997

TO: Terry Concannon, Co-Chairman

FROM: John L. Helm, Sr.

SUBJECT: NRC Meeting with Parsons Power at their offices in Reading Pennsylvania, on Friday December 5, 1997. Concerning an CAVP review of Selected Millstone Unit 2 Systems.

ENCLOSURE: List of Attendees

Richard McIntyre of the NRC gave a summary of the current status of NRC's inspection of Parsons Power's progress in conducting a CAVP review of the selected Millstone 2 systems. It was brief and favorable. Steve Reynolds, NRC Branch Chief, added a few words.

In the question period following the NRC presentation, I asked if they had found any significant open items or areas of weakness, that some might attempt to exploit at the upcoming open meetings with the technical staff and NRC commissioners. The NRC representatives avoided answering this question by stating that with several inspection efforts yet to be carried out, it was to soon for such a determination.

All in all, I believe the NRC was satisfied with Parsons Power's work. The fact that the meeting only took half an hour confirms this.

Very truly yours,

John L. Helm, Sr.

John L. Helm SR.

cc: Evan W. Woollacott, Co-Chairman
128 Terry's Plain Rd.
Simsbury, CT 06070

Memorandum

DATE: January 19, 1998

TO: Evan Woollacott and Terry Concannon, CoChair, NEAC

FROM: Bill Sheehan

RE: MONITOR WATCH IN MILLSTONE 3 CONTROL ROOM

1. On January 18, 1998 I spent an hour in the control room of MILLSTONE 3 observing the control room watchstanders. Watchstanders were preparing for the Emergency Core Cooling System(ECCS) flow test and lining up secondary systems to bring them into an operational status..

2. The following comments are germane:

a. Watchstanders were formal in their communications with each other.

b. Watchstanders were very careful in conducting the various lineups(see comment below)

c. An operator conducting a valve lineup of the secondary sampling system reported the following deficiencies:

1) A valve was labeled "880" but according to the lineup procedure and the print it should be labeled "350".

2) Valve SST994 was in a "Locked Open" position. According to the valve lineup procedure and the procedure listing all "Locked" valves in the plant it should not be a locked valve. A check of the Print in Control and the P&ID Listing however, the valve should be locked open. The Unit Supervisor submitted a CR on the deficiency.

d. While discussing the above items with the unit supervisor, the operator commented in a sarcastic manner that "... the plant is ready for startup."

e. Another operator requested a second check on the valve lineup he was conducting because one of the valves did not respond the same way the remaining valves did when he manipulated them. This line up did not require a second check by the procedure. The unit supervisor provided another watchstander to conduct the second check.

f. There were two persons from oversight observing plant evolutions.

3. Based on the above comments, the following observations are germane:

a. At least one of the watchstanders in this section does not really understand what the "Physically Ready for Restart" declaration really meant. Management has put out explanations that the declaration does not mean all work is done, but this meaning may not be clear to all. Subjectively, I got the impression that the watchstander felt it was just another management feel good declaration and management may not appreciate just howmuch remains to be done.

b. The fact that there was an error on valvelineup operations sheet should not be unexpected. I just hope that management has a mechanism to efficiently handle the resulting CR s on systems that have not been under the CAVP microscope. I would classify the CR commented on above as a Level 4 because the actual plant condition agreed with the print and the P&ID list even though it did not agree with the valve lineup sheets.

c. I was impressed with the operators care and concern to be sure that the lineups were done correctly the first time and documenting any difficulties. Management's message to "...do it right" has certainly gotten through.

4. I have discussed this observation with Mike Brothers.

Bill Sheehan

APPENDIX 12

State of Connecticut
NUCLEAR ENERGY ADVISORY COUNCIL

REPRESENTATIVE TERRY CONCANNON
Co-Chair
EVAN WOOLLACOTT
Co-Chair

Room 4035
Legislative Office Building
Capitol Avenue
Hartford, CT 06106

February 4, 1997

Mr. Bruce D. Kenyon
President and Chief Executive Officer
Northeast Nuclear Energy Company
P.O. Box 128
Waterford CT 06385-0128

Dear Mr. Kenyon:

Public concern was raised about the "independence"aspect of the *Independent Corrective Action Verification Program* established by the NRC to monitor and assess NU's actions in preparation for re-starting the Millstone nuclear generating plant. On November 7, 1996, the Nuclear Energy Advisory Council (NEAC) established a special subcommittee to evaluate the 'independence' issue, and to review the independence aspect of the process whereby the ICAVP contractor is selected.

NEAC members John Helm and John Markowicz co-chaired the subcommittee. Its initial charge was to assess both the independence of the selection process as performed by NU and that of the selected contractor. As time was of the essence, the subcommittee proceeded with deliberate speed.

Attached for your information and use are the findings made by the subcommittee. Should you have any questions, please do not hesitate in contacting us.

For the Nuclear Energy Advisory Council

Terry Concannon
Co-Chair

Evan W. Woollacott
Co-Chair

State of Connecticut
NUCLEAR ENERGY ADVISORY COUNCIL

REPRESENTATIVE TERRY CONCANNON
Co-Chair
EVAN WOOLLACOTT
Co-Chair

Room 4035
Legislative Office Building
Capitol Avenue
Hartford, CT 06106

February 7, 1997

The Honorable Shirley Jackson
Chairman, Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Dear Dr. Jackson:

One of the responsibilities of the Nuclear Energy Advisory Council is to work in conjunction with agencies of the federal, state, and local governments and with any electric company operating a nuclear power plant to ensure public health and safety. From discussions with your office, we recognize that you are also sensitive regarding the public faith and confidence in actions taken by NU and the NRC. At our last Council meeting, we came up with a recommendation that merits your consideration.

It is recognized that the actions, or lack thereof, by NU are subject to enforcement action by the NRC, and, may well, under NRC rules, result in substantial fines. This is a unique situation where both the NRC and NU have been subject to public criticism for presumed failures in fulfilling their responsibilities relative to the Millstone and Connecticut Yankee stations. The general public has health and safety concerns regarding both the operation and shut down of our nuclear plants.

With this background, it is recommended that after you identify the fines that you might assess, you take a different approach. We recommend that you direct NU to use the money to establish a special health, safety and environmental fund to be used by the communities in the immediate areas of the Connecticut nuclear plants for relevant purposes.

We believe that the establishment of such a fund would go a long way to improving the public faith and confidence of Connecticut citizens.

For your information, we will be contacting our Washington representatives to assist us in this matter.

For the Nuclear Energy Advisory Council

Terry Concannon
Co-Chair

Evan W. Woollacott
Co-Chair

cc: NEAC Members
Bernard Fox
Bruce Kenyon

State of Connecticut
NUCLEAR ENERGY ADVISORY COUNCIL

REPRESENTATIVE TERRY CONCANNON
Co-Chair
EVAN WOOLLACOTT
Co-Chair

Room 4035
Legislative Office Building
Capitol Avenue
Hartford, CT 06106

February 7, 1997

Dear

The Nuclear Energy Advisory Council (NEAC) was established by Connecticut Public Act 96-245. Among its charges is to work with agencies of the federal, state and local governments and with any electric company operating a nuclear power generating facility to insure the public health and safety.

In keeping with that charge, the attached letter was sent by the Council to Dr. Shirley Jackson.

We will not summarize the letter here, but simply ask for your assistance in establishing a nuclear health and safety fund for Connecticut. We stand ready to discuss this with you, should you desire.

This same letter is being sent to the seven other congressional members from Connecticut.

For the Nuclear Energy Advisory Council

Terry Concannon
Co-Chair

Evan W. Woollacott
Co-Chair

WASHINGTON OFFICE:
2416 RAYBURN BUILDING
WASHINGTON, DC 20515
(202) 225-2076

DISTRICT OFFICES:
74 WEST MAIN STREET
NORWICH, CT 06360
(203) 886-0139

94 COURT STREET
MIDDLETOWN, CT 06457
(203) 346-1123

Congress of the United States
House of Representatives
Washington, DC 20515

February 24, 1997

SAM GEJDENSON
2D DISTRICT
CONNECTICUT

COMMITTEE ON
INTERNATIONAL RELATIONS

RANKING MEMBER
SUBCOMMITTEE ON
INTERNATIONAL ECONOMIC
POLICY AND TRADE

SUBCOMMITTEE ON
ASIA AND THE PACIFIC

COMMITTEE ON RESOURCES

SUBCOMMITTEE ON
FISHERIES, WILDLIFE
AND OCEANS

SUBCOMMITTEE ON
WATER AND POWER RESOURCES

COMMITTEE ON
HOUSE OVERSIGHT

The Honorable Terry Concannon
Room 4035, Legislative Office Building
Capitol Avenue
Hartford, CT 06106

Dear Representative Concannon:

Thank you for your letter regarding the Council's proposal to set up a special health, safety and environmental fund to be used by the communities most directly affected by the Millstone and Connecticut Yankee plants.

It is indeed an interesting proposal. If the NRC levies fines, I believe they and NU should closely examine this option. I believe this would be fair and equitable, since the towns are the hardest hit by this whole debacle. Any fines should stay in Connecticut, and I am willing to do my part to see that through.

Thank you for sharing this proposal with me. I hope you will continue to update me as this process moves along.

Sincerely,

SAM GEJDENSON
Member of Congress

SG:fc

Northeast Utilities System

Rope Ferry Road, Waterford, CT 06385

Northeast Nuclear Energy Company
P.O. Box 128
Waterford, CT 06385-0128
(860) 440-0419
Fax (860) 440-2105

Bruce D. Kenyon
President and Chief Executive Officer

February 27, 1997

Representative Terry Concannon
Mr. Evan Woollacott
Co-Chairpersons - Nuclear Energy Advisory Council

Dear Representative Concannon and Mr. Woollacott:

In your February 4, 1997 letter to me, you forwarded a report prepared by the Nuclear Energy Advisory Council's (NEAC) special subcommittee. The report provided an assessment of the "independence" issue relating to Northeast Utilities' selection of the Independent Corrective Action Verification Program (ICAVP) contractor. While I was familiar with the issues as they were being discussed in real time, I read the subcommittee's report and found it to be quite thoughtful. I personally appreciate the efforts that the NEAC and the subcommittee are investing in reviewing the issues facing Northeast Utilities, and extend to you my sincerest thanks.

There has been a significant amount of dialogue between Northeast Utilities, the NEAC, and the public regarding the selection of Sargent & Lundy as the proposed ICAVP contractor and members of my staff observed the deliberations of your subcommittee and responded to questions directed to us. All of the insights offered were weighed fully by the Company prior to finalizing our selection of Sargent & Lundy. We continue to believe that they are the most appropriate selection for Millstone Units 1 and 3. I am somewhat disappointed that the subcommittee's report did not concur with our assessment, but I am confident we are proceeding in a fashion which is responsive to the terms of the NRC Order. Moreover, while I certainly appreciate the importance of both the conduct of a substantive independent review and the maximum degree of independence, I believe that the proposal pending before the NRC will ultimately result in an important demonstration of NU nuclear's commitment and ability to do what is right. We plan to continue the dialogue on this important topic with the NEAC and the public.

Further to that point, as I introduced at the February 20, 1997 NEAC meeting, the Company is in the early stages of forming a Millstone Nuclear Advisory Committee. Broadly stated, their charge is to provide an independent perspective of all activities relating to restart of the Millstone units, including the ICAVP. We want to provide an additional opportunity for members of the public to express their perspectives and engage in a meaningful dialogue on the recovery efforts ongoing at Millstone Station. Our intention is to continue to improve communications with members of the public, complementing the important work being carried out by the NEAC. I welcome your input on the committee in general, as well as the nomination of potential candidates for inclusion on the committee. Susan Baranski (440-2059) is coordinating this effort on behalf of the Company.

Sincerely,

Bruce Kenyon

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

March 6, 1997

The Honorable Terry Concannon
Mr. Evan Woollacott
Co-Chairs
Nuclear Energy Advisory Council
Room 4035
Legislative Office Building
Capitol Avenue
Hartford, CT 06106

Dear Ms. Concannon and Mr. Woollacott:

This letter is in followup to questions raised during a recent Nuclear Energy Advisory Council (NEAC) meeting regarding the Nuclear Regulatory Commission's (NRC's) contract with Sargent and Lundy (S&L). As you are aware, S&L has been selected by Northeast Utilities to conduct the independent corrective action verification program (ICAVP) at both Millstone Units 1 and 3. The work to be performed under the NRC's contract with S&L is that S&L will provide the NRC with a team of five design specialists to perform design basis inspections to assist the NRC in determining if operating pressurized water reactors (PWRs) still meet their original design bases and ensure that these plants have been maintained in compliance with their original design bases over their lifetime. Enclosure 1 to this letter provides a copy of the contract between the NRC and S&L.

Additionally, questions were raised about Millstone Unit 2 entering Mode 6 and conducting a core offload in light of the numerous discrepancies identified, as a result of the licensee's ongoing design basis review efforts, for those systems necessary to support entry into Mode 6 and core offload. This issue was identified by the NRC staff and documented in NRC Combined Inspection 50-245/96-08; 50-336/96-08; 423/96-08 (IR 50-336/96-08), dated December 3, 1996. A copy of the cover letter and excerpts from the inspection report are included as Enclosure 2. The NRC staff followed-up on this issue in NRC Combined Inspection 50-245/96-09; 50-336/96-09; 423/96-09 (IR 50-336/96-09), dated February 24, 1997. A copy of the cover letter and excerpts from the inspection report closing out the issue are included as Enclosure 3.

Should you have any questions or comments, please do not hesitate to call me at (301) 415-1490.

Sincerely,

Eugene V. Imbro
Deputy Director, ICAVP Oversight

Docket Nos. 50-245, 50-336, and 50-423

Enclosures: 1. Sargent and Lundy Contract
2. Excerpts from IR 50-336/96-08
3. Excerpts from IR 50-336/96-09

cc: John C. Markowicz, NEAC

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

CHAIRMAN

April 10, 1997

The Honorable Terry Concannon
Mr. Evan W. Woollacott
Co-Chairs
Nuclear Energy Advisory Council
Room 4035
Legislative Office Building
Capitol Avenue
Hartford, Connecticut 06106

Dear Ms. Concannon and Mr. Woollacott:

Your letter of February 7, 1997, on behalf of the Nuclear Energy Advisory Council (NEAC) suggested that the Commission adopt an alternative approach in considering the assessment of civil penalties against Northeast Utilities for violations of NRC requirements at the Haddam Neck or Millstone plants. In this regard, NEAC suggested that the Commission, after it identified any penalties it might assess, direct Northeast Utilities to use the money to establish a special health, safety, and environmental fund to be used by the communities near the plants for relevant purposes.

You should be aware that the General Accounting Office (GAO) previously has advised the Commission that it may not redirect civil penalties otherwise assessed to fund research or similar projects as an alternative sanction for regulatory violations. *See Nuclear Regulatory Commission's Authority to Mitigate Civil Penalties*, B-238419, 70 Comp. Gen. 17 (1990). We recognize, and the GAO concedes, that the Commission has authority to mitigate or remit civil penalties to reflect the special circumstances of the violation or concessions exacted from the violator. Our enforcement policy provides for mitigation of penalties based on a licensee's corrective action, with due consideration for other circumstances surrounding a violation.

We also are aware that the Environmental Protection Agency (EPA) has adopted a policy for evaluating supplemental environmental projects as part of a settlement of civil penalty actions brought against polluters. The GAO has found the same principles regarding civil penalty mitigation applicable to EPA's discretion as it applied to the NRC as described above. Consistent with GAO's opinions, however, EPA has accepted projects pursuant to well-defined criteria, for example, where a project has a nexus to the violations at issue. With regard to EPA, such projects must remediate or reduce the probable environmental impacts or risks to which the violations contributed or reduce the likelihood that such violations will occur in the future. EPA excludes from consideration such proposals as general educational or environmental awareness projects, contributions to university research, or projects unrelated to environmental protection.

Under the very general terms your letter describes, we believe it would be difficult to fit the project as you have described it in your letter within the permissible bounds of the legal constraints and policies described above.

As you may be aware, agency staff has discussed this issue with staff from Senators Lieberman and Dodd's offices. Although the Commission is considering enforcement action against Northeast Utilities in the near future which may include the proposed imposition of civil penalties, we will consider carefully the licensee's response to any such penalties.

We appreciate your interest in this matter.

Sincerely,

Shirley Ann Jackson

Shirley Ann Jackson

cc: Senator Christopher J. Dodd
Senator Joseph I. Lieberman
Representative Sam Gejdenson
Mr. Bruce D. Kenyon

State of Connecticut
NUCLEAR ENERGY ADVISORY COUNCIL

REPRESENTATIVE TERRY CONCANNON
Co-Chair
EVAN WOOLLACOTT
Co-Chair

Room 4035
Legislative Office Building
Capitol Avenue
Hartford, CT 06106

April 25, 1997

Dear Senator Lieberman:

The Nuclear Energy Advisory Council (NEAC) has been working tirelessly to support the High Level Nuclear Waste Bill #104. We were pleased with its passage by a Senate vote of 65-34. However, we were saddened that neither of our senators chose to support a bill that is so vital to the interests of the State of Connecticut.

From a capacity standpoint, Connecticut has the highest percentage of nuclear megawatts of any state in the union. The issue of decommissioning, as is now happening at Connecticut Yankee and Millstone in the future, is a very real concern to Connecticut, especially where storage of spent fuel is concerned. It is more economical to store spent fuel in one centralized interim location. In the case of plants in a decommissioning mode, rate payer costs continue while not one kilowatt is generated. It will cost our rate payers 20 million dollars a year to continue the spent fuel pool storage at Connecticut Yankee. The cost for storing fuel at Yankee Rowe is 10 million dollars annually. All plants may have to go to dry storage, at an additional expense, if there is no federal storage site as required by the contracts between the Department of Energy and the utilities.

We have been told that the cost of storing spent fuel 'in situ' is seven billion dollars greater than that for a centralized interim storage site.

Nuclear represents 20% of our Nation's capacity and 60% of Connecticut's capacity. Failure to proceed with deliberate speed in developing the interim storage site could prove to be the death knell for nuclear power in America.

We understand that the President will honor his commitment to Nevada and veto any successful bill. Two more senatorial votes are needed to override the veto.

Accordingly, at the April 17th NEAC meeting in Waterford, the Council voted to respectfully request our senators to vote to override the veto, and vote for the State of Connecticut on this particular issue.

For the Nuclear Energy Advisory Council

Terry Concannon
Co-Chair

Evan W. Woollacott
Co-Chair

State of Connecticut
NUCLEAR ENERGY ADVISORY COUNCIL

REPRESENTATIVE TERRY CONCANNON
Co-Chair
EVAN WOOLLACOTT
Co-Chair

Room 4035
Legislative Office Building
Capitol Avenue
Hartford, CT 06106

April 25, 1997

The Honorable Christopher Dodd
Putnam Park
100 Great Meadow Road
Wethersfield CT 06109

Dear Senator Dodd:

The Nuclear Energy Advisory Council (NEAC) has been working tirelessly to support the High Level Nuclear Waste Bill #104. We were pleased with its passage by a Senate vote of 65-34. However, we were saddened that neither of our senators chose to support a bill that is so vital to the interests of the State of Connecticut.

From a capacity standpoint, Connecticut has the highest percentage of nuclear megawatts of any state in the union. The issue of decommissioning, as is now happening at Connecticut Yankee and Millstone in the future, is a very real concern to Connecticut, especially where storage of spent fuel is concerned. It is more economical to store spent fuel in one centralized interim location. In the case of plants in a decommissioning mode, rate payer costs continue while not one kilowatt is generated. It will cost our rate payers 20 million dollars a year to continue the spent fuel pool storage at Connecticut Yankee. The cost for storing fuel at Yankee Rowe is 10 million dollars annually. All plants may have to go to dry storage, at an additional expense, if there is no federal storage site as required by the contracts between the Department of Energy and the utilities.

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For the Nuclear Energy Advisory Council

Terry Concannon
Co-Chair

Evan W. Woollacott
Co-Chair

State of Connecticut

NUCLEAR ENERGY ADVISORY COUNCIL

REPRESENTATIVE TERRY CONCANNON
Co-Chair
EVAN WOOLLACOTT
Co-Chair

Room 4035
Legislative Office Building
Capitol Avenue
Hartford, CT 06106

April 25, 1997

Dear Representative Kennelly:

The Nuclear Energy Advisory Council for the State of Connecticut {NEAC} is, among other responsibilities, charged with communicating with the general public about the public health and safety regarding operation and decommissioning of the nuclear reactor plants in Connecticut. In listening to the public, it is obvious that there is substantial public concern about both NU and the NRC and their actions or inactions that led to the present situation. The public has lost faith in NU and the NRC. That faith can only be restored by positive visible actions taken by both NU and the NRC.

The NEAC believes that the visible presence of our Connecticut delegation in a series of hearings throughout the southern Connecticut area is most important. We recommend that the hearings include NU and NRC discussions, and time for public comment. Based on the currently start-up schedule, we recommends that hearings be held during the August recess. This expression of concern by our congressional delegation, on location, would be extremely helpful to the general public. Although we doubt that hearings conducted by an entire state congressional panel have ever been done, this is a most important time in our state's history. Will we face blackouts during the summer season? What will happen to the economy of the State of Connecticut? How bad will the ozone containment problems be? Can the plants be safely operated? Can Connecticut Yankee be safely decommissioned? These are some questions that we hear.

This note is being sent to the other seven Congressional delegates. We sincerely hope that, jointly, you will favorably consider our request.

For The Nuclear Energy Advisory Council

Terry Concannon
Co-Chair

Evan W. Woollacott
Co-Chair

State of Connecticut
NUCLEAR ENERGY ADVISORY COUNCIL

REPRESENTATIVE TERRY CONCANNON
Co-Chair
EVAN WOOLLACOTT
Co-Chair

Room 4035
Legislative Office Building
Capitol Avenue
Hartford, CT 06106

April 25, 1997

The Honorable Shirley Jackson
Chairman, Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Dear Doctor Jackson:

There has been considerable dialogue between the Nuclear Energy Advisory Commission (NEAC) and the NRC staff regarding the Independent Corrective Action Verification Program (ICAVP). We will not go through the litany of issues because it would serve no purpose.

Simply put, the nature of the industry and the need for technical expertise, among other issues, preclude any contractor from being perceived as being literally or really independent. Accordingly, the NEAC voted to delete the letter "I" from ICAVP and call it the Corrective Action Verification Program. While saying this, we agree we must all be vigilant in insuring that the monitoring would permit the CAVP contractor to be perceived as "independent" as possible.

The council appreciates being able to observe the recent review of Sargent & Lundy's CAVP audit plan by the NRC. It was informative and an important aspect of the process. The NEAC stands ready to work with you on each of the corrective action verification programs, and to foster communication with the general public.

For the Nuclear Energy Advisory Council

Terry Concannon
Co-Chair

Evan Woollacott
Co-Chair

State of Connecticut
NUCLEAR ENERGY ADVISORY COUNCIL

REPRESENTATIVE TERRY CONCANNON
Co-Chair
EVAN WOOLLACOTT
Co-Chair

Room 4035
Legislative Office Building
Capitol Avenue
Hartford, CT 06106

May 21, 1997

The Honorable Shirley A. Jackson
Chairman, Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Dear Dr. Jackson:

Thank you for your letter of April 10, 1997, in which you responded to the NEAC recommendation that the NRC direct the monies derived from penalties imposed against Northeast Utilities into a special health, safety and environmental fund. We understand that the Commission may not direct civil penalties to fund research or similar projects. However, we have a more specific proposal which might fit into one or both alternatives which you outlined.

The Energy and Technology Committee of the Connecticut General Assembly acted on a recommendation contained in the NEAC Interim Report. The intent of the proposed legislation was 'to establish a position of nuclear safety inspector within the Department of Environmental Protection, to serve as an on-site inspector of nuclear generating facilities and monitor on-site storage and transportation of nuclear waste in accordance with the Atomic Energy Act.' The bill was filed in January, but due to an extremely difficult budget year in which we are creating the budget for the biennium, 1997-1999, the bill died in committee. We in NEAC would like to pursue this further and see two possible avenues based on the information in your letter:

1) The Commission could remit part of the civil penalties imposed on Northeast Utilities (currently a proposed $650,000 for violations at the Haddam Neck Plant - 5/12/97) and exact a concession from NU, the purpose being to fund the aforementioned position of nuclear safety inspector. Alternatively,
2) the funding of the position might qualify as a Supplemental Environmental Project since it has a nexus to the violations at issue and could be considered as having a relationship to environmental protection.

We would very much like to receive your response to these proposals as we work to attain the goals outlined in our Interim Report of January 9, 1997.

There is also an issue which I wish to address concerning my trip to Chicago in April, when I had the opportunity to observe the interviews with Sargent & Lundy, as well as much of the discussion of their CAVP Audit Plan for Millstone 3. My participation was discussed during your Briefing on Millstone which took place on April 23, in Rockville. Subsequently, this was reported in full on the Internet and there are some points I wish to clarify. I have not yet subscribed to an Internet server, but many citizens in our state, who are concerned about the nuclear health and safety issues do subscribe, and some called me with inquiries about the report of my participation.

First of all, I traveled to Chicago alone and met the interview participants at the offices of Sargent & Lundy. Secondly, you asked Mr. Trevors whether they (NEAC) 'had any initial observations or comments.' Mr. Imbro responded and referred to the report which I had prepared for the 4/17 NEAC meeting, a copy of which I am enclosing with this letter. I believe that Mr. Imbro's interpretation of my conclusions was too far-reaching its scope. When I stated that every person involved is making sure that the verification program will be carried out thoroughly and competently I was referring to what I had observed in Chicago. This was a significant step in the 'ICAVP' process, but it was only one of the first steps, and there remains a long path to tread before the end is reached and Millstone 3 is ready for Restart. The NEAC is pleased to be involved and is determined to devote as much time as possible to observing the CAVP process. We have also been monitoring conference phone calls in order to determine the independent nature of communications between the various parties. Finally, the opportunity to select one or two of the Risk and Safety-Significant systems for the CAVP is a welcome one.

On behalf of NEAC I want to thank you for your courtesy in responding to our communications, and for your assistance in addressing the issues before us.

Sincerely,

Terry Concannon

Representative Terry Concannon
Co-Chair NEAC

State of Connecticut
NUCLEAR ENERGY ADVISORY COUNCIL

REPRESENTATIVE TERRY CONCANNON
Co-Chair
EVAN WOOLLACOTT
Co-Chair

Room 4035
Legislative Office Building
Capitol Avenue
Hartford, CT 06106

May 21, 1997

Dear Senator Lieberman:

Please find attached a copy of the part of our letter to Chairman Shirley Jackson which addresses a use for a portion of the proposed fines levied against Northeast Utilities by the Nuclear Regulatory Commission.

We believe that these are safety/environmentally related and would help to address the current 'nuclear related' problems in Connecticut.

We thank you for your interest in working with us on this matter.

For the Nuclear Energy Advisory Council

Terry Concannon
Co-Chair

Evan W. Woollacott
Co-Chair

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

May 27, 1997

The Honorable Terry Concannon
Mr. Evan Woollacott
Co-Chairs
Nuclear Energy Advisory Council
Room 4035
Legislative Office Building
Capitol Avenue
Hartford, CT 06106

Dear Ms. Concannon and Mr. Woollacott:

I am responding to your letter of April 25, 1997, to the Chairman in which you emphasized the importance of the NRC's and your Council's oversight efforts to ensure that an objective and competent review is performed by the Independent Corrective Action Verification Program contractor. We plan to carry out our regulatory oversight program, including inspection activities and licensing reviews to ensure a thorough and objective evaluation at Millstone.

I appreciate your active participation and valuable input to date. The staff will continue to offer you the opportunity to participate in the NRC's future oversight activities at Millstone.

Sincerely,

Frank J. Miraglia

Samuel J. Collins, Director
Office of Nuclear Reactor Regulation

JOSEPH I. LIEBERMAN
CONNECTICUT

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June 13, 1997

The Honorable Terry Concannon
Connecticut General Assembly
Legislative Office Building, Room 4035
Capitol Avenue
Hartford, CT 06106

Dear Terry:

Thank you for contacting me concerning S. 104, the Nuclear Waste Policy Act of 1997. I appreciate your concerns and carefully studied the bill before making my decision.

I strongly support our continued development of a permanent centralized geological repository as expeditiously as possible. I could not, however, support S. 104 for a number of reasons.

First, more than 200 environmental groups, including the Natural Resources Defense Council, the Sierra Club, the U.S. Public Interest Research Group, Friends of the Earth, Public Citizen, and a long list of other groups, opposed the bill because it did not adequately protect public health and safety and weakened our Federal and state environmental laws. Not one environmental group supported the legislation. As you know, I have a long history of fighting for strong environmental laws and against preempting state environmental laws. I could not support a bill which would weaken and restrict enforcement of some of our key laws, such as the Safe Drinking Water Act.

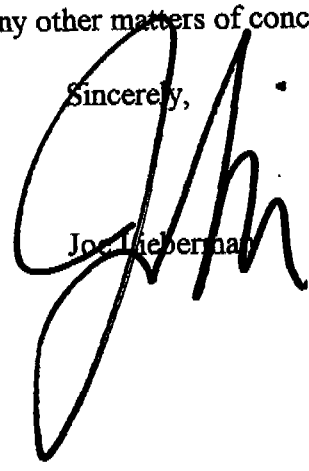
Second, I have been informed that in Connecticut there is not a storage crisis -- there is capacity. The fuel repository or "pool" at Millstone 3 can accommodate waste until 2025, including waste from Millstone 1 and 2 until the end of their licenses -- and the final repository is scheduled for completion many years before that date.

I also could not support the bill because it mandated construction of an interim storage site at Yucca Mountain before the scientific studies on the permanent repository have been done; further, the bill went on to allow that even if Yucca Mountain were found to be unsuitable for disposal, it would almost certainly, by default, become the storage site anyway. This approach is bad public policy, unfair, and threatens to undermine the efforts to establish a permanent repository. The approach also raises the concern that if Yucca Mountain is not found suitable as a permanent repository, all the spent fuel would need to be shipped twice across our country.

I hope this helps to clarify my reasons for voting against this legislation. Please

don't hesitate to contact me on any other matters of concern in the future.

Sincerely,



Joe Lieberman

JIL:vdh

105TH CONGRESS
1ST SESSION

S. 960

To amend the Atomic Energy Act of 1954 to authorize the Nuclear Regulatory Commission to direct that a portion of any civil penalty assessed be used to assist local communities.

IN THE SENATE OF THE UNITED STATES

JUNE 25, 1997

Mr. DODD (for himself and Mr. LIEBERMAN) introduced the following bill; which was read twice and referred to the Committee on Environment and Public Works

---

A BILL

To amend the Atomic Energy Act of 1954 to authorize the Nuclear Regulatory Commission to direct that a portion of any civil penalty assessed be used to assist local communities.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. USE OF PORTION OF CIVIL PENALTY ASSESSED BY THE NUCLEAR REGULATORY COMMISSION TO ASSIST LOCAL COMMUNITIES.

Section 234 of the Atomic Energy Act of 1954 (42 U.S.C. 2282) is amended by adding at the end the following:

"d. USE OF PORTION OF CIVIL PENALTY TO ASSIST LOCAL COMMUNITIES.—In imposing a civil penalty on a person, the Commission may direct the person to pay 50 percent of the amount of the civil penalty to local communities to protect local communities from the adverse economic and other affects of a violation of this Act or of decommissioning of a facility under this Act.".

○

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

CHAIRMAN

July 2, 1997

The Honorable Terry Concannon
Co- Chair
Nuclear Energy Advisory Council
Room 4035
Legislative Office Building
Capitol Avenue
Hartford, Connecticut 06106

Dear Ms. Concannon:

Thank you for your letter of May 21, 1997. We appreciate your comments regarding your attendance at the April meetings held in Chicago, Illinois, to interview the contractors for the Millstone Unit 3 Independent Corrective Action Verification Program (ICAVP) plan and to discuss the plan itself. We look forward to your continued participation in the ICAVP process.

Your recent letter also proposed that Northeast Utilities fund a State of Connecticut nuclear safety inspector position by way of remission of civil penalties assessed in the course of recent and possible future enforcement actions taken by the NRC against that licensee. With regard to the recent $650,000 civil penalty levied against Northeast Utilities for violations occurring at its Haddam Neck facility, Northeast Utilities has already paid the $650,000 civil penalty. Once received by the U.S. Government, that money must be paid to the general treasury and cannot then be diverted for other purposes.

In terms of any possible future civil penalties, the General Accounting Office has advised, as I indicated in my first letter, that there are significant restrictions on the NRC's and other agencies' ability to accept alternative projects as part of a settlement of a proposed levy of civil penalties against a licensee. Although our enforcement policy allows for consideration of corrective action in determining the amount of civil penalties to be assessed against a licensee, the NRC currently has no policy in place that addresses supplemental projects in mitigation or in lieu of proposed civil penalties. In any event, were the Commission to adopt a policy and criteria similar to that used by the Environmental Protection Agency, it is not clear that your proposal would meet the applicable criteria.

Nevertheless, you may wish to discuss your request for funding a state inspector with Northeast Utilities.

Sincerely,

Shirley Ann Jackson

Shirley Ann Jackson

cc: Mr. Bruce D. Kenyon

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

August 11, 1997

Representative Terry Concannon
Co-Chair for NEAC
34th Assembly District
76 Timms Hill Road
Haddam, CT 06438

Mr. E. Woollacott
Co-Chair for NEAC
128 Terrys Plain Road
Simsbury CT 06070-1830

Dear Representative Concannon and Mr. Woollacott:

Prior to a meeting between the Nuclear Regulatory Commission (NRC) and the Nuclear Energy Advisory Committee (NEAC) on July 17, 1997, the NRC received ten questions to be answered during the meeting regarding Northeast Utilities' nuclear power plants. Prior to the meeting, we committed to provide written responses to two of the ten questions at a later date. Below are our responses to questions No. 8 and No. 9.

Question No. 8

"What is the NRC position on the CTPUC prefiled testimony on the FERC Connecticut Yankee docket 97-913-000? The testimony details the excessive radiological contamination of the Haddam Neck site as well as the inflated decommissioning cost estimates. Is the NRC currently considering issuing violations for the contamination? What is the status of the NRC investigation?"

Commensurate with its responsibilities and authority, the Federal Energy Regulatory Commission (FERC) requires utilities to provide information and supporting basis on estimated costs expected to be incurred to support facility decommissioning activities. Such obligation to FERC is separate from NRC regulatory requirements.

We are aware of the testimony provided on behalf of the Connecticut Public Utility Commission, regarding Connecticut Yankee Atomic Power Company's (CY) statements to FERC concerning estimated decommissioning costs. We also recognize that this is an ongoing process that is not yet completed. CY remains to provide additional information and testimony to FERC on this matter.

Relative to NRC requirements, 10 CFR 50.82, "Termination of license," requires CY to provide an estimate of decommissioning costs as part of their submittal of the Post-Shutdown Decommissioning Activities Report (PSDAR). The licensee's PSDAR is expected to be submitted in September 1997. The PSDAR will also be made available for public comment as part of NRC's review process. In addition, a public meeting will be held to permit further public discussion and comment on the PSDAR, CY's decommissioning plans and preparations, and NRC activities.

Facility contamination events, such as discussed in the FERC testimony, were previously reviewed and subsequently documented in several NRC Inspection Reports. Examples include NRC Inspection Reports 50-213/82-008 which reviewed concerns about the extent and control of soil contamination on-site; and 50-213/89-002 which describe an unmonitored release pathway which resulted in soil contamination. Our regular inspections of the Haddam Neck facility, including review of liquid and gaseous radiological effluent controls and processes, and the environmental monitoring program, have not suggested any recent or continuing radiological release to the environment in excess of NRC regulatory limits, as the result of residual on-site contamination. Recent radiological sampling activities, initiated by CY to characterize residual soil contamination levels, have not yet revealed any substantial depositions of contaminated material.

While there were occurrences that resulted in radiological contamination of the site (such as reported in Inspection Report 50-213/82-008 and 50-213/89-002), the NRC is not aware of any instance in which the licensee failed to take appropriate remedial action or adhere to NRC reporting requirements. Nor are we aware of situations in which CY made on-site disposals by burying or otherwise covering-up contaminated material contrary to applicable NRC regulatory requirements. Further, recent radiological effluent and environmental reports have not shown any radiological impact on the environment, including soil, sediment, river water, vegetation, and fish. The radioisotope tritium (a product of previous reactor operations) has been usually measured in on-site monitoring wells to be above background but within EPA drinking water limits.

Notwithstanding, the NRC process for license termination requires the agency to independently verify and validate that all radioactivity, including soil contamination, is reduced to levels that permit release of the facility in accordance with NRC's radiological criteria for license termination. If NRC inspection activities or other information reveal noncompliance with regulatory requirements, NRC will take action in accordance with the established Enforcement Policy.

Question No. 9

In light of the contamination problems at Haddam Neck, what is the NRC doing about investigating the possibility of a similar contamination situation existing at the Millstone station?"

We are not aware of any abnormal or previously unrealized condition at Haddam Neck, relative to the extent of site contamination, notwithstanding news media reports that discuss recent testimony to FERC on this matter. Similarly, our inspection efforts at Millstone have not revealed any site contamination that has not been addressed in accordance with applicable regulatory requirements.

Only four Radiologically Controlled Areas (RCA) are not enclosed in some manner (i.e., covered or maintained within a building) at Millstone. These areas are: (1) the storage area by Warehouse #9 (used to store radwaste awaiting shipment); (2) the storage yard of the Millstone Radwaste Reduction Facility (MRRF); (3) the radioactive material storage area on the east side of Unit 3 (between the Hydrogen Recombiner Building and the Radwaste Facility); and, (4) the radwaste bunker yard. Plant procedures require that only containerized radioactive materials be stored in these areas, and that the areas be surveyed regularly for contamination by the plant health physics staff.

NRC inspectors have verified that the licensee maintains a record, as required by 10 CFR 50.75(g), to document the location of any significant contamination remaining as the result of spills and unusual occurrences. This record is periodically reviewed during NRC inspection activities. From our inspection efforts at Millstone we are not aware of any contaminated areas, beyond the Radiologically Controlled Areas, that are not controlled and maintained in accordance with NRC regulatory requirements. If NRC inspection activities or other information reveal noncompliance with regulatory requirements, NRC will take action in accordance with the established Enforcement Policy.

Sincerely,

Jacque P. Durr
Chief, Inspections
Special Projects Office
Office of Nuclear Reactor Regulation

cc:
W. Lanning, Deputy Director of Inspections, SPO, NRR
W. Travers, Director, SPO, NRR

CONNECTICUT ACADEMY OF SCIENCE AND ENGINEERING
179 Allyn Street, Hartford, Connecticut 06103-1421 • (860) 527-2161
e-mail: acad@ix.netcom.com

August 20, 1997

Representative Terry Concannon
Mr. Evan Woollacott
Co-Chairs, Nuclear Energy Advisory Council
Room 4035, LOB
Capitol Avenue
Hartford, CT 06106

Re: CYN: Cancer Incidences Near the Connecticut Yankee Nuclear Plant

Dear Rep. Concannon and Mr. Woollacott:

We enclose a copy of our Statement of Inquiry Form on subject inquiry for confirmation and to indicate that the chair of the study committee is expected to be Dr. David R. Miller, Professor of Natural Resources at the University of Connecticut.

The Academy Technical Board on the Environment will have oversight of the study. The chair, Mr. Gale Hoffnagle, Senior Vice President and Technical Director, TRC Environmental Corp., is also to be a member of the study committee. Therefore, oversight of this study will be assumed by the vice chair, Dr. Gary W. Yohe, Professor of Economics, Wesleyan University.

The study committe is currently being assembled. When it is, and receives approval by the Council of the Academy, we will send you a list of its members.

With every good wish,

Thomas F. Malone
Executive Scientist

cc: Prof. Miller
Mr. Hoffnagle
Prof. Yohe

CONNECTICUT ACADEMY OF SCIENCE AND ENGINEERING
179 Allyn Street, Hartford, Connecticut 06103-1421 • (860) 527-2161
e-mail: acad@ix.netcom.com

November 19, 1997

Representative Terry Concannon
Mr. Evan Woollacott
Co-Chairs, Nuclear Energy Advisory Council
Room 4035, LOB
Capitol Avenue
Hartford, CT 06106

Re: CYN: Cancer Incidences Near the Connecticut Yankee Nuclear Plant

Dear Rep. Concannon and Mr. Woollacott:

Preliminary discussions among Academy members and other experts who will be making up the study committee have determined that the study plan as expressed in the original Statement of Inquiry (S/I) required revision.

The enclosed S/I expresses the current judgement of this group as to how the study should be performed.

If you are in agreement with this revision, would one of you kindly return to the Academy a signed copy of this revised S/I.

With every good wish,

Thomas F. Malone

Thomas F. Malone
Executive Scientist

cc: Prof. David Miller
Mr. Gale Hoffnagle
Prof. Jelle de Boer

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Congress of the United States
House of Representatives
Washington, DC 20515

SAM GEJDENSON
2D DISTRICT
CONNECTICUT

RANKING MEMBER
COMMITTEE ON HOUSE OVERSIGHT

COMMITTEE ON
INTERNATIONAL RELATIONS

RANKING MEMBER
SUBCOMMITTEE ON
INTERNATIONAL ECONOMIC POLICY
AND TRADE

November 21, 1997

The Honorable Terry Concannon
Room 4035, Legislative Office Building
Capitol Avenue
Hartford, CT 06106

Dear Representative Concannon:

In your role as Co-Chair of the Nuclear Energy Advisory Council, you and your Co-Chair, Evan Woollacott, have done an excellent job in representing the state's interests in nuclear energy affairs in a forceful and responsible manner. For that I commend you, for it is absolutely vital that public officials continue to be involved in this process, but in a manner that does not incite fear amongst our neighbors.

The situation we face in Connecticut is a difficult one. Decades ago, the state decided to invest in nuclear power as the solution to our power generation needs. At the time, we heard that electricity generated from nuclear power would be "too cheap to meter." Experience, however, has shown otherwise. Between management problems at the plants and a market going through deregulation, our state and region are faced with the question of how to best generate electricity. Clearly, whatever solution is ultimately agreed upon, we can all agree on a few principles: electric power must be generated safely; it must be generated cleanly; it must be adequate enough to power the entire state without threat of interruption and; it must be produced economically.

The crisis in our state has been brought about through no fault of our citizens. Instead, a situation arose because standards at the plants were allowed to fall below acceptable levels. All public agencies, working together at the federal, state and local levels must ensure that the safety and well being of our citizens is never put at risk. Forums like yours help ensure that all of us are working together to achieve the same goals.

As always, I stand ready to join you and our other elected officials in Connecticut to discuss this matter publicly. Like you, I have heard from scores of our neighbors over the past number of years on this subject, and recognize the need to continue an open and frank dialogue on this critical issue. I look forward to your invitation.

Sincerely,

SAM GEJDENSON
Member of Congress

State of Connecticut
NUCLEAR ENERGY ADVISORY COUNCIL

REPRESENTATIVE TERRY CONCANNON
Co-Chair
EVAN WOOLLACOTT
Co-Chair

Room 4035
Legislative Office Building
Capitol Avenue
Hartford, CT 06106

December 31, 1997

The Honorable Shirley A. Jackson
Chairman, Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Dear Chairman Jackson.

With the unanimous approval of the Nuclear Energy Advisory Council (NEAC) membership we are writing this letter in support of the Community Decommissioning Advisory Committee (CDAC) which has been created to oversee the Decommissioning of Connecticut Yankee at Haddam Neck.

CDAC is performing an invaluable service to the community as the issues pertinent to the decommissioning are addressed. Given that the decommissioning is occurring some 10 years earlier than had been projected, this undertaking is thus more difficult and challenging. In addition, there has been an incredible public furore concerning potential on and off-site nuclear waste contamination at the Haddam Neck site following the testimony generated by the state Department of Public Utility Commission (DPUC) in support of their rate case currently before the Federal Energy Regulatory Commission (FERC). Since Representative Concannon lives in Haddam, she is personally aware of the problems that have ensued following the release of James Joosten's testimony, particularly his rebuttal of Northeast Utility's response.

Consequently, NEAC has two requests to make of the Nuclear Regulatory Commission:

1) That the position of on-site resident inspector be maintained at Haddam Neck; It would seem to be of the utmost importance and prudent to retain the NRC presence at the site. The public needs to know that the NRC is being vigilant in exercising its oversight and in protecting their interests from the aspects of health and safety. At this juncture, their confidence has been undermined, especially as a result of recent developments. The citizens must be assured that the regulatory component is in place, with a physical

presence to monitor it.

2) That the NRC has a representative at the CDAC monthly meetings; These are well attended, and act as the conduit of important information for the public whose questions and comments are welcomed by the committee. It is important that the appropriate authorities be there to provide the correct information in response. No other person can substitute for the NRC presence.

We earnestly support the communication you have received from CDAC which outlined these same requests and we look forward to hearing from you in the affirmative.

For the Nuclear Energy Advisory Council

Terry Concannon
Co-Chair

Evan W. Woollacott
Co-Chair

TC/mf

cc: Hugh Curley, Chairman, CDAC
Donald K. Davis, President & CEO CYAPCo

APPENDIX 13

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Chronological by plant/program

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*** ADDITIONAL DOCUMENTS ARE AVAILABLE, UPON REQUEST, AT THE PUBLIC DOCUMENT ROOMS: RUSSELL LIBRARY, MIDDLETOWN AND THREE RIVERS COMMUNITY-TECHNICAL COLLEGE LIBRARY, NORWICH.**