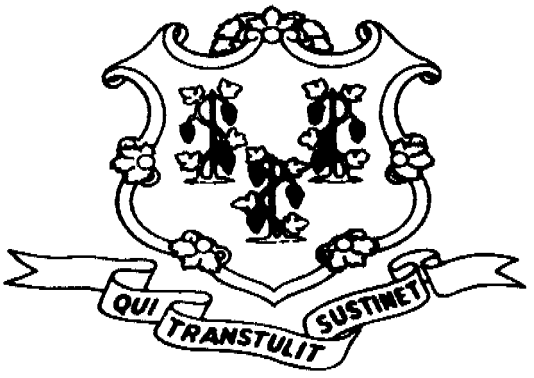
State of Connecticut



THE NUCLEAR ENERGY ADVISORY COUNCIL REPORT

1998

Established Pursuant to Public Act 96-245

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

January 7th, 1999

TABLE OF CONTENTS

Requests for any report or backup documents issued by NEAC, NRC, NU, Little Harbor Associates Parsons Power, Sargent & Lundy, may be made by contacting the Co-Chairs at Room 4100, Legislative Office Building, Hartford, CT 06106.

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 plants;
4. Communicate, through reports and presentations, with the plants' operators about safety or operational concerns at the plants;
5. Review the current status of the plants with the Nuclear Regulatory Commission (NRC).

COUNCIL MEMBERS

The council has 14 members appointed by the leadership in the General Assembly and the executive bodies in the towns in which the state's nuclear power plants are located (**Appendix 1**).

EXECUTIVE SUMMARY

During 1998, NEAC continued to concentrate on those health and safety issues that were critical to either the restart or decommissioning of the state's nuclear power plants. The major issues that were monitored at the Millstone site included the physical restart program, the Independent Corrective Action Verification Program (ICAVP), and the efforts made to establish a Safety Conscious Work Environment (SCWE). Specific comments and observations regarding the restart of Millstone 3 were provided to Nuclear Regulatory Commission (NRC) Chairman, Shirley Jackson and Commissioner Nils Diaz during meetings in Waterford, CT, and in written and verbal testimony at two public meetings of the NRC at their headquarters in Rockville, MD.

With the NRC authorization of the restart of Millstone 3 on June 15th, NEAC shifted focus to similar issues at Millstone 2, as well as emerging decommissioning issues associated with Connecticut Yankee (CY) and Millstone 1. In Haddam, attention was particularly directed toward several incidents that occurred at CY and were reported to the NRC, as well as various options related to the reuse of the CY site. At the same time, NEAC monitored the corrective action taken by NU on Discrepancy Reports (DRs) developed by the ICAVP contractors at Millstone 2 and 3, and the closure of the Special Projects Office (SPO), which had been specifically created to oversee the Millstone recovery. The duties of the SPO have been redistributed to NRC headquarters and Region 1.

In response to public concern, a NEAC subcommittee studied the use of Potassium Iodide (KI) as a supplement to evacuation during a severe nuclear power plant accident. Recognizing that the use and distribution of Potassium Iodide are complex problems, NEAC sent a letter to Governor Rowland in August. It recommended that the Departments of Public Health and Environment, and the Office of Emergency Management (OEM), implement and evaluate a two-year program for voluntary distribution of KI pills to residents within the Millstone five-mile Emergency Planning Zone (EPZ).

The NEAC Emergency Preparedness subcommittee made recommendations to OEM and the Federal Emergency Management Agency (FEMA) including the introduction of public education programs on nuclear emergency planning and the updating of present evacuation routes.

NEAC continued its study of alternate energy sources relative to the air pollution caused by fossil fuel burning units.

We were quite pleased that our Co-Chair, Representative Terry Concannon, was invited to participate in the International Atomic Energy Agency's International Conference on Nuclear Radiation and Radioactive Waste Safety held in Vienna, Austria, at the United Nations complex in September. In addition, Ms Concannon made a presentation at the American Nuclear Society meeting in Nashville in June on the local community impact of a nuclear plant (CY) shutdown.

It was another busy year for NEAC. We look forward to continuing our work in 1999, with the expectation that there should be a reduced demand for our effort towards the end of the year, due to the restart of Millstone 2 and 3, and the progress that has been made on the critical aspects that caused the creation of NEAC.

REPORT ON ISSUES

INTRODUCTION

During 1998 NEAC continued the monitoring of the restart activities at the Millstone nuclear power plants and the decommissioning of Connecticut Yankee. In so doing, the focus was directed by the recommendations made in its 1998 (*January 29, 1998*) report, which addressed the issues critical to the well being, health and safety of the public.

House Bill 5607 was raised by the Committee on Energy and Technology which updated the language in the original statute (Section 16-11a) relating to NEAC, and addressed our recommendation to establish the permanent position of a Nuclear Advisor to be appointed by the Secretary of the Office of Policy and Management (**Appendix 3A**). Co-Chairs Woollacott and Concannon testified in favor during the Committee hearing (**Appendix 3B**). Due to the fact that this was the second year of the Biennial Budget, the Appropriations Committee did not approve the required funding. However, NEAC members met with the Governor's staff and they informed us that they are pursuing the appointment of the nuclear advisor (**Appendix 3C**).

This report covers the progress NEAC made during 1998 and updates specific recommendations for consideration by the state legislature and other entities.

NU RESTART PROGRAM

NEAC monitored the following restart activities at Millstone 2 and 3:

1. Through briefings by Northeast Utilities (NU), the Nuclear Regulatory Commission (NRC) and the Independent Corrective Action Verification Program (ICAVP) contractors, Sargent & Lundy and Parsons Power, at most NEAC monthly meetings;
2. By observing public meetings between NU, the NRC and the ICAVP contractors that discussed NU's progress towards restart;
3. By observing the various NRC inspections of NU, including the 40500, the Safety System Functional Inspection (SSFI), Operation Safety Team Inspection (OSTI) and the ICAVP In-Scope and Out-of-Scope Inspections;
4. By monitoring phone calls and working meetings between NU, the NRC and the ICAVP contractors;
5. By observing public meetings for the NRC by Little Harbor Consultants (LHC) regarding NU's progress in implementing the *Employee Concerns Program* (ECP) and the *Safety Conscious Work Environment* (SCWE);
6. By observing public meetings with NRC commissioners in Waterford, CT, and at NRC headquarters in Rockville, MD, and
7. By having a member of NEAC monitor Control Room operations at Millstone 2 and 3.

In addition, NEAC monitored the status of the **Restart Program** by reviewing NRC staff memos, Inspection Reports, Notices of Violation, Significant Items List updates as well as NU Restart Readiness Reports, Commitments to the NRC and Key Performance Indicators. NEAC was also involved in the review and resolution of several hundred Discrepancy Reports (DRs) developed by the ICAVP contractors who were hired to review the adequacy of the steps taken by NU to correct the deficiencies in the licensing and design bases at Millstone 2 and 3. Each member of NEAC received nearly eight linear feet of documents to review!

Corrective Action Verification Program

NEAC devoted hundreds of hours to observing and monitoring the CAVP*. In part, this attention was focused on insuring that an "*arms length relationship*" was maintained between the contractors and NU. NEAC members also received copies of all Discrepancy Reports for Millstone 2 and 3 that were prepared by the contractors and responded to by NU. Each DR referred to a finding, or group of findings, detected by the engineering firms during their review of the systems selected for corrective action verification. The DRs have four significance levels, as originally recommended by NEAC in 1997:

1. SIGNIFICANCE LEVEL 1: Identifies that the system does not meet its licensing and design bases and cannot perform its intended function.

2. SIGNIFICANCE LEVEL 2: Identifies that a single train of a redundant system does not meet its licensing and design bases and that the train cannot perform it intended function.
3. SIGNIFICANCE LEVEL 3: Identifies that a system does not meet its licensing and design bases but the system is capable of performing its intended function.
4. SIGNIFICANCE LEVEL 4: Identifies that the system meets it licensing and design bases, but there exists minor errors such as minor arithmetic errors that do not significantly affect the results of a calculation or inconsistencies between documents of an editorial nature.

The documents were reviewed at each step of the CAVP process. At least one NEAC member monitored more than a dozen working meetings, and the phone calls between the contractors and NU (monitored by the NRC), which increased from 2-3/week to a near-daily occurrence, were monitored on a random basis by one of 3 NEAC members.

February 19, Co-Chair Terry Concannon observed the NRC meeting in Rockville, MD, at which a quarterly briefing on Millstone 2 and 3 was made by the (NRC) Special Projects Office, NU, Little Harbor Consultants, Parsons Power and Sargent & Lundy.

May 1: Vice-Chair John Markowicz testified at the NRC Millstone Meeting in Rockville, MD. **(Appendix 4A)**

June 2: Terry Concannon and John Markowicz participated in the NRC public briefing in Rockville, MD, prior to the Commission considering authorization for the restart of Millstone 3. **(Appendix 4B)**

* In 1997, NEAC took issue with the term, '***Independent*** Corrective Action Verification Program' (*I*CAVP), emphasizing that the established process precluded the program from being truly independent, due to the fact that Northeast Utilities is paying the contractors engaged to undertake the review. A number of checks and balances are in place. However, NEAC chose to use the term 'CAVP' in support of its position.

Safety Conscious Work Environment

NEAC continued to monitor NU activities to develop and implement the ECP and SCWE. This included observing the presentations and reports of Little Harbor Consultants (LHC), the contractor retained to implement the NRC Order that established the Third Party Oversight Program, which addresses the employee concerns issues. NEAC representatives also observed several all-day NU management training events that were designed to foster the ECP/SCWE process. In public testimony before NRC commissioners, NEAC representatives noted that LHC, NU and the NRC demonstrated a reasonable best effort to achieve and maintain an "arms length" Third Party Oversight.

In a Staff Requirements Memorandum, May 19, 1998, the NRC staff concluded that the work environment at Millstone supported the restart of Millstone 3 and, subject to the continued oversight of LHC, approved its restart. Currently, NU is seeking to have the NRC Order of October 24, 1996, lifted,

which required Independent, Third-Party Oversight of NU's Implementation of Resolution of Employee Concerns (Request for Closure, December 9, 1998). LHC has reported that Millstone continues to have a safety conscious work environment and, thus, LHC has begun phase-out activities. NU has begun implementation of plans to prevent backsliding and to enhance performance after the departure of LHC, while hiring LHC to conduct periodic reviews during the year following the rescission of the October 24, 1996, Order. The intent is to affirm the restoration of the healthy work environment so that the organization can perform at a higher and safer level in the future. The decision of the NRC is pending. NEAC continues to monitor the situation.

Millstone Monitor

A member of NEAC, John W. (Bill) Sheehan retained his "badged" status throughout 1998, which permitted him unescorted access to the Millstone plants. There he monitored the control room watch-standers in Millstone 2 and Millstone 3 emphasizing the aspects relating to Public Health and Safety.

a) Twenty-two monitors were conducted. Most were at Millstone 3, but three were conducted in the Millstone 2 control room as preparations are being made for restart (**Appendix 5**).

b) Each visit took an hour or more. Besides observing the conduct of watch-standers, the monitor reviewed pertinent logs, turnover check-offs, status sheets and procedures in use during the observation period.

c) The year's observations may be summarized as follows:

   1) The trend in watch-stander performance over the year was up.
   2) Watch-standers were not afraid to draft Condition Reports (CRs), if necessary.
   3) The management emphasis of "Do it Right" permeated the watch sections, e.g. the watch-standers were not afraid to shutdown the reactor if that was necessary due to a problem or changing plant conditions.
   4) As expected, morale was up after Millstone 3 commenced producing electricity in June.
   5) Millstone 2 appears to have learned from the Millstone 3 watch-stander errors. Their watch-sections are much more formal than those of Millstone 3 at a similar stage in the approach to restart.
   6) Watch-standers are health and safety conscious and have the open support of upper management.

d) Although there is still room for improvement, the operators have shown real professional growth during the past year.

RESTART OF MILLSTONE 3

Sargent & Lundy completed its review of Millstone in May. 22 valid LEVEL 3 DRs were confirmed and 599 valid LEVEL 4 DRs. The corrective action was still pending on some of these and, at the recommendation of NEAC, among others, the backlog of corrective actions was appropriately labeled so that the progress in addressing them can be readily identified, and accountability maintained.

On June 15, 1998, the NRC commissioners voted (4:0) in favor of the Restart of Millstone 3. The licensee had demonstrated *compliance with NRC regulations, license conditions and licensing commitments* which was fundamental in establishing the *NRC'c confidence in the safety of licensed activities*. Power ascension commenced July 1, and 100% power was reached on July 14th. After 29 months, Millstone 3 was now back on line. The recovery process is considered to be a watershed in the nuclear industry.

STATUS OF MILLSTONE 2

The CAVP is nearing completion at Millstone 2. Confirmed valid LEVEL 3 DRs = 75 and LEVEL 4 DRs =521. There are no Level 1 or 2s. NU has scheduled Restart for March 1999.

STATUS OF MILLSTONE 1

On July 17, 1998, it was announced that Millstone 1 would undergo decommissioning. The economic analysis indicated restart of the nuclear power plant was no longer a feasible proposition. On July 21, the NRC was notified that operations had ceased and the fuel had been permanently removed from the reactor vessel. For the immediate future, the plant will be maintained in a "SAFSTOR" configuration; the spent nuclear fuel will continue to be stored in the fuel pool, major plant systems are placed in a maintenance mode and no other decommissioning will occur. A citizen's advisory panel, such as that formed for the Connecticut Yankee decommissioning, is being created to address the issues of public concern that are associated with the decommissioning of Millstone 1.

EMERGENCY PREPAREDNESS

In 1998, the NEAC Emergency Preparedness subcommittee continued to work with the Citizens Regulatory Commission (CRC), a local group of volunteers from southeastern Connecticut, to improve nuclear emergency planning within the areas designated as the Millstone Emergency Planning Zone (EPZ). A separate NEAC subcommittee was formed to address the use of Potassium Iodide (KI) as a supplementary nuclear emergency protective measure.

January 12, 1998, the Connecticut Office of Emergency Management (OEM) issued a response (**Appendix 6A**) to several emergency planning questions included in a CRC letter to the Federal Emergency Management Agency (FEMA) on September 9, 1997 (**NEAC 1997 Report**). Additionally,

on January 29, 1998, FEMA provided a response (**Appendix 6B**) to emergency planning questions raised in letters sent the agency by the CRC on September 9 and October 10, 1997. Upon reviewing the OEM (1/12) letter, it was felt that several questions were not fully addressed by OEM. In an attempt to obtain additional information, a member of NEAC's Emergency Preparedness sub-committee sent a letter to OEM on April 14, 1998 (**Appendix 6C**) requesting clarification of these questions. OEM responded on August 10, 1998. (**Appendix 6D**)

Despite assurances from OEM and FEMA that nuclear emergency planning is adequate and under regular review in order to improve current procedures, the Emergency Preparedness subcommittee believes that a concerted effort is needed to address several shortfalls in nuclear emergency planning. Specifically, these areas include:

- Establishment of public education programs that focus on nuclear emergency planning,
- Updating present evacuation routes to reflect increase traffic volume,
- Increasing the number of emergency reception centers to accommodate more than 20% of the EPZ population,
- The distribution and stockpiling of Potassium Iodide (KI) as a supplement to rapid evacuation.

Potassium Iodide

A three-person subcommittee was appointed to meet with the public and address issues related to the use and general distribution of potassium iodide (KI), which is used for thyroid protection in the event of a severe nuclear power plant accident. A public meeting was held on July 23, 1998, at Waterford Town Hall. Ten members of the public provided statements regarding KI stockpiling, distribution and public information/education. Based on this input and the associated discussion, the subcommittee submitted three recommendations to NEAC. On August 20, 1998, NEAC reviewed the recommendations of the KI subcommittee at its regularly scheduled meeting and, with minor modifications, adopted the recommendations by majority vote:

1. NEAC endorses and supports the decision of the NRC commissioners regarding KI and the specific actions directed by them in a Memorandum to L. Joseph Callan, Executive Director of Operations, dated June 26, 1998 (**Appendix 6E**),
2. NEAC recommends that the Connecticut Departments of Public Health and Environmental Protection, take action to request appropriate quantities of KI pills from the federal government (at no cost) for stockpiling and distribution to residents within the Millstone Emergency Planning Zone (EPZ-5 mile radius),

3. NEAC recommends that the Department of Public Health develop, implement and evaluate a two-year program for voluntary distribution of KI pills to residents within the Millstone EPZ. This program should include the following elements:
   (a) Public education/information program regarding the use of KI pills;
   (b) A signed medical release as a requirement before any individual is provided a KI pill;
   (c) Utilize local municipal activities to stockpile and pre-distribute KI pills to individual residents on a voluntary basis;
   (d) Encourage schools, hospitals, nursing homes, prisons and other restricted/heavy density populations to stockpile quantities of KI pills;
   (e) Stockpile sufficient quantities of KI pills at the Reception Centers in Evacuation Plans for each evacuee;
   (f) Submit a report to the State Legislature regarding the effectiveness of the voluntary participation program at the end of the two-year trial period.

In addition, the co-chairs were directed to send correspondence to appropriate state officials, including Governor Rowland, notifying them of the NEAC position regarding KI, and suggesting a meeting to discuss issues involved in the stockpiling and distribution of KI. **(Appendix 6F)**

Potassium Iodide Distribution – update

The State of Connecticut formed a working group made up of the Office of Policy and Management, Office of Emergency Management and the Departments of Public Health, Environmental Protection and Corrections to investigate the distribution of potassium iodide (KI) to the public in response to NEAC's proposals. This working group is investigating the impact of all of the NEAC recommendations, taking into consideration proposed changes by several federal government agencies in their recommendations and positions with regard to the distribution of KI. As the federal agencies develop and finalize their positions, including the proposal under consideration that the Nuclear Regulatory Commission purchases KI for the states, the working group will investigate their application to the situation in Connecticut.

Meanwhile, the NRC *staff has formed a KI Core Group to develop a revised draft, NUREG-1633, and an accompanying draft user-friendly brochure to support emergency planning decisions on the role and use of KI in site-specific emergency plans.*(NRC 11/23/98 Announcement). The first meeting took place at NRC Headquarters in Rockville, MD, in the first week of December.

DECOMMISSIONING

DECOMMISSIONING OF CONNECTICUT YANKEE

Overview

The decommissioning of the Connecticut Yankee (CY) nuclear power plant will continue for another 5-6 years. The cost has been estimated at approximately $427 million, but CY is preparing a revised estimate, and the Federal Energy Regulatory Commission has yet to rule on the amount to be allowed to come from the ratepayers. This money is now held in a trust funded by ratepayers during the operation of the plant. Radioactive components from the plant, including the boilers, will be removed and transported via truck or barge to Barnwell, South Carolina, which is the only disposal site in the eastern United States. The spent fuel rods constitute high level radioactive waste and will have to be stored on site until such time as the federal repository is completed.

Health and Safety

The health and safety of the general public is the highest priority of NEAC and we believe that the risk to them is minimal during the decommissioning. The risk posed while the plant was operating was far greater. Consequently, the Emergency Management system has been reduced, including the dismantling of sirens, unless the towns in the Emergency Planning Zone (EPZ) want to retain them for other purposes. However, there are concerns relating to the possible long term effects of radiation about which little is known, and the health and safety of plant employees and contractors involved in the decommissioning.

In the past, cement blocks from the plant were donated and removed off-site where they were used for several purposes including, landscaping and construction. It has now been determined that some 5,000 of these blocks in a number of locations are contaminated with extremely low levels of radiation. While they pose virtually no threat to the people, the effort is underway to remove these blocks and to dispose of them in an appropriate manner.

During preliminary decommissioning activities, there have been too many "events," or incidents, reportable to the Nuclear Regulatory Commission (NRC). Although some are unavoidable, many could have been prevented and the overall pattern indicates that management systems need more improvement. This contrasts with the reputation that Connecticut Yankee had in the 1970's as being one of the best and safest nuclear power plants in the world.

The Connecticut Academy of Science and Engineering has yet to complete its study of cancer rates downwind from Connecticut Yankee compared with a control area without a nuclear power plant.

CY continues to release amounts of the radioactive isotope tritium into the Connecticut River, which are below the levels allowed by the Environmental Protection Agency (EPA). Despite the low levels, we believe that the public should be given prior notice of any such releases so that they do not coincide with recreational activities on the river.

Spent Nuclear Fuel

The spent fuel rods resulting from the operating tenure of the plant continue to be stored on site in a cooled pool of water known as the **spent fuel pool**. The U.S. Department of Energy (DOE) is charged with the building of a storage repository for the highly radioactive rods, but is at least 15 years from providing this facility. The issue of the storage, and the alternatives of the spent fuel pool versus dry cask storage, will play a critical role in the future use of the plant site.

Economic Impact on the Town of Haddam

CY once provided almost 60% of Haddam's tax base. After a recent assessment appeal, and an upcoming revaluation, it is likely that it will provide only 18%. Since this change could be so drastic, the town is actively facilitating the reuse of the site for the generation of electricity using natural gas as the fuel.

Future Use of the Site

The reuse of the CY site could be feasible since the transmission lines and other equipment are in place. However, there are many hurdles. CY would lease a portion of the site, probably the existing parking lot, to a new company, which would be responsible only for the power generation in the context of a deregulated power industry. This new power company must take the risk that the required license amendments be obtained from the NRC, and that construction and power generation take place in time to meet the demand from the "market." The toughest regulatory hurdle may be getting NRC approval for a gas-fired plant in proximity to the spent fuel pool. Storage of the spent fuel rods in "dry casks" may be a better, if more costly, method so that they can be moved to a site further removed from the gas plant. The higher initial cost of the dry cask storage balances out over the long term, which is the reality given the prospective delay with the federal repository. When this facility becomes available, it has been proposed that spent fuel be accepted in the order of which it was removed from a reactor. Thus, all of CY's spent fuel rods would not be accepted at the same time, thus prolonging the process.

Groups Monitoring the Process

In addition to NEAC, two similar groups have been created. The Community Decommissioning Advisory Committee (CDAC) was formed by CY to obtain input from, and give information to, representatives from the community, including mayors and selectmen from surrounding towns, the Middlesex County Chamber of Commerce, citizens groups, state government and the Second Congressional District (Sam Gejdenson). The town of Haddam has formed the Repowering Advisory Committee (RePAC) to facilitate the reuse of the site by a gas-fired plant. All three groups are purely advisory in their capacity and have no regulatory power. They also have limited means to communicate the results of their monitoring and their recommendations.

HIGH LEVEL NUCLEAR WASTE

By law, the federal Department of Energy (DOE) is responsible for the disposal of high level nuclear waste such as spent fuel, and each operating nuclear plant is assessed a one mill/kilowatt hour charge to cover the costs of disposal. This past year, NEAC continued to monitor action by Congress to pass the high level nuclear waste bill.

In 1997, the U.S. House and Senate overwhelmingly passed separate bills to provide an integrated spent fuel management system for the country. We were assured that the resulting compromise bill would be ready for a vote in the second quarter of 1998. Unfortunately, consideration of H.R. 1270 was delayed in the Senate when the 56:39 vote to end debate and proceed with the bill fell short of the required 60 votes. It is our understanding that political priorities rather than any substantive issues relating to the legislation triggered the delay. It is expected that a new vote will be planned for 1999. The longer this is delayed the longer the fuel will stay at the Connecticut sites. This has both a safety and an economic concern for Connecticut.

As of January 31, 1998, the contractual requirement that DOE start to move spent fuel lapsed. This has given rise to considerable legal action. Most recently, the Supreme Court refused to review an Appeals Court decision that affirmed the DOE's definitive obligation to begin moving spent fuel by January 31, 1998. This decision permits the nuclear utilities to continue to pursue damage claims against DOE. Since October 39, the U.S. Court of Federal Claims, in three separate cases, ruled that DOE is financially responsible for its failure to begin moving used fuel from reactor sites. Of interest, is the fact that the three utilities to bring suit were Connecticut Yankee, Maine Yankee and Yankee Rowe.

It is believed that in order to avoid spending billions of dollars in claims, Congress may be motivated to expedite its efforts to designate a temporary storage site in the Yucca Flats area in Nevada. NEAC will continue to push for a central temporary spent fuel storage site. Our federal legislators should again be contacted to inform them of Connecticut's safety and economic concerns.

ALTERNATIVE ENERGY SOURCES (Full report in Appendix 7)

The 1997 sub-committee report on this subject addressed the "Greenhouse Effect", which is substantially caused by the discharge of carbon dioxide gas into the atmosphere. Fossil fuel-burning systems are a major contributor. Using fuel that has relatively little carbon, such as natural gas, can minimize the effect, but there would still be a significant discharge of carbon dioxide. A continuation of the report is included for review.

CANCER RISK STUDY

This report is pending. The data regarding emissions from Connecticut Yankee, the weather and the plume patterns have been compiled by the Connecticut Academy of Science and Engineering (CASE). Remaining is the correlation of these with cancer incidence statistics (**Appendix 8**).

RECOMMENDATIONS

Federal:

1. There should be a positive recommendation that Congress pass and the president sign a High Level Waste siting bill that would ensure timely construction of a national High Level Radioactive Waste Repository.(This is a political decision – the technical ability has been available for at least 20 years). The state administration and legislature should also support the federal solution.
2. NEAC supports the work of the *KI Core Group*, and urges it to complete its work in an expeditious manner.

State:

1. The state should finalize the position of Nuclear Advisor to observe the decommissioning of Millstone 1 and Connecticut Yankee, the restart of Millstone 2 and the operation of Millstone 3. The position should be in the executive/policy branch and the advisor should provide reports to NEAC and the towns of Waterford and Haddam;

2. NEAC recommends that the Office of Emergency Management receive the fiscal support needed to address the shortfalls in Emergency Preparedness as highlighted in the text of the subcommittee report including;
   - Establishment of public education programs that focus on nuclear emergency planning,
   - Updating present evacuation routes to reflect increase traffic volume,
   - Increasing the number of emergency reception centers to accommodate more than 20% of the EPZ population,
   - The distribution and stockpiling of Potassium Iodide (KI) as a supplement to rapid evacuation.
3. The state should establish a task force to study the regional economic impact of nuclear plant decommissioning, including provisions to help offset the loss in property taxes affected by a plant's premature closing;
4. The legislature, governor and NEAC should continue to insist the NRC maintain vigilant oversight during the entire decommissioning effort at Connecticut and Millstone 1, and regular inspections should be carried out by the NRC for as long as the high level radioactive waste remains on site;
5. Legislation should be introduced requiring that scheduled radioactive effluents from nuclear power plants do not occur during usual hours of recreational use on Long Island Sound or the Connecticut River;
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), and should monitor the reorganizations of the NRC to insure that health and safety are not compromised by budgetary constraints;
7. Connecticut should focus its support of alternative energy technologies on those that are realistically capable of replacing the Millstone point and Connecticut Yankee's electricity generating capacities;
8. 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 monitor the stability of the Employee Concerns Program/Safety Conscious Work Environment once Little Harbor Consultants have left the site;
2. NEAC should monitor the progress of the state's working group which is investigating the distribution of potassium iodide to the public per NEAC's recommendations;
3. NEAC should continue monitoring:
   a) The ongoing power operation at Millstone 3, including the Corrective Action backlog reduction,
   b) The restart of Millstone 2;

c) The decommissioning of Millstone 1 and Connecticut Yankee;

d) Millstone Station's progress towards Y2K compliance.

4. NEAC should continue to advocate that spent fuel from plants undergoing decommissioning receives priority in disposal;
5. Communication of NEAC activities should be improved through:
   a) Regular distribution of reports/press releases to daily/weekly newspapers and town newsletters;
   b) Coordination of agendas with the citizens' councils/committees involved with the decommissioning of CY and Millstone 1;
   c) Development of consistent post restart public communications in conjunction with local citizen groups and the utility.
6. NEAC needs the guarantee of continued clerical support in order to function;
7. NEAC should request informal meetings with U.S. senators Dodd and Lieberman, and Congressman Gejdenson, in order to provide a briefing on NEAC's work and goals so that a better working relationship is established.

COUNCIL ACTIVITIES IN 1998

Meetings

NEAC held regular public meetings during the year, as required by PA 96-245, to provide a venue for the discussion of issues relating to the safety and operations of the state's nuclear power plants. NU, NRC, CY, the CAVP contractors and Little Harbor Consultants made presentations on current issues and developments. Each meeting included a period for public participation and questioning.

The council met January 8 (Hartford), January 29 (Waterford), February 26 (Waterford), March 19 **public forum** (Waterford), April 16 (Haddam Neck), May 14 (Waterford), June 18 (Waterford), August 20 (Waterford), October 15 (Waterford), November 19 (Haddam), December 10 (Waterford). The minutes of the meetings are in **Appendix 2**.

In addition, NEAC met with NRC Chairman Shirley Jackson at Millstone on **February 2**, when she reaffirmed her rigorous criteria for the restart approval for Millstone 3. NEAC members shared their concerns relating to the restart of Millstone 3. That evening there was a public meeting at Waterford High School auditorium. Dr. Jackson included a segment for responses to questions previously submitted by NEAC and several citizens' groups. NEAC's 3 questions and Dr. Jackson's answers are enclosed as **Appendix 9**.

April 6: NRC Commissioner Nils Diaz also met with NEAC members in the afternoon at Millstone for an interchange of opinions.

June 8: Representative Terry Concannon was invited to attend the American Nuclear Society annual meeting in Nashville, Tennessee. She participated in the special session, "*No More Golden Eggs: Local Community Impact of a Plant Shutdown*," and presented a paper entitled, "**Decommissioning Comes Early to a Connecticut Hamlet**," which addressed the local impact of the decommissioning of Connecticut Yankee on the town of Haddam(**Appendix 10A**).

September 2: Representative Terry Concannon was invited to participate in the International Atomic Energy Agency's (IAEA) International Conference on Topical Issues in Nuclear, Radiation and Radioactive Waste Safety held in Vienna, Austria, at the United Nations complex. She participated in the Panel Discussion, "*Communicating Nuclear Radiation and Radioactive Waste Safety Information*," and made a presentation on NEAC, its origins, functional model, history and accomplishments. It sparked great interest in the ensuing discussion(**Appendix 10B**).

Correspondence

NEAC undertook correspondence with various entities as outlined in Table 1(**Appendix 11**).

Table 1: NEAC Correspondence

FROM	TO	DATE	SUBJECT
R. M. Kacich (NU)	NEAC	1/28	Response to monitor's observations regarding control room at Millstone 3
W. M. Travers (NRC)	NEAC	1/30	ICAVP
NEAC	Sen. Melodie Peters	2/19	NEAC's concerns regarding electric restructuring legislation
Chairman Jackson (NRC)	NEAC	3/24	Response to NEAC's 12/31/97 letter re. resident inspector @ CY and NRC rep. at CDAC meetings.
Phillip McKee	NEAC	3/25	Information re. allegations at Millstone
Mark Holloway	Robert Plant, Dir. OEM	4/14	Request for additional emergency planning information.
NEAC	Shirley Jackson	4/24	Response to 3/24 letter

Bruce Kenyon	John Markowicz, Vice-chair, NEAC	5/5	Thank you for participation in 5/1 NRC Commission Hearing, Rockville, MD
Cmsr. Nils Diaz (NRC)	NEAC	5/5	Review of 4/6 meeting @ Millstone with follow-up information
John Hoyle (NRC)	NEAC	5/11	Invitation to make presentation at 6/2 meeting re. Millstone 3's restart
Sidney Holbrook, Governor's Chief of Staff	NEAC	5/15	Memo re. Nuclear Advisor position in OPM
NEAC	Don Downes (DPUC)	6/22	Removal of Millstone 3 from rate base
Jack Roe (NRC)	NEAC	7/8	Policy re. Decommissioning Resident Inspector.
Don Downes (DPUC)	NEAC	7/14	Response to 6/22 letter/DPUC decision to remove Millstone 3 from rate base
George Luther (DPS)	Mark Holloway	8/10	Response to 4/14 letter to OEM re. emergency planning
NEAC	Gov. Rowland	8/27	Recommendations regarding KI and emergency planning zone
Marc Ryan (OPM)	NEAC	12/31	Response to 8/27 letter re. KI
David Miller (CASE)	NEAC	12/31	Status of 'Cancer Risk Study'

APPENDIX 1

APPENDICES

Nuclear Energy Advisory Membership

Rep. Terry Concannon (Co-Chair), Haddam; BSc Biochemistry, Dublin, Ireland. Legislator, (retired 1/6/99) tax consultant.

Evan Woollacott (Co-Chair), Simsbury: MBA, Wharton School. Consultant, formerly Vice-President Combustion Engineering.

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

Mary Ann Buckley, Haddam Neck; MA, Child Development & Family Relations, UConn. Director of Noyes Rhythm Foundation, Inc. (replaced Trevor Davis, Jr., Haddam Neck).

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

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

Ronald A. Jackson, Haddam; Michigan State University. President, Trade Winds International, Inc. (replaced Jelle Zeilinga DeBoer, Haddam).

Robert J. Klancko, 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.

Pearl Rathbun, Niantic: AS General Studies, Three Rivers C-TC. Administrative Assistant, Office of Emergency Management & Fire Marshal's Bureau, Niantic.

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

Rep. Kevin Ryan, Montville; O.D., Pennsylvania College of Optometry. Legislator, Adjunct Faculty U. of New Haven. (replaced Sen. John Fonfara, Hartford)

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

Edward L. Wilds, Griswold: Ph.D Physics, UConn. Director, Division of Radiation, Department Environmental Protection.

APPENDIX 2

Nuclear Energy Advisory Council (NEAC) Meeting
Legislative Office Building, Hartford CT
January 8, 1998

Rep. Terry Concannon, Co-Chair
Mr. Evan Woollacott, Co-Chair
Mr. Lawrence Brockett
Mr. Trevor Davis
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. Robert Klancko
Mr. John Markowicz
Mr. Frank Rothen
Mr. Bill Sheehan

Co-Chair Concannon called the meeting to order at approximately 3:35 p.m. on January 8, 1998 in the Legislative Office Building, Hartford, Connecticut.

Co-Chair Concannon asked for a motion for the acceptance of the NEAC Minutes of the November 20, 1997 meeting. The motion was made, seconded and accepted with a language amendment.

Co-Chair Concannon read a letter from Majority Leader Moira K. Lyons of the state House of Representatives appointing Ms. Pearl I. Rathbun to the NEAC to fill the vacancy created by the resignation of Richard (Butch) Rowley. Ms. Rathbun is currently the Assistant Director of Emergency Preparedness for the town of East Lyme.

The NEAC members held extensive discussion regarding the development of the year-end report. They made comments and discussions on the following subcommittee reports: Nuclear Power and Deregulation, Alternative Energy Sources, Decommissioning and CAVP Subcommittees and committee recommendations. The consensus of the group was to make changes to the draft subcommittee reports and vote on the final draft of the year-end report at the January 29, 1998 NEAC meeting.

Co-Chair Concannon reported the scheduling of a visit by Chairman Shirley A. Jackson, Nuclear Regulatory Commission to Millstone on February 2 and asked for opinions on whether the NEAC wanted to meet with her as a group. She stated a possible time might be 2:00 p.m.. The consensus of the group was that they would like to meet Chairman Jackson and that the subjects for discussion with her would be discussed at the January 29 NEAC meeting.

The NEAC scheduled the next meeting for January 29, 1998 at 5:00 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 7:00 p.m.

Nuclear Energy Advisory Council (NEAC) Meeting
Waterford Town Hall, Waterford Connecticut
January 29, 1998

Rep. Terry Concannon, Co-Chair
Mr. Evan Woollacott, Co-Chair
Mr. Lawrence Brockett
Mr. Trevor Davis
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
Ms Pearl Rathbun
Mr. Frank Rothen
Mr. Bill Sheehan

Co-Chair Woollacott called the meeting to order at approximately 5:15 p.m. on January 29, 1998 in the Waterford Town Hall, Board of Education Conference Room, Waterford, Connecticut.

Co-Chair Woollacott asked for a motion for the acceptance of the NEAC Minutes of the January 8. 1998 meeting. The motion was made, seconded and accepted.

Mr. Sheehan reported on January 25 he spent an hour in the control room at Millstone 3. He stated this was the fifth time he has been there to monitor Millstone.

Co-Chair Concannon introduced a new member, Ms Pearl Rathbun who was appointed to the Council by Majority Leader Moira Lyons of the State House of Representatives.

The NEAC agreed to meet on February 2, 1998 at 2:00 p.m. at the Millstone Simulator Building to prepare for a 2:45 p.m. meeting with Chairman Shirley Jackson of the U.S., Nuclear Regulatory Commission (NRC).

Mr. Sheehan mentioned the Passport relational database and stated that he was impressed with the tagout system.

Mr. Markowicz mentioned that in the area of employee concerns, the NRC inspection of Little Harbor Consultants (LHC) had yielded good results and trending to be getting better. He explained the NRC found a few items that require additional work. Mr. Rothen explained that

there were 250 craft and 100 engineering personnel leaving the site in December and that all were going through the employee concerns program. Mr. Sheehan stated there had been only two concerns directed to the NRC from Millstone in December. Mr. Markowicz said that of 29 employees interviewed who had used the employee concerns program, 25 (83%) would use the employee concerns program again and that LHC would be doing 280 structured interviews, random and volunteer in early March.

The NEAC scheduled the next meeting for February 26, 1998 at 7:00 p.m. in the Waterford Town Hall, Board of Education Conference Room, Waterford, Connecticut. The Little Harbor Consultants (LHC) will be invited.

The NEAC also scheduled the March NEAC meeting for March 19, 1998 and it will be reserved for public comment. Co-Chair Concannon will ask Paul Blanch to post the meeting on his website.

The NEAC members held extensive discussion regarding the development of the year-end report. They made comments and changes to the report and the subcommittee inputs to the year-end report were discussed. Co-Chair Concannon said the annual report would be consolidated with all the recommendations. A vote was taken to approve the content of the 1997 report. It was approved unanimously.

Mr. Davis suggested to the council the NEAC should consider having a communications subcommittee. After discussion between the council Chairman Concannon suggested that there should be a Vice-Chair from the Waterford area that would have some responsibility for media relations. Mr. Sheehan nominated Mr. Markowicz as Vice-Chair to act in the Waterford area, Mr. Rothen seconded this nomination and it was accepted.

Co-Chair Concannon made the motion to adjourn the meeting. This was seconded and accepted and the meeting adjourned at approximately 8:20 p.m.

Nuclear Energy Advisory Council (NEAC) Meeting
Waterford Town Hall, Waterford Connecticut
February 26, 1998

Rep. 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. Arthur J. Rocque, Jr.
Mr. John Helm, Sr.
Mr. Mark Holloway
Mr. Robert Klancko
Mr. John Markowicz
Ms Pearl Rathbun
Mr. Frank Rothen
Mr. Bill Sheehan

Co-Chair Concannon called the meeting to order at approximately 7:15 p.m. on February 26, 1998 in the Waterford Town Hall, Board of Education Conference Room, Waterford, Connecticut.

Co-Chair Concannon asked for a motion for the acceptance of the NEAC Minutes of the January 8, 1998 meeting. The motion was made, seconded and accepted.

Co-Chair Concannon announced Mr. Jelle Z. DeBoer has submitted a letter of resignation. She requested a vote of regret.

Co-Chair Concannon introduced Mr. Bruce Kenyon, President & CEO of Northeast Nuclear Energy Company. Mr. Kenyon thanked the council for adding him into the agenda with such short notice and explained that today was a difficult day at Millstone. He reported that on February 25, 1998 he accepted the resignation of Mr. David Goebel as Vice President of Oversight. He continued to report by explaining this was a very difficult and somewhat tragic outcome of an individual who has done an excellent job in taking oversight and bringing to a functional organization. Mr. Kenyon stated he was disappointed to have reached this conclusion because he believed Mr. Goebel is a moral individual.

Co-Chair Concannon asked if there is an effort being made to work with the individuals who do not have a positive outlook to encourage them to look at things in a different way? Mr. Kenyon stated that he would love to have all the employees be a part of the team and he believed in most

cases that will happen.

Mr. Gardner expressed his concern with the employees in the oversight group that are left behind that are angry. He asked what effect will that have? Mr. Kenyon stated he is concerned about them from several perspectives. One is that is they have a very applaudable loyalty to a leader who is now a casualty and they feel let down. He is concerned that the resignation by Mr. Gabal not be understood as some regression of the role of the Oversight Group and the importance of Oversight. He stated he is also concerned that a perceived rejection of Oversight that has a chilling effect and those have an effect on the organization of adversely impacting their ability and willingness to raise concerns.

Mr. Kenyon announced he has named a new leader for oversight, Mr. John Streeter. He reported Mr. Streeter is a former Nuclear Regulatory Commission (NRC) inspector, a former NRC manager and has headed the equivalent of the oversight function at Comanche Peak. He further stated Mr. Streeter knows regulations, standards and what it means to bring an organization to a state of readiness.

Co-Chair Concannon introduced three members of the Little Harbor Consultant, Inc. (LHC), Mr. John Beck, President LHC Team Leader, Mr. John Griffin, Deputy Team Leader and Ms Billie Garde, Team Member. Mr. Beck opened their presentation by reminding the attendees why LHC was hired by Northeast Utilities (NU). NU hired LHC as a result of an October 1996 order from the NRC to the company to establish a comprehensive plan for dealing with all the issues, and to bring in an independent 3rd party to oversee their implementation of that plan. Since January, 1997 LHC has been on site. He then summarized the content of an evaluation which LHC provided to the Commission last week. The evaluation reviews the criteria or the attributes which LHC has established that are representative of an ideal safety conscious work environment and where LHC feels the site is at currently. He stated four success criteria: 1) a willingness of people at the site to raise concerns; 2) demonstrate that issues are being effectively resolved by management (corrective action program); 3) demonstrate that the employee concerns program is effective; 4) demonstrate that management can recognize and effectively deal with aledged incidences with harassment, intimidation, retaliation or discrimination or other circumstances which have created a chilling effect which collectively are referred to as problem areas. Criteria 1, 2 and 3 were acceptable. Criteria 4 continues to be not acceptable. Mr. Beck then pointed out attributes/criteria that have had any changes during the process.

Questions and comments from the NEAC and public attendees followed the LHC presentation.

Co-Chair Concannon introduced Mr. Philip McKee, Deputy Director for Licensing in Special Projects Office, NRC. Mr. McKee gave a presentation regarding the Employee Concerns Program (ECP) (Enclosure A).

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

Mr. Mike Brothers introduced Mr. David Amarane, Vice President of Human Services. Mr. Amarane explained there are six criteria that will determine that NU has met all the objectives in the area of ECP: 1) employees have the willingness to feel to raise concerns; 2) management deals with those concerns; 3) the plant has a valid and functional ECP 4) they will be able to anticipate problem areas 5 & 6) ECP oversight panel and LHC independently also reach the conclusion that the plant is successful in all the areas.

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

- The NEAC held their business meeting. Co-Chair Concannon stated the Annual Report was finished on February 12, 1998 and at the printers. Discussion was held between the members regarding the upcoming meeting be held and who would be attending these meeting. Co-Chair Concannon handed out Raised Bill No. 5607 (Enclosure B). Mr. Sheehan spoke about his two visits on February 9 and 19, 1998 (Enclosures C & D).

It was decided the next NEAC meeting will be held on March 19, 1998 in Waterford Town Hall. Auditorium, Waterford Connecticut. The meeting will be a public forum meeting.

Co-Chair Concannon made the motion to adjourn the meeting. This was seconded and accepted and the meeting adjourned at approximately 10:20 p.m.

Nuclear Energy Advisory Council (NEAC) Meeting
Waterford Town Hall, Waterford Connecticut
March 19, 1998

Rep. Terry Concannon, Co-Chair
Mr. Evan Woollacott, Co-Chair
Mr. Lawrence Brockett
Mr. Trevor Davis
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
Ms Pearl Rathbun
Mr. Frank Rothen
Mr. Bill Sheehan

Co-Chair Concannon called the meeting to order at approximately 7:10 p.m. on March 19, 1998, in the Waterford Town Hall, Board of Education Conference Room, Waterford, Connecticut.

Co-Chair Concannon asked for a motion for the acceptance of the NEAC Minutes of the February 26, 1998 meeting. The motion was made, seconded and accepted.

Mr. Sheehan spoke about his two visits on March 7 and March 18, 1998 (Enclosures A & B).

Co-Chair Concannon called the public forum section of the meeting to start. The following speakers spoke at this meeting:

Ms Pati Harper, CRC & Emergency Evacuation
Ms Susan Perry Luxton, CRC
Mr. Donald W. DelCore, Sr.
Mr. Jay Gionet, Niantic
Mr. Jeri Duefrene, East Lyme
Ms Mary Kuhn, Quaker Hill
Mr. David Smith
Mr. Al Cizek, Haddam
Mr. Paul Blanch, West Hartford
Mr. J. Sullivan, Waterford
Mr. M. Kennedy, Waterford
Ms Geralyn Winslow, Waterford
Ms Barbara Luce, Waterford

Mr. Joe Besade
Mr. George Kee
Mr. Anthony Cordovano

It was decided the next NEAC meeting will be held on April 16, 1998 at 7:00 p.m. in the Connecticut Yankee Information Center, Haddam Neck, Connecticut.

Co-Chair Concannon made the motion to adjourn the meeting. This was seconded and accepted and the meeting adjourned at approximately 10:20 p.m.

Nuclear Energy Advisory Council (NEAC) Meeting
Connecticut Yankee, Haddam Neck Connecticut
April 16, 1998

Rep. Terry Concannon, Co-Chair
Mr. Evan Woollacott, Co-Chair
Mr. Lawrence Brockett
Mr. Trevor Davis
Mr. Denny Galloway, representing DEP, Commissioner Mr. Arthur J. Rocque, Jr.
Mr. John Helm, Sr.
Mr. Mark Holloway
Mr. John Markowicz
Mr. Frank Rothen
Mr. Bill Sheehan

Several NEAC members and public attended a tour of Connecticut Yankee at 4:30 p.m.

Co-Chair Woollacott called the meeting to order at approximately 7:05 p.m. on April 16, 1998, at Connecticut Yankee Information Center, Haddam Neck, Connecticut.

Co-Chair Woollacott asked for a motion for the acceptance of the NEAC Minutes of the March 19, 1998 meeting. The motion was made, seconded and accepted.

Co-Chair Woollacott explained he recently received a letter from the Assistant Attorney General asking the Council if they have looked into the Recirculation Spray System (RSS). He answered they had not but explained he felt the Council would in the future. He then introduced Mr. Mike Brothers, NU, who had been requested to discuss what the RSS is and the Millstone Unit 3 RSS problem. Mr. Brothers reported the origin of the problem as well as the role and technical perspective of oversight. The system has been tested and all four pumps are acceptable and fully operational after replacing the flexible coupling with hard pipe. They since did an Event Review Team and they are finishing up the root cause investigation.

Mr. Sheehan reported on his visit to the Unit 3 control room on April 4, 1998 (Enclosure A).

Mr. Markowicz reported on a large number of meetings he has attended and on the Sargent & Lundy DR status and noted that all Little Harbor Consultant indicators were satisfactory for restart.

Mr. Holloway reported he responded to a letter from the State of Connecticut, Office of Emergency Management sent in response to the CRC emergency preparedness subcommittee. (Enclosure B)

Mr. Helm mentioned the recommendations included in the NEAC Annual Report, 1998 regarding carbon dioxide and that he had received a new National Geographic reporting the issue.

Co-Chair Woollacott introduced the Haddam First Selectman, Keith Ainsworth. Mr. Ainsworth gave a brief history of his efforts to promote "reuse" of the CY site. He explained the town has talked with consultants about possible uses. One of the items was a gas-fired, combined-site conversion that would include extending a gas line from Haddam Neck to Portland. He added he is working with CY

management to develop several siting configurations compatible with decommissioning.

Co-Chair Woollacott introduced Dr. Ronald Bellamy, NRC, Chief of the Decommissioning Branch at King of Prussia: Mr. Bill Raymond, Senior Resident Inspector at CY; and Ms Marie Miller, Senior Health Physicist. Dr. Bellamy started the presentation by explaining his sole responsibility with the NRC is the decommissioning of nuclear power plants. He then explained Mr. Raymond would stay until the end of the fiscal year and after the resources would be brought in as necessary to support operations. He further stated the decommissioning process is very important to the NRC and they will continue to monitor the remediation of the site. They will do that by continued inspection activities. Mr. Evan Woollacott made a comment stating one of the major concerns raised to the NEAC was the availability of a resident inspector. Co-Chair Concannon read a letter from Dr. Shirley Jackson (Enclosure C) regarding the termination of the resident inspector. Discussion ensued between the members of NEAC to express their view to Dr. Jackson that a new job description be developed.

Ms. Miller presented the purpose, findings and follow-on actions from the Haddam Neck Historical Review (Enclosure D). Also provided was (Enclosure E) detailing of the review, the full report is provided as (Enclosure F). After Ms Miller's presentation she answered questions from the NEAC and members of the public.

Mr. Russ Mellor was then introduced. He began with a briefing on decommissioning activities (Enclosure G). The discussion returned to proposed rollback of the emergency plan and also the retraining/reclassification of reactor operators to become certified fuel handlers. Questions and comments were asked by the NEAC attendees and public.

Mr. Dick Sexton presented the off-site contamination issues/characterization status (Enclosure H).

It was decided the next NEAC meeting will be held on May 14, 1998 at 7:00 p.m. in the Waterford Town Hall, Waterford, Connecticut. A new member was announced, Mr. Ronald Jackson of Haddam, has been appointed by First Selectman Ainsworth. A subcommittee was established to study the KI issue: Mr. John Markowicz, Ms Pearl Rathbun and Mr. Mark Holloway. Discussion will be held regarding OSTI deferred items and the Significant Items List at the NEAC meeting.

A letter from Mr. Phil McKee of the NRC responding to a question at the February 26, 1998 NEAC meeting regarding the number of allegations received by the NRC was received (Enclosure I). Mr. Markowicz will present his and NEAC's observations at the NRC May 1, 1998 meeting.

Co-Chair Concannon made the motion to adjourn the meeting. This was seconded and accepted and the meeting adjourned at approximately 10:20 p.m.

NOTE: Enclosures B - I can be found with master copy

Nuclear Energy Advisory Council (NEAC) Meeting
Waterford Town Hall, Waterford Connecticut
May 14, 1998

Rep. Terry Concannon, Co-Chair
Mr. Evan Woollacott, Co-Chair
Mr. Robert J. Klancko
Mr. Denny Galloway, representing DEP, Commissioner Arthur J. Rocque, Jr.
Mr. John Helm, Sr.
Mr. John Markowicz
Ms. Pearl Rathbun
Mr. Frank Rothen
Mr. Bill Sheehan

Co-Chair Concannon called the meeting to order at approximately 7:05p.m. on May 14, 1998, at Waterford Town Hall, Waterford, Connecticut.

Co-Chair Concannon asked for a motion for the acceptance of the NEAC Minutes of the April 16, 1998 meeting. The motion was made, seconded and accepted.

Co-Chair Concannon introduced Mr. William Travers, Director of NRC's Special Projects Office. Mr. Travers announced that the Commission has re-scheduled the Second All Day Millstone Meeting for June 2, 1998 at 8:00 a.m.. He explained this meeting should be quite similar to their first meeting, where NEAC and other groups shared their views and concerns on the Millstone issues with the Commission. He then gave a status report on Significant Items List. Within the report he explained most of what is on the list deals with specific, technical issues. After some discussion with the NEAC he then explained the status of Discrepancy Reports (DRs) and Independent Corrective Action Verification Program (ICAVP) (Enclosure A & B).

Co-Chair Concannon introduced Mr. Mike Brothers, Unit Director of Millstone 3. He clarified a question on the Significant Items List regarding the last item on the list. Mr. Brothers announced that the last item out of the 216 items is due on Monday. He also gave a brief explanation on the OSTI conclusion and what has been done with regard to corrective actions in response to the industry standards issues presented. Mr. Brothers briefly explained the six areas of control which break down into two big tickets: (1) Compliance & Performance Standard (2) Industry Standards. He listed the six areas and explained whether they were a Compliance & Performance issue or an Industry Standards issue:

1) Lock valve check list (they found one valve in the air start system for the diesel that should have been locked). This was considered an Industry Standards issue.

2) Throttle valve documentation - they had a valve line up sheet which said it was 37% open, but on the surveillance of the valve it said 34%. This was an Industry Standards

issue as well.

3) Single, Senior Reactor Operator (SRO) changes - identified as an Industry Standards issue which has already been fixed. It is a two party review, therefore two senior operators must make the change and document the reason for the change.

4) Use of Non Applicables (procedure requires that the reason for the N/A be documented, and their documentation for the non Applicables was weak until they bolstered it. This was also an Industry Standards issue.

5) Valves line-ups (electrical switches and breakers). Considered an Industry Standards issue.

6) Skid modern equipment (every valve on the skid does not show up on their dryer). This is an Industry Standards issue.

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

Mr. Sheehan reported about his two visits to the Millstone Unit 3 Control Room on April 19 and May 1, 1998 (Enclosures C & D).

Mr. Markowicz reported on the May 1, 1998 public meeting which he testified at (Enclosure E). He also announced the change in the Executive summary section of the 1997 NEAC Report (Enclosure F).

Co-Chair Concannon asked for a motion on the acceptance of the changes to the NEAC Annual Report - 1997; Executive Summary Report, page 2. The motion was made, seconded and accepted.

Co-Chair Concannon introduced Mr. John Haseltine, Engineering Director at Connecticut Yankee, and Mr. Richard J. Sexton, Manager Health Physics at Connecticut Yankee. Mr. Haseltine gave a brief explanation of the Confirmatory Action Letter (CAL). The CAL was issued by the NRC in 1997 as a result of radiological control problems experienced by CY in 1996 and early 1997. The CAL restricted radiological work to that which was essential to the safe maintenance of the facility. On May 5, 1998 the CAL was lifted and it allows the company to resume performing the major radiological work of Decommissioning.

Questions and comments from the NEAC and public followed Connecticut Yankee's presentation by Mr. Haseltine and Mr. Sexton.

Co-Chair Concannon introduced Mr. Gary Verdone, employee at Millstone Unit 3 Design and Engineering. Mr. Verdone updated the NEAC on the changes at Millstone since the time of his lay off in January, 1996. According to Mr. Verdone, who was rehired in March, 1997 the most dramatic improvement at Millstone is within the management department. The changes in management have resulted in a structured organization of "very well people-oriented individuals" who are concerned about the safety and work environment of their employees. Management has

also improved the communications gap which used to existed then, between management and workers. Other improvements observed by Mr. Verdone were in various areas of the Millstone Plant, which were either re-organized, painted, or cleaned out. The Employee Concern Program (ECP) is another great improvement. Mr. Verdone stated that overall he is very satisfied with the changes at Millstone 3, and happy to be working for them again.

It was decided the next NEAC meeting will be held on June 18, 1998 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 10:24 p.m.

Nuclear Energy Advisory Council (NEAC) Meeting
Waterford Town Hall, Waterford Connecticut
June 18, 1998

Rep. Terry Concannon, Co-Chair
Mr. Evan Woollacott, Co-Chair
Mr. Lawrence Brockett
Mr. Trevor Davis, Jr.
Mr. Dwayne Gardner, representing DEP, Commissioner Arthur J. Rocque, Jr.
Mr. Mark Holloway
Mr. Ronald Jackson
Mr. Robert J. Klancko
Mr. John Markowicz
Ms. Pearl Rathbun
Mr. Frank Rothen
Mr. Bill Sheehan

Co-Chair Concannon called the meeting to order at approximately 7:15p.m. on June 18, 1998, at the Waterford Town Hall, Waterford, Connecticut.

Co-Chair Concannon asked for a motion for the acceptance of the NEAC Minutes of the May 14, 1998 meeting. The motion was made by Mr. Sheehan, seconded by Mr. Markowicz and accepted.

Co-Chair Concannon reported on her attendance/participation in the Nuclear Regulatory Commission's (NRC) public briefing with Chairman Jackson and the Commissioners of the Nuclear Regulatory Commission (Enclosure A).

Co-Chair Concannon introduced Mr. Dan Curry, Vice-President, Project Director, Parsons Corporation. Mr. Curry reported on the status of Millstone Unit 2 ICAVP Review Activities and the status on the Discrepancy Reports (Enclosure B).

Co-Chair Concannon introduced Mr. Richard Kacich, Director of Special Projects, Northeast Utilities. Mr. Kacich gave an update on the current status of the Millstone Unit 3 plant and discussed their startup plans pending the NRC's authorization for re-start. The NRC Commissioners voted in favor of re-start on June 15, 1998. Mr. Kacich also reported on the NRC's voting record and provided comments from a few of the Commissioners who voted (Enclosures C-H).

Mr. John Markowicz addressed a concern with the Department of Public Utility Control (DPUC) regarding the pressure that regulatory decisions put on the Millstone employees. Mr. Bill Sheehan made a motion to write a formal letter to the DPUC communicating their concerns on the unintentional impact of the regulatory decisions that affect nuclear power plants which should be carefully considered from the perspective of the public health and safety of the Millstone employees. The motion was seconded by Mr. John Markowicz and accepted.

Co-Chair Concannon made a proposal to schedule a tour of Millstone Unit 2 and 3 some time in September. The majority of the NEAC members agreed with the proposal.

Co-Chair Concannon made a motion to cancel the NEAC Meeting in July because NEAC is fairly up to date. The motion was made, seconded by Mr. Rothen, and accepted.

Mr. Bill Sheehan reported on his two visits to the Millstone Unit 3 Control Room on May 19 and June 3, 1998 (Enclosure I & J).

Mr. Robert Klancko gave a brief report on a town meeting held by the Connecticut Academy of Science and Engineering which focused on technology and technology skills and training in Connecticut. He also distributed registration forms for the summer workshop for teachers on "Decommissioning a Nuclear Power Plant" held at Connecticut Yankee, Haddam Neck on July 29, 1998 (Enclosure K).

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 Connecticut
August 20, 1998

Rep. Terry Concannon, Co-Chair
Mr. Evan Woollacott, Co-Chair
Mr. Lawrence Brockett
Mr. Trevor Davis, Jr.
Mr. Denny Galloway, representing DEP, Commissioner Arthur J. Rocque, Jr.
Mr. Mark Holloway
Mr. John Helm, Sr.
Mr. Robert J. Klancko
Mr. John Markowicz
Ms. Pearl Rathbun
Mr. Frank Rothen
Mr. Bill Sheehan

Co-Chair Woollacott called the meeting to order at approximately 7:05 p.m. on August 20, 1998, at the Waterford Town Hall, Waterford, Connecticut.

Co-Chair Woollacott asked for a motion for the acceptance of the NEAC Minutes of the June 18, 1998 meeting. The motion was made, seconded by Mr. Bill Sheehan and accepted.

Co-Chair Woollacott introduced Mr. Mike Brothers, Unit Director of Millstone 3. He briefly discussed the August 11, 1998 shutdown. Mr. Brothers explained the reasons for the shutdown and listed a few other problems encountered during the shutdown. Mr. Brothers stated that there was no restart date yet. He briefly reported on the status of level one's stating that currently, there are none. Mr. Markowicz gave the latest report of level one, two, and three deficiency reports. He reported that there was only one level one, one level two, three level three's, and one unresolved. Questions and comments were made by the NEAC and members of the public.

Co-Chair Concannon introduced Mr. Russ Mellor, Vice-President Connecticut Yankee Atomic Power Company. Mr. Mellor gave an update on CY decommissioning, including recent incidents (Enclosure A). Questions from members of the public followed Mr. Mellor's presentation.

Co-Chair Concannon introduced Mr. John Markowicz and other members of the Potassium Iodide Subcommittee. Mr. Markowicz discussed the minutes of the subcommittee's July 23, 1998 meeting (Enclosure B). He concentrated on the subcommittee's recommendations to the NEAC regarding potassium iodide issues.

Mr. Robert Klancko made a motion for the acceptance of the Potassium Iodide Subcommittee's recommendations, emphasizing the education program first. The motion was made and seconded by Co-Chair Woollacott.

Questions and comments from the NEAC and members of the public followed Mr. Markowicz's presentation.

Co-Chair Concannon called for a vote on the acceptance of the recommendations of the Potassium Iodide Subcommittee with the changes presented by NEAC (Enclosure C). The NEAC took a vote resulting in the majority voting for the acceptance of the recommendations with the discussed changes. There were two oppositions and one abstention by Mr. John Helm, Sr.. Mr. Denny Galloway and Mr. Frank Rothen both opposed to the acceptance of the recommendations.

Mr. Mark Holloway briefly discussed a correspondence from the Department of Public Safety - Office of Emergency Management dated August 10, 1998. This correspondence was in response to Mr. Holloway's letter dated April 14, 1998 (Enclosures D & E).

Mr. Bill Sheehan reported on his two visits to the Millstone Unit 3 Control Room on July 25, 1998 and August 19, 1998 (Enclosure F & G).

Co-Chair Concannon gave a brief report on the Fire Protection Meeting held on June 2, 1998 concerning the manufacturing of fire seals at Millstone. She also read the Nuclear Regulatory Commission's response to the NEAC's letter dated April 24, 1998 (Enclosure H). Co-Chair Concannon briefly discussed the Department of Public Utility Control's response to the NEAC's letter dated June 22, 1998 (Enclosure I).

Co-Chair Concannon made the motion to adjourn the meeting. The motion was seconded by Mr. Bill Sheehan and accepted and the meeting adjourned at 10:45 p.m.

Nuclear Energy Advisory Council (NEAC) Meeting
Waterford Town Hall, Waterford Connecticut
October 15, 1998

Rep. Terry Concannon, Co-Chair
Mr. Evan Woollacott, Co-Chair
Mr. Lawrence Brockett
Mr. Trevor Davis, Jr.
Dr. Edward L. Wilds, Jr., representing DEP, Commissioner Arthur J. Rocque, Jr.
Mr. Mark Holloway
Mr. Robert J. Klancko
Mr. John Markowicz
Ms. Pearl Rathbun
Dr. Kevin Ryan
Mr. Frank Rothen
Mr. Bill Sheehan

Co-Chair Concannon called the meeting to order at approximately 7:10 p.m. on October 15, 1998, at the Waterford Town Hall, Waterford, Connecticut.

Co-Chair Concannon asked for a motion for the acceptance of the NEAC Minutes of the August 20, 1998 meeting. The motion was made, seconded, and accepted with one correction presented by Co-Chair Concannon. The beginning of the second paragraph on page two of the minutes should read as follows: "Co-Chair Concannon called for a vote on the acceptance of the recommendations of the Potassium Iodide Subcommittee with the changes presented by NEAC."

NEAC would like to congratulate Mrs. Monica Faraci, Secretary I, DEP-Division of Radiation, on the birth of her first child. Monica had a baby boy on October 13, 1998. He was named Dylan Louis Faraci.

Co-Chair Concannon introduced a member of the public, Mary Ann Buckley of Haddam Neck, Connecticut, who will be analyzing how NEAC operates.

Co-Chair Concannon introduced Mr. Bill Dean, Director of the Millstone Project Directorate. Mr. Dean gave an update on the employee concerns program. He also gave a brief update on general activities involving the Nuclear Regulatory Commission (NRC) and Millstone for the past few months. He announced that Dr. Bill Travers was recently named to succeed Mr. Joe Callan as the Executive Director of Operations of the NRC. Mr. Dean briefly discussed the NRC's perspective on the reorganization at Millstone emphasizing that it is a thorough and fair process. Millstone is still having their evening public meetings, but they will now be on a quarterly basis. He mentioned that Millstone had an evaluation team onsite in August that reported an overall good performance and improvement in the employee concerns program. Millstone will be having a commission meeting on November 24, 1998.

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

Co-Chair Concannon introduced Mr. John Carlin, Vice-President Human Services, Northeast Utilities. Mr. Carlin briefly discussed the reasons for their realignment at Millstone. He stated that one of the key features of the realignment plan is extensive employee involvement. He also pointed out that the organization structure focuses on management and not on Millstone station in its entirety. An extensive amount of employee input has been taken into account throughout this realignment plan still in progress.

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

Co-Chair Concannon introduced Mr. Jack McElwain, Millstone Unit 2 Recovery Officer. Mr. McElwain gave a brief update on the Millstone Unit 2 recovery process. According to Mr. McElwain the recovery is moving along well. Currently, there are no unknowns. Unit 2 has been undergoing departmental supervisor-by-supervisor review of all work and any contingency issues. Soon they will be undergoing a cross-departmental review. Currently, there is no large backlog of maintenance tasks to be completed.

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

Co-Chair Concannon introduced Dr. Edward L. Wilds, Jr., Director of the Division of Radiation, Department of Environmental Protection. Dr. Wilds is replacing Mr. Kevin McCarthy who is now retired.

Co-Chair Concannon briefly discussed her experience at the International Conference of Topical Issues in Nuclear. Radiation and Radioactive Waste Safety at the United Nations Building in Vienna, Austria (Enclosure A).

Mr. Bill Sheehan reported on his two visits to the Millstone Unit 2 Control Room on September 5, 1998 and September 23, 1998. He also reported on his visit to Millstone Unit 3 on October 7, 1998 (Enclosure B-D).

Co-Chair Woollacott gave a brief summary on the preliminary decision made on August 31, 1998 to shutdown Connecticut Yankee. According to Co-Chair Woollacott, the problems with the reaction to shut down related to: management phase, the age of the plant and to cost. He reported that the intervenors were very unhappy with the cost of decommissioning and the decision to shutdown. Co-Chair Woollacott will discuss the document in further detail with anyone who is interested.

Co-Chair Concannon briefly discussed the letters sent to Shirley Jackson and Hubert Bell of the Nuclear Regulatory Commission, dated September 1, 1998 from Senators Chris Dodd and Joe Lieberman and Congressman Sam Gejdenson (Enclosure E). She also distributed copies of the July 20, 1998 letter to Mr. Bowling , Recovery Officer- Millstone, from the Nuclear Regulatory Commission (Enclosure F).

Comments from Richard Kacich followed Co-Chair Concannon's discussion of Shirley Jackson's letter.

Members of the NEAC decided to have their next meeting at the Haddam-Killingworth High School on November 19, 1998. A meeting in December would be dedicated to working on the next annual report due in January 1999.

Co-Chair Concannon opened the floor to the public for questions and comments. Mr. Joe Bisade, CRC member, was the only member of the public who spoke.

Co-Chair Concannon made the motion to adjourn the meeting. The motion was seconded and accepted and the meeting adjourned at 10:05 p.m.

Nuclear Energy Advisory Council (NEAC) Meeting
Haddam-Killingworth High School Auditorium
Higganum, Connecticut
November 19, 1998

Rep. Terry Concannon, Co-Chair
Mr. Evan Woollacott, Co-Chair
Ms. Mary Ann Buckley
Mr. John Helm, Sr.
Mr. Mark Holloway
Mr. John Markowicz
Ms. Pearl Rathbun
Mr. Frank Rothen
Mr. Bill Sheehan

Co-Chair Concannon called the meeting to order at approximately 7:00 p.m. on November 19, 1998, at the Haddam-Killingworth High School Auditorium, Higganum, Connecticut.

Co-Chair Concannon asked for a motion for the acceptance of the NEAC Minutes of the August 20, 1998 meeting. The motion was made, seconded, and accepted with a couple of corrections. The correct spelling for Mary Ann's last name is "Buckley". Also, the second paragraph on page three should read "Members of NEAC decided to have their next meeting at the Haddam-Killingworth High School on November 19, 1998."

Co-Chair Concannon introduced Marie Miller, Senior Health Physicist, Nuclear Regulatory Commission Region I. Ms. Miller's presentation focused on the perspectives of Connecticut Yankee decommissioning (Enclosure A).

Questions and comments from NEAC followed Ms. Miller's presentation.

Co-Chair Concannon introduced Mr. Russ Mellor, Vice-President Operations & Decommissioning, Connecticut Yankee. Mr. Mellor discussed the perspectives on Connecticut Yankee decommissioning (Enclosure B).

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

Co-Chair Concannon introduced Mr. Keith Ainsworth, First Selectman, Haddam. Mr. Ainsworth briefly discussed re-powering issues at Connecticut Yankee. As a member of the Re-powering Advisory Committee (RePAC), Mr. Ainsworth supports the re-powering initiative at Connecticut Yankee. He stated that because it is a public committee and due to the Freedom of Information Act, there are certain facts that the committee will not be privy to, including the potential contractors until the decision is made by Connecticut Yankee.

Questions and comments from NEAC followed Mr. Ainsworth's presentation.

Co-Chair Concannon welcomed Ms. Mary Ann Buckley of Haddam Neck as a new member of NEAC.

Mr. John C. Markowicz gave a brief update on deficiency reports at Millstone. Mr. Markowicz reported 6 confirmed level three's; 464 confirmed level four's and 824 preliminary D.R.'s. By unanimous vote, NEAC authorized Mr. John Markowicz, Mr. John Helm, Sr. and Mr. Bill Sheehan to meet as a subcommittee and work with the NRC to select Level 3 deficiency reports for corrective action verification audit.

Mr. Bill Sheehan reported on his visit to the Millstone Unit 2 Control Room on October 23, 1998 (Enclosure C).

Co-Chair Concannon announced that as of January 6, 1999, she will no longer be at the Legislative Office Building, therefore, NEAC must find a new address for its correspondence. She suggested using the Department of Environmental Protection's (DEP) address for NEAC correspondence. All members of NEAC agreed and Co-Chair Concannon will be contacting DEP with this suggestion.

NEAC took a vote on writing a formal letter to the Nuclear Regulatory Commission (NRC) expressing concern about potential conflict of interest, should the same contractor undertake the decommissioning of Connecticut Yankee as well as the re-powering of the plant. Co-Chair Concannon, Co-Chair Woollacott, Mr. Mark Holloway, and Ms. Mary Ann Buckley voted for it. Mr. John Markowicz, Ms. Pearl Rathbun, Mr. Frank Rothen, and Mr. Bill Sheehan opposed the motion. There was one abstention by Mr. John Helm, Sr.. Consequently, the motion failed.

NEAC members discussed the "Bill of Rights" Proposal put forward by FOSM. NEAC voted unanimously to reject the proposal contained in the "Bill of Rights" and to offer to meet with FOSM to discuss post restart public communications.

NEAC members decided to have a working session on December 10, 1998 at 7:00 p.m. at the Waterford Town Hall, Waterford, Connecticut. A final meeting will be held in January.

Co-Chair Concannon made the motion to adjourn the meeting. The motion was seconded and accepted and the meeting adjourned at 10:20 p.m..

Nuclear Energy Advisory Council (NEAC) Meeting
Waterford Town Hall
Waterford, Connecticut
December 10, 1998

Rep. Terry Concannon, Co-Chair
Mr. Evan Woollacott, Co-Chair
Ms. Mary Ann Buckley
Mr. John Helm, Sr.
Mr. John Markowicz
Ms. Pearl Rathbun
Mr. Frank Rothen
Mr. Bill Sheehan
Dr. Edward L. Wilds, Jr., representing DEP, Commissioner Arthur J. Rocque, Jr.

Co-Chair Concannon called the meeting to order at approximately 7:15 p.m. on December 10, 1998, at the Waterford Town Hall, Waterford, Connecticut.

Co-Chair Concannon introduced First Selectman Tony Sheridan, Waterford. Mr. Sheridan briefly discussed the potassium iodide (KI) working group meeting at Washington, D.C. (Enclosure A). He also presented information on another meeting held in Washington, D.C. regarding decommissioning at Millstone Unit 1. Mr. Sheridan was pleased to see Northeast Utilities volunteer to have a local advisory committee.

Co-Chair Concannon asked Dr. Edward L. Wilds, Jr., Director, Division of Radiation, Department of Environmental Protection to write a short letter on the State's activities on potassium iodide (KI). Dr. Wilds agreed to do so.

Co-Chair Concannon asked for a motion for the acceptance of the November 19, 1998 NEAC minutes as amended. The motion was made, seconded and accepted.

Co-Chair Concannon briefly discussed the issue of clerical support to NEAC from the Department of Environmental Protection. This issue is still pending as far as who will be providing the support.

NEAC members discussed the logistics of printing the annual report. It was also decided that the color of the cover for the report will be kelly-green.

Co-Chair Concannon discussed the response from the Department of Environmental Protection (DEP) regarding an address for NEAC correspondence. The proposal to use DEP's address for NEAC's correspondence was denied.

Mr. John Markowicz made a motion for NEAC to ask Dr. Kevin Ryan if NEAC could use his address at the Legislative Office Building for it's correspondence if feasible. The majority of NEAC voted for the motion. There was one abstention by Co-Chair Woollacott.

Members of NEAC discussed the council's funding requirements. Co-Chair Concannon also reminded members to submit their mileage requests at the end of the year for reimbursements.

Members of NEAC discussed the final assignments and revisions for the first draft of the yearly report.

Co-Chair Concannon and other members of NEAC will be looking into possibilities of hiring a temporary secretary or asking if a local Department of Environmental Protection secretary can do the minutes for NEAC meetings.

NEAC members decided to have their next meeting on January 7, 1999 at 5:00 p.m. at the Waterford Town Hall..

Co-Chair Woollacott and Co-Chair Concannon briefly mentioned their meeting with Mr. Bruce Kenyon, President Chief Executive Officer, Northeast Nuclear Energy Company, regarding Connecticut Yankee.

Co-Chair Concannon made the motion to adjourn the meeting. The motion was seconded and accepted and the meeting adjourned at 9:40 p.m..

APPENDIX 3A

STATE OF CONNECTICUT

Raised Bill No. 5607 Page 1

Referred to Committee on ENERGY AND TECHNOLOGY

LCO No. 1541

Introduced by (ET)

General Assembly
February Session, A.D., 1998

AN ACT CONCERNING THE NUCLEAR ENERGY ADVISORY COUNCIL.

Be it enacted by the Senate and House of Representatives in General Assembly convened:

Section 1. Section 16-11a of the general statutes is repealed and the following is substituted in lieu thereof:

(a) There is established a Nuclear Energy Advisory Council which shall (1) hold regular public meetings for the purpose of discussing [issues relating to the safety and] THE SAFE operation of [the] nuclear power generating facilities located in this state and to advise the Governor, the General Assembly and municipalities within a five-mile radius of any nuclear power generating facility in this state [of such issues] REGARDING SUCH OPERATION, (2) work in conjunction with agencies of the federal, state and local governments and with any [electric company operating] LICENSEE OF a nuclear power generating facility, AS DEFINED IN SECTION 16-19m, to ensure the public health and safety, (3) discuss proposed changes in or problems arising from the operation of a nuclear power generating facility, (4) communicate with any [electric company operating] LICENSEE OF a nuclear power generating facility, about [safety or operational concerns at] THE SAFE OPERATION OF the facility, which communications may include, but not be limited to, receipt of written reports and presentations to the council, and (5) review the current status of facilities with the Nuclear Regulatory Commission.

(b) The advisory council shall consist of: (1) Two members appointed by the president pro tempore of the Senate and two members appointed by the speaker of the House of Representatives; (2) the Commissioner of Environmental Protection, or his designee; (3) one representative of an operator of a nuclear power generating facility located in the state, appointed by the Governor; (4) two electors from each municipality in which a nuclear power generating facility is located, appointed by the chief executive officers of said municipalities; and (5) four electors each of whom is from a municipality which is adjacent to a municipality in which a nuclear power generating facility is located, one appointed by the majority leader of the House of Representatives, one appointed by the majority leader of the Senate, one appointed by the minority leader of the House of Representatives, and one appointed by the minority leader of the Senate. ANY VACANCY SHALL BE FILLED BY THE APPOINTING AUTHORITY. THE COUNCIL SHALL ELECT A CHAIRPERSON FROM AMONG ITS MEMBERS.

[(c) All appointments to the advisory council shall be made not more than thirty days after June 6, 1996. Any vacancy shall be filled by the appointing authority.

(d) The council shall elect a chairperson from among its members, except that the speaker of the House of Representatives

and the president pro tempore of the Senate shall select the chairpersons for the first meeting of the council. Such chairpersons shall schedule the first meeting of the council, which shall be held within sixty days after June 6, 1996.]

[(e)] (c) The membership of the council shall serve without compensation. The Commissioner of Environmental Protection shall provide, within available resources, clerical support to the council.

[(f)] (d) On or before January [1, 1997, and annually thereafter] FIRST, ANNUALLY, the advisory council shall report to the General Assembly concerning its activities for the preceding year.

Sec. 2. (NEW) (a) There is established within the Office of Policy and Management the permanent position of a Nuclear Advisor, to be appointed by the Secretary of the Office of Policy and Management. The Nuclear Advisor shall primarily be responsible for observing the decommissioning of the Connecticut Yankee nuclear power generating facility located in the town of Haddam and the restart and operation of the Millstone nuclear power generating facilities located in the town of Waterford.

(b) The Nuclear Advisor shall report not less than annually to the Nuclear Energy Advisory Council and to the towns of Haddam and Waterford on the status of such decommissioning and operations of said facilities and related issues, as appropriate.

Sec. 3. This act shall take effect July 1, 1998.

STATEMENT OF PURPOSE: To create the permanent position of Nuclear Advisor within the Office of Policy and Management to observe the decommissioning of the Connecticut Yankee nuclear power plant and the restart and operation of the Millstone nuclear power plants.

[Proposed deletions are enclosed in brackets. Proposed additions are all capitalized or underlined where appropriate, except that when the entire text of a bill or resolution or a section thereof is new, it is not capitalized or underlined.]

APPENDIX 3B

Testimony before Committee on Energy and Technology

Senator Peters, Representative Eberle, members of the Energy and Technology Committee, thank you for giving me an opportunity to speak to Raised Bill #5607-An Act Concerning the Nuclear Energy Advisory Council. I am Evan Woollacott, Co-Chair of the Nuclear Energy Advisory Council (NEAC). My testimony reflects the consensus thinking of our council members.

Lines 52-53: I note that the "council shall elect a chairperson." Since NEAC was organized, we have been operating with co-chairpersons. This has been particularly helpful for Representative Concannon during the legislative sessions. In addition, the demands on our council have been greater than any of us could have imagined. Representative Concannon and I have worked out a good workload division, which has helped us in council management. I would hope that this language would not preclude us from continuing our current effective arrangement.

Lines 67-68: We report on a calendar year basis. Although we have had some help from staff, most of the report writing is done by volunteer members of the council. The requirement that we report formally to the legislature by January 1st of each year cannot physically be accomplished. We propose that the report date be changed to February 1st of each year. As we have done in the past, we will continue our earlier informal report to this Committee, particularly when our findings could result in possible legislative changes.

Lines 71-82: We are pleased that the permanent position of a Nuclear Advisor has been added, based on our recommendations. We strongly support this action. The state needs to have an independent review of not only nuclear operations, but plant decommissioning, if we are to insure that the health and safety of the general public is not compromised. During the past two years, we recognized that we needed independent reviews as an aid in fulfilling our statutory assignment. A nuclear engineer working with us would have improved our ability to fulfill the assignment given us. I might note that most of the states where nuclear plants are located have a separate nuclear engineer looking to the interests of the public.

We have spent considerable time over the past 20 months insuring that any review of the NRC, NU and other supporting contractors can be as independent as possible. The nuclear energy group is a small fraternity where everyone knows everyone else. To insure that selection of an independent nuclear advisor, we offer our services to participate in the interview process.

With these minor clarifications, both Representative Concannon and I, along with the NEAC members, strongly support a favorable return on this bill. *Evan W. Woollacott, Co-Chair NEAC*

APPENDIX 3C

JOHN G. ROWLAND
GOVERNOR

STATE OF CONNECTICUT
EXECUTIVE CHAMBERS
HARTFORD, CONNECTICUT
06106

TO : REPRESENTATIVE TERRY CONCANNON

FROM : SIDNEY J. HOLBROOK, CHIEF OF STAFF

DATE : MAY 15, 1998

IN FOLLOWING UP ON OUR MEETING ON WEDNESDAY REGARDING THE APPOINTMENT OF AN INDIVIDUAL TO ACT IN THE CAPACITY OF A NUCLEAR ADVISOR, I CONTACTED DEPUTY SECRETARY MARC RYAN AT OPM. MARC TOLD ME THAT YOU HAD CONTACTED HIM THE DAY OF OR TWO DAYS AFTER OUR MEETING.

MARC INFORMED ME OF YOUR CONVERSATION REGARDING RESTRUCTURING OF THE ENERGY OFFICE AT OPM. IN MY CONVERSATION WITH MARC IT WAS MY UNDERSTANDING THAT WHEN THIS RESTRUCTURING OCCURS AN INDIVIDUAL CAN BE PLACED IN THE CAPACITY OF AN ADVISOR. MARC ALSO INFORMED ME THAT HE WILL KEEP YOU INFORMED AS TO THE PROGRESS OF THIS RESTRUCTURING.

IT IS MY HOPE THAT THIS WILL ACHIEVE WHAT WE ALL BELIEVE TO BE MUTUALLY BENEFICIAL NOT ONLY TO ALL OF US CONCERNED WITH THIS MATTER, BUT UTMOST TO THE PEOPLE OF THE STATE OF CONNECTICUT.

CC: MARC RYAN, OPM
PAM SUCATO, LEGISLATIVE DIRECTOR

APPENDIX 4A

WRITTEN STATEMENT OF JOHN MARKOWICZ, VICE-CHAIRMAN,
STATE OF CONNECTICUT
NUCLEAR ENERGY ADVISORY COUNCIL (NEAC)

Chairman Jackson and NRC Commissioners. Thank you for this opportunity to participate in this public briefing on selected issues related to the proposed restart of Millstone Unit 3.

My name is John Markowicz. I am a citizen of Waterford, CT, and Vice Chairman of the State of Connecticut Nuclear Energy Advisory Council (NEAC). With my family, I have resided for the past twenty-one years within two miles of the Millstone Nuclear Power Station. Prior to that, and for more than eleven years, I served on active duty as a nuclear trained commissioned officer in the United States Navy, including a tour as Chief Engineer of a fast attack nuclear submarine. I have never been employed by a commercial nuclear utility. As a local civic leader and businessman, I was nominated by the First Selectman of Waterford to serve as a volunteer on NEAC nearly two years ago.

NEAC was established by the Connecticut Legislature in Section 17 of Public Act 96-245. Our membership consists of fourteen uncompensated appointees from varied backgrounds and perspectives to provide diversity, balance, and credibility. We receive clerical support from the Department of Environmental Protection, and have been appropriated $15,000/year for travel funds in Fiscal Years 1998 and 1999. Four of us have signed Communications Protocols with the NRC. We have been charged by the Legislature to:

1. Hold regular public meetings to discuss safety and operation of Connecticut nuclear plants, and advise the governor, legislature and municipalities within a five-mile radius of the plants.
2. Work with federal, state, and local governments and companies operating the facilities to ensure public health and safety.
3. Discuss proposed changes and problems arising from the operation of nuclear power generating facilities.
4. Communicate, through written reports and presentations, with nuclear plant operators about safety and operational concerns.
5. Review the current status of facilities with the Nuclear Regulatory Commission.

Pursuant to this charter, NEAC has regularly held monthly public meetings in Waterford, East Lyme, Haddam, and Hartford since the first meeting on August 1, 1996. At least one or more members of NEAC have monitored or observed more than one hundred other meetings, nearly all of which have been publicly noticed. This includes: twenty-one NRC public meetings, approximately seventy meetings between the NRC, Northeast Utilities (NU), and/or a Third Party Contractor (i.e., Sargent & Lundy, Parsons Power, or Little Harbor Consultants), and at least ten NU public meetings or senior management training sessions. In addition and in accordance with the Communications Protocols noted earlier, telephone conferences between the NRC, NU, and Third Party Contractors have been routinely monitored by two NEAC members when possible. Site visits, plant tours, and periodic monitor observations have also occurred on several occasions at Millstone and Connecticut Yankee. With this year's appropriation of travel funding, NEAC members have also monitored Corrective Action Verification Program activities on multiple occasions at Sargent & Lundy, Chicago, IL and Parsons Power, Reading, PA.

As required by Public Act 96-245, NEAC has prepared and submitted Annual Reports for 1996 and 1997 to the Governor and Legislature. Copies of these two documents have also been distributed to the Nuclear Regulatory Commission. As documented therein, extensive correspondence has also been generated to federal and state officials. This has included a number of letters to the Nuclear Regulatory Commission.

With this information as background, I would like to share with you the following observations from more than twenty-two months of monitoring the Millstone Unit 3 Restart process:

1. Public Participation. There have been significant efforts on the part of all parties to this process to solicit and receive public input. Noticed meetings by the NRC have provided numerous opportunities for members of the public to observe and/or speak on all Millstone Restart issues. Demonstrating similar openness, the utility, NU, has sponsored open meetings in Waterford and Haddam, invited the public to normally closed officers' meetings, and has solicited comments via a local advisory council/committee at both locations. The Citizens Regulatory Commission (CRC) has also hosted a weekly, one hour, telephone call-in program on cable access television to voice its concerns and take citizen input.

Though the gap has narrowed, it would be inaccurate to assert that a uniform public consensus has emerged from these discussions, as I am sure you will conclude from the presentations you will receive today from all Public Interest Groups. However, it has been and I hope will continue to be a remarkably open process. Thousands of hours of effort by your staff, the utility, and the public have been focused upon health and safety concerns associated with the contemplated Millstone Unit 3 Restart. NEAC appreciates the measures taken by the NRC to foster this level of public participation. In this regard, I would like to mention the time and effort of NRC staff personnel in hosting local public meetings. Open meetings in New England can be a unique experience and a test of the sponsor's tact, diplomacy and restraint. The monthly, five-hour evening public meetings have provided your staff, particularly the Special Projects Office, excellent opportunities to demonstrate these skills. They have certainly earned my respect and admiration.

2. Millstone Employee Concerns Program (ECP) and Safety Conscious Work Environment (SCWE). This has recuringly appeared to be the most challenging aspect of the Restart Process, in part because it is difficult to quantify and evaluate. It has been likened by one NEAC member as trying to get one's hands around smoke. Most significantly, NEAC has observed that a comprehensive change in the Millstone work culture was a fundamental prerequisite to restart certification. While we fully supported the NRC Order establishing Third Party Oversight in this area, we raised questions regarding your "Independence" criteria and the membership of the Little Harbor Consultant (LHC) team. Having now observed the implementation of this order for nearly sixteen months, it appears that LHC has credibly implemented the letter and spirit of the Order. Their comprehensive plan and common sense approach to grading attributes provided quantitative criteria for understanding and evaluating progress by NU in this critical area. It was and is essential for LHC to maintain lines of communication with NU employees to implement the NRC Order, though some in the public have recently challenged the degree of interaction that has resulted. NEAC has observed that LHC, NU and the NRC have demonstrated a reasonable, best effort to achieve and maintain

"arms length" Third Party Oversight. Furthermore, the trends reported to the public by NU and the LHC on April 7, 1998 are believable and suggest the work place culture at Millstone has improved. We also observe that this condition is fragile and requires continued NU management attention and LHC "arms length" monitoring, at least until the number of Employee Concerns and NRC allegations have been reduced to the industry averages for "Best Run" nuclear power plants.

3. Deferred Items Management/Corrective Actions. The nature, challenges, and solutions to deferred items management have been more understandable than the ECP/SCWE. The magnitude of this situation has been of particular concern with eighty-eight risk and/or safety significant systems at Millstone Unit 3. Most troubling, as well, was the erosion of public confidence in the ability of the NRC to monitor and enforce corrective action standards. Though challenging the "Independence" criteria for selection of Third Party Contractors to implement a Corrective Action Verification Program (CAVP), NEAC supported the goals and objectives of this NRC Order. Additional confidence in this process was established when NEAC was allowed to develop and implement a random process for selecting CAVP systems, and the NRC defined four understandable levels for publicly grouping and disseminating Discrepancy Reports (DRs) produced by the CAVP contractor. Pursuant to the aforementioned Communications Protocols, NEAC members have monitored telephone conferences and working meetings (public and closed) between the NRC, NU, and the Third Party contractor, Sargent & Lundy. NEAC is satisfied that an "arms length" relationship has been achieved and maintained, and that the work product from Sargent and Lundy is credible. The number of deferred items remains a concern, particularly in view of the number of Level 4 DRs that have emerged from the CAVP. The docketed commitment by NU on March 9, 1998 (NO. 50-336, 50-423, B17084) regarding final corrective action on deferred Level 4 DRs prior to completion of the next refueling outage is positively noted by NEAC. In so far as practicable, this should be the standard goal for all current deferred items. In addition, NEAC considers the prompt and comprehensive implementation of PASSPORT as essential for NU to establish "world class" deferred items management control.

4. Management Oversight/Quality Assurance. Many of the observations noted in the proceeding two paragraphs have management oversight and quality assurance implications. Specific observations of Oversight have been by the very nature of the function rather limited. Certainly the small number of Level 3 DRs resulting from the CAVP reflect upon the validity of Oversight's certification process. The results of on-going NRC inspections will add to this database. The public and press have recently challenged the role of Oversight in the Recirculation Spray System (RSS) liner failure event. NEAC monitored the April 7, 1998 RSS failure meeting with the NRC, NU, and Sargent & Lundy, and observed that Oversight appeared to properly execute its responsibility in this situation.

In summary, I offer the following observations as a member of NEAC:

1. The two NRC Orders applicable to Millstone Unit 3 have established credible, "arms length" processes for evaluating the progress of NU in establishing an employee concerns program, safety conscious work environment and deferred items management control.

2. Northeast Utilities has demonstrated steady, measurable improvement as documented in Third Party Contractors' reports and public presentations.

3. Processes and procedures established and maintained by the NRC for oversight at Millstone should continue beyond restart and until measurable standards have been achieved and maintained by NU. Sustained public confidence in the safe operation of Millstone has not been completely established.

Subject to your questions, this completes my prepared remarks.

Very respectfully submitted,

John Markowicz

APPENDIX 4B

STATEMENT OF TERRY CONCANNON, CO-CHAIR
CONNECTICUT
NUCLEAR ENERGY ADVISORY COUNCIL (NEAC)

June 2, 1998, Rockville, MD

Good afternoon, Chairman Jackson and Commissioners of the Nuclear Regulatory Commission! Thank you for the opportunity to participate in this public briefing prior to the Commission considering authorization for the restart of Millstone Unit 3.

My name is Terry Concannon. I am the State Representative for the 34th Assembly District in the Connecticut Legislature and I am a resident of the town of Haddam. Since its inception on August 1, 1996, I have been co-chair of the state Nuclear Energy Advisory Council (NEAC) which was established pursuant to Public Act 96-245.

NEAC was created in response to the concerns of the citizens in southeastern Connecticut who were variously; alarmed, angry, confused and somewhat frightened by the developments at the three Millstone nuclear power generating plants in Waterford. The three were placed on the NRC Watch List on January 31, 1996. A history of safety violations and the intimidation of employees, compounded by the ineffective and arrogant approach of management, created these problems for the public. In addition, the public had lost confidence in the ability of the NRC to monitor and enforce corrective action standards. The NEAC was created as an independent council of 14 members to ensure that the health and safety of the public, particularly those living within a five-mile radius of the nuclear plants, is protected. Our charge is strictly advisory, but we do interact on a regular basis with the public, the utility, NRC staff members, and the engineering firms contracted to carry out the Independent Corrective Action Verification Program (ICAVP), and we communicate with the state government. To date we have issued two annual reports. The fourteen members have diverse backgrounds, some nuclear, scientific and engineering, and others in business. Their perspectives vary regarding the pros and cons of nuclear generated power and this adds diversity and credibility to the council. We believe it to be important that we retain our objectivity, both real and perceived.

When the council embarked on this task we had no idea of the magnitude of the undertaking. We conjectured that quarterly meetings might suffice but that, initially, it would be best to hold them on a monthly basis. As the process became clearer, our schedule developed and the intensity was much greater than anticipated. The dedication shown by our members has been remarkable and attendance by one or more at any and all meetings of the NRC, NU/the

contractors, more than 100 in number, has taken place. Thus, we are well informed as we have observed the progress over the past 22 months. Four of our members signed the communications protocol established by the NRC, which enabled us to observe closed meetings, to monitor phone calls between NU and the contractors, and to attend meetings with Sargent & Lundy,(the Millstone 3 contractor), the NRC and NU in Chicago. In addition, one member became 'badged' so that he can enter the plant unescorted at any time, and he has been performing a 'Monitor Watch' in the Millstone 3 control room on a regular basis, including visits during off hours, since December.

Today we have been invited to address the principal issues remaining to be evaluated by the Commission, including the ICAVP, the Corrective Action Program and the results of the NRC's Operation Safety Team Inspection (OSTI).

ICAVP/C0RRECTIVE ACTION PROGRAM: We became intensely involved with the ICAVP from the start. Due to the skepticism of the public we questioned the 'independence' aspect of the program. Since the utility is paying the contractor, is it possible for the latter to be truly objective? We asked this in Connecticut and we asked it in Chicago. It became apparent that the contractor has a great deal at stake, most of all its reputation in the industry. In our travels, we also ascertained that the eyes of the nuclear energy industry are focused on the outcome of Millstone's efforts. Thus, it would seem that independence and a thorough review by the contractor of Millstone's ability to establish adequate design bases and design controls are of the essence. Nevertheless, our council had some reservations and chose to delete the word, 'independent', simply calling it the 'CAVP.'

Comment: During the process of the CAVP our observations have noted a consistent business-like style to communication whether over a table at a meeting, or over the telephone. An 'arm's length' posture has been maintained.

Next came our involvement in the selection of systems to be reviewed by the contractor in the first of three levels in the Audit Plan. This was intended to address the public concerns about the possible leak of the list of the systems to the licensee ahead of the CAVP review. We were invited to select 2 of the 4 functional groups of systems for the Tier 1 review. A subcommittee of the council determined a method to guarantee a random selection, and the names of the 2 systems were drawn out of a hat by members of the public at a regularly scheduled NEAC meeting in Waterford.

Comment: This process worked well and we appreciated our inclusion as reflected in the Policy Issue released by the Executive Director of Operations, James Taylor, on January 3, 1997.

It soon became apparent that the matter of the Discrepancy Reports posed a problem. The public needed to be able to understand the significance level of the discrepancies being identified by the CAVP. At first, it was easy to read and assimilate them as they were published, but the numbers grew rapidly. In response to these concerns, and in response to our request, the criteria for categorizing the relative significance of the DRs were established.

Comment: This has facilitated the process in a remarkable fashion. Everyone involved is familiar with the significance levels and it has cut down on lengthy verbiage. It is also good to know, where Millstone 3 is concerned, that no confirmed level 1 or level 2 DRs have been found. This means, at the least, that the systems reviewed are capable of performing their intended function. I shall also comment that we were totally surprised by the number of DRs that have been made When we were hazarding a guess about the possible number before the reviews began, we thought that some 250-300 might be expected. That the number should have reached 1100, is an indication, in our estimation, of how far the corrective action program at Millstone 3 had been permitted to deteriorate. By the same token, it is also a measure of how thoroughly Sargent & Lundy performed the review.

I have monitored phone calls between Sargent & Lundy and NU on a random basis with occasional assistance from my co-chair, Evan Woollacott. These same calls have been monitored by the NRC staff from the Special Projects Office. The communications have retained a constructive businesslike tone as efforts are made to get additional information so that problems can be resolved. Several times I have felt that the NU team has been overly enthusiastic or too determined to have its point of view accepted. Thus, I was glad to hear the Sargent & Lundy representatives hold firm to their position when necessary. We have also found it reassuring that there are some Discrepancy Reports for which no agreement could be reached with Sargent & Lundy regarding the Corrective Action Plan. The NRC has had to step in to help resolve the situation in some 18 cases. Out of the 1100 DRs issued by the contractor some 20+ remain to be closed before Restart as of May 26. The fact that less than 30 are expected to be confirmed at level 3(not meeting the licensing and design bases) is less than 3% of the total. NEAC is concerned that the corrective actions be taken, and has been assured that the outstanding items will be appropriately tagged for identification purposes, as we suggested, and that all corrective action will be completed prior to the end of the next refueling outage.

The end of the CAVP is in sight. Some thousands of hours and thousands of documents later, a picture of Millstone 3 and its conformity/lack thereof to its design and licensing bases has emerged Of the 88 safety and/or risk significant systems, a comprehensive review was made of the design and licensing bases of 15 systems and portions of 51 interfacing systems. In addition, a validation of the critical design characteristics for accident mitigation included 22 systems. The results should enable the contractor and the Commission to assess the restart capability of the plant in concurrence with other essential criteria, such as the Employee Concerns Program.

OPERATIONAL SAFETY TEAM INSPECTION (OSTI): NEAC members observed the OSTI entrance briefing, public exit meeting and several intermediate events. The Team Leader and the 13 other members of the inspection were professional and thorough. Significantly, this was the first time we had met them, and can certainly note that they provided a fresh perspective to the Millstone 3 inspection process. At the Exit meeting and a subsequent NEAC public meeting, NU officers have provided the status of aggressive initiatives to correct the operator performance and system valve alignment issues that were identified as deficiencies.

Lastly, we can reinforce the observations made by vice-chairman, John Markowicz, on May 1,'98

1. The Corrective Action Verification Program, as established by the NRC, has been comprehensive in nature, and has been performed at Millstone 3 in a credible 'arm's length' manner by Sargent & Lundy.
2. Northeast Utilities has exhibited significant and sustained improvement in management and in the manner in which problems are addressed, whether they be of a personnel or functional nature.
3. In order for public confidence to be fully restored in the safe operation of Millstone 3, continued oversight and vigilance on behalf of the NRC will be necessary. Its vigorous oversight will be required to ensure that any possible future regression at the plant will be prevented in a timely fashion. This is important so that the NRC retains the improvement in public perception that is the result of its substantial investment in Millstone, and its openness and availability to the public in the surrounding area.

This completes my remarks on behalf of NEAC, and I thank you for your kind attention,

Respectfully,

Terry Concannon, Co-chair, NEAC

APPENDIX 5

Memorandum

DATE: January 4, 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

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

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

Memorandum

DATE: January 26, 1998

TO: Evan Woollacott and Terry Concannon, CoChair, NEAC

FROM: *Bill Sheehan*

RE: MONITOR WATCH IN MILLSTONE 3 CONTROL ROOM

1. On January 25, 1998 I spent an hour in the control room of MILLSTONE 3 observing the control room watchstanders. Watchstanders were restoring from the Emergency Core Cooling System(ECCS) flow test, testing the 'A' Charging Pump and lining up condensate system in preparation for flushing prior to restoring the system to 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 and tests.

c There was a definite sense of progress as indicated by the following:

1) The condensate system came on line with only one valve packing leak the stopped without operator intervention.

2) The unit supervisor planned to EMAIL a Well Done message to the maintenance supervisor regarding the condensate system.

d. While discussing the increased tempo with the shift manager, he indicated that if he felt it necessary he could call upon three other qualified operators in the shift to share the operator load. He did not feel it was necessary just yet to increase the control room watchstanders.

e. There was one person from oversight closely observing the recovery from the ECCS flow test.

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

a. This watch section has a "cando" attitude and performed in an enthisiastic but professional manner.

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

4. I have discussed this observation with Mike Brothers.

Bill Sheehan

Memorandum

DATE: February 13, 1998

TO: Evan Woollacott and Terry Concannon, CoChair, NEAC

FROM: Bill Sheehan

RE: MONITOR WATCH IN MILLSTONE 3 CONTROL ROOM

1. On February 09, 1998 I spent an hour in the control room of MILLSTONE 3 observing the control room watchstanders. Watchstanders were testing the 'A' Charging Pump and lining up QSS pump testing. The condensate system had a vacuum using an auxiliary steam source and was flushing the condensate to warm up the water prior to filtering. The 'B' Emergency Diesel was also undergoing repairs but was not impacting on events in the control room.

2. The following comments are germane:

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

b. Watchstanders were careful in conducting the various lineups and tests.

c. There were two Control Room operators on watch..

d. While discussing personnel with the unit supervisor, he commented that there were not as many qualified operators as before the shutdown because the long hours had caused some operators to search for other employment. He was of the opinion that more could be accomplished if the personnel level was the same as prior to the shutdown.

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

a. This watch section performed in a professional manner. However, the watch section supervisors are concerned by a "shortage" of personnel.

b. The material problems being experienced are normal for "waking up" a plant that has been shut down for over two years. This does not alleviate the frustration generated by the delays incurred by stopping to fix the problems.

4. I have sent a copy of this observation to Mike Brothers.

Bill Sheehan

Memorandum

DATE: February 20, 1998

TO: Evan Woollacott and Terry Concannon, CoChair, NEAC

FROM: Bill Sheehan

RE: MONITOR WATCH IN MILLSTONE 3 CONTROL ROOM

1. On February 19, 1998 I spent an hour in the control room of MILLSTONE 3 observing the control room watchstanders. Watchstanders were in the process of filling the B Steam Generator and operational testing of B Chiller(Air conditioning system).

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. During the testing of the B Chiller the Pump tripped on Low Oil Pressure. The Shift Manager conferred with the maintenance personnel on proper corrective action. This system had not been operated for a number of months.

3. The problems experienced by the watch section appear normal for a plant that has not operated for some time and is in the process of returning systems to service. In fact the unit supervisor "apologized" to me because there was so little going on. I am pleased that the problems being experienced are relatively minor and expected.

4. A copy of this monitor has been faxed to Mike Brothers.

Bill Sheehan

Memorandum

DATE: March 09, 1998

TO: Evan Woollacott and Terry Concannon, CoChair, NEAC

FROM: Bill Sheehan

RE: MONITOR WATCH IN MILLSTONE 3 CONTROL ROOM

1. On March 07, 1998 I spent an hour in the control room of MILLSTONE 3 observing the control room watchstanders. Watchstanders were testing charging pumps, conducting a repeat surveillance operation on a ventilation system, and starting circulating water pumps.

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. Two reactor operators were stationed and both were busy performing the necessary pump and valve operations required by the evolutions in progress.

3. During the slave relay testing on the charging pumps, a computer printout of valve indication showed a possible "chatter" of the valve off its open seat. This was not seen on the local indication and the testing was delayed while this anomoly was resolved. The ventilation system surveillance was expected to fail since the evolution was a repeat of a recent failure so the maintenance personnel could see where the failure was occurring. It did fail as expected and the maintenance personnel were able to commence the corrective action on some damper operations in the ventilation system. Low tide prevented the circulating water pumps from starting on first attempt. According to the procedure, after a visual observation of the water box to insure there was sufficient water for a suction for the circ water pump, the interlock preventing the startup of the pump was overridden and the pump started.

4. According to the unit supervisor, none of these problems were unexpected and he was confident that the plant would be ready to proceed to Mode 4 on March 14, 1998 as currently scheduled.

4. A copy of this monitor has been faxed to Mike Brothers.

Bill Sheehan

Memorandum

DATE: March 19, 1998

TO: Evan Woollacott and Terry Concannon, CoChair, NEAC

FROM: Bill Sheehan

RE: MONITOR WATCH IN MILLSTONE 3 CONTROL ROOM

1. On March 18, 1998 I spent an hour in the control room of MILLSTONE 3 observing the control room watchstanders. Watchstanders were conducting surveillance operations and minor maintenance procedures.

2. The following comments are germane:

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

b. The few evolutions conducted were done in a professional manner.

c. Activity was slow because there are two significant material problems.

1) During the shutdown period, as part of the upgrade to the Containment recirculation System(RSS), an oriface was added at the discharge side of the circulation pumps. During operation, one of the pumps flow indication was offset and the expansion joint on the discharge of the pump vibrated. Inspection of the system determined that a portion of the expansion joint ripped off and was lodged in the instrumentation line. Inspection of the other pumps showed similar damage to the discharge expansion joints. The RSS system is shutdown and being checked for foreign material. According to the watchstanders and the watch brief sheet, the plan is to install a metal joint on the discharge of the pumps after the system has been cleaned of foreign material and resume operations. The change from an expansion joint to a metal joint is a change in the design and it must be proven that the metal joint will provide the same protection as the expansion joint. Since the RSS System is one of the CAVP systems, this is a significant impact. There are a number of questions that come to mind that I am sure the NRC and Sargent and Lundy are asking NU.

2) The air operated solenoid valves (4 of them) of the Residual Heat Removal(RHR) system are out of commission because it has been determined that the valves will not operate as desired in the current configuration. These are new valves installed during the shutdown. This failure brings into question the design effort that installed these valves or the inspection of the valves after installation. Again, I am sure there is an active investigation going on by NRC and NU to determine just why this problem occurred.

d. One of the testing operations concerned the evolution of adding boron to the primary coolant. During the evolution, air is getting into the transfer pump causing loss of pump suction from an unknown source. The test was to confirm this and give engineers data to commence trouble shooting. According to Mike Brothers, the solution is to shift the vent from the suction to the discharge of the pump. This mod is in progress..

3. Because operations were slow, the watchstanders had an opportunity to compare notes during informal conversation. One of the roving watchstanders noted his frustration on March 17 when he spent time doing

a valve lineup that he discovered had been done by the previous watch. The other watchstanders then related some other past instances where this had occurred to them. I asked the unit supervisor how this could happen and he very bluntly said, "Lack of communications between watch sections." If the lineup was completed at the end of the shift and the paperwork had not been checked and the computer system updated, only the turnover data will let the oncoming section know what was done. While no harm was done by doing a valve lineup that had already been accomplished, it certainly was a waste of the watchstander's time. This appears to be an area needing some improvement before operations become more complicated.

4. This monitor was discussed with Mike Brothers.

Bill Sheehan

Memorandum

DATE: April 06, 1998

TO: Evan Woollacott and Terry Concannon, CoChair, NEAC

FROM: Bill Sheehan

RE: MONITOR WATCH IN MILLSTONE 3 CONTROL ROOM

1. On April 04, 1998 I spent an hour in the control room of MILLSTONE 3 observing the control room watchstanders. Watchstanders were conducting surveillance operations and minor maintenance procedures.

2. The following comments are germane:

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

b. The activity consisted of preparations for containment chill water isolation valve testing and maintaining plant conditions.

c. The shift manager and the unit supervisor spent considerable time discussing how to coordinate the testing required because of new installations and the biannual surveillance of the same system

d. The PORC review of the RSS modifications completed as a result of the problems discussed in my last report was underway in an adjacent conference room and the watchstanders were expecting that RSS testing would be added to the work list shortly. The PORC meeting had not informed the watchstanders of its findings by the time I left the control room.

3. Although there are no comments regarding the conduct of the watchstanders, while I was in the control room a contract member of the oversight group visited the control room. I took the opportunity to discuss the resignation of the VP of oversight and the RSS problems. He is very pleased with the direction of oversight under the new VP. I learned that he was a member of the oversight group that predicted that the new orifice design for RSS would not work as planned. He commented that the RSS problem was a prime example (both good and bad) of how the design engineers support the plant. There is still a number of design engineers who "are not willing to listen to a dissenting opinion." Although progress is being made in this area, he was of the opinion that this was still a barrier to readiness for criticality.

4. This monitor was discussed with Mike Brothers.

Bill Sheehan

Memorandum

DATE: April 20, 1998

TO: Evan Woollacott and Terry Concannon, CoChair, NEAC

FROM: Bill Sheehan

RE: MONITOR WATCH IN MILLSTONE 3 CONTROL ROOM

1. On April 19, 1998 I spent an hour in the control room of MILLSTONE 3 observing the control room watchstanders. The Reactor Plant was in Mode 4(Hot Shutdown) and the Watchstanders were making preparations to proceed to Mode 3(Hot Standby). The retest of a Motor Driven Feed Pump had just failed. The following comments are germane:

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

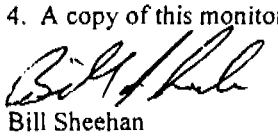
b. The activity consisted of preparations the motor driven feed pump maintenance and minor evolutions to maintain plant conditions.

c. The shift manager and the unit supervisor spent considerable time discussing the requirements for proceeding to Mode 3 and coordinating the necessary steps.

d. The Shift Manager emphasized in his conversations with maintenance and engineering that repairs to the feed pump were required prior to changing modes but to remember that doing it right the first time was more important that speed in the repairs.

3. I also reviewed the OP3208 Cold shutdown Procedure that was used to cool the plant from hot standby on April 15, 1998 and watch turnover sheets for the past week. These documents appeared to be in order and properly reflect the conditions and plans of the watch as explained to me.

4. A copy of this monitor was provided to Mike Brothers.



Bill Sheehan

Memorandum

DATE: May 08, 1998

TO: Evan Woollacott and Terry Concannon, CoChair, NEAC

FROM: Bill Sheehan

RE: MONITOR WATCH IN MILLSTONE 3 CONTROL ROOM

1. On May 1, 1998 I spent an hour in the control room of MILLSTONE 3 observing the control room watchstanders. The Reactor Plant was in Mode 3(Hot Standby) and the Watchstanders were recovering from a Low Tave and Low Pressurizer Level occurring during testing of the "Terry" Turbine. The following comments are germane:

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

b. During one portion of the recovery, both Control Room Operators and the Unit Supervisor were grouped in by one control panel. (They were all looking at a Let down Heat Exchanger high temperature indication). The Shift Manager asked them to separate so he could see and they could respond to any other alarms that might occur during the recovery of normal operating temperature and Pressurizer level.

c. During the recovery a set of electrical breakers for a Pressurizer heater bank did not operate as expected. the Shift Manger directed that they be left in a safe condition and not operated again until a condition report was resolved.

c. There was a oversight management observer in the control room monitoring evolutions. I am sure his observations will be much more detailed than my brief comments.

d. When conditions were restored to normal and testing resumed, one of the valves in the test did not close on the first attempt. After cycling a bypass valve, the valve did operate correctly two additional times.

3. a. When the plant conditions were returned to normal, I was able to ask the Shift Manager what caused the loss of Pressurizer level and plant temperature. He informed me that part of the testing of the "Terry" Turbine required some significant condensate flow which provided a sudden influx to "Cold" water to the steam generators. This, in turn, caused the primary system to cool down and contract, lowering Pressurizer level and Tave. The plant conditions for the test required that the Pressurizer level be in the low end of the band. This was a change from previous issues of the test where the Pressurizer level was higher in the operating range. He understood that the PORC had commented that the test might cause what occurred but approved the procedure because it also might not. Unfortunately, the suspicions of the PORC were correct. The Unit Supervisor drafted a CR to change the procedure before the surveillance is performed again.

b. The malfunctioning breakers during the recovery of plant conditions was a condition that the operators would just as soon not have happened when it did.

c. The Shift Manager termed the occurrence a "minor annoyance" but it did not appear minor as the control room operators and the unit supervisor worked to restore the normal conditions. The adrenaline

was pumping and the unit supervisor cringed when he was told by the shift manager that the PORC had predicted the problem.

d. Comment: When a procedure forces the operators to put the plant in a condition were the planned evolution is likely to cause a violation of alarm setpoints and necessitate operator action to keep the plant in a safe condition, it is leading with your chin, especially if it is not properly briefed to the crew prior to the evolution. On the opposite side, there was extensive training, according to the shift manager, on the action to take when the 36D valve stuck open because the occurrence was expected because of valve design. the action take to free the valve was correct and smooth.

d. The Unit Supervisor commented to the Shift Manager that a "Three CR Night" was really something(for obvious reasons).

e. There was a short delay in the testing while the QA personnel could be called to conduct the necessary steps in the procedure(readings, etc.). the Unit Supervisor commented that neither Operations or Maintenance or QA really effectively coordinate there efforts to insure that no one is kept waiting during testing and evolutions. The Shift Manager allowed as how some steps were being taken on both sides to improve this deficiency.

4. This monitor report was delayed until it could be discussed with Mike Brothers.

Bill Sheehan

Memorandum

DATE: May 20, 1998

TO: Evan Woollacott and Terry Concannon, CoChair, NEAC

FROM: Bill Sheehan

RE: MONITOR WATCH IN MILLSTONE 3 CONTROL ROOM

1. On May 19, 1998 I spent an hour in the control room of MILLSTONE 3 observing the control room watchstanders. The Reactor Plant was in Mode 5(Cold Shutdown) and the Watchstanders were preparing for an operational test of the 'A' Charging Pump. There is a work stoppage in progress except for repairs to the leaking primary system valve and other evolutions necessary to maintain plant conditions. The work stoppage was started on Friday May 15, 1998 according to the shift turnover sheets. The following comments are germane:

a. Watchstanders were not as formal in their communications with each other as I have seen in previous observations. The unit supervisor left the control room to go to the back office to arrange for personnel to conduct the planned test without being relieved by the shift manager(a practice I observed previously when the unit supervisor was going out of eye range of the panels). While he was out, there was an alarm which the control room operator turned to report and found no one to report to. Later, the unit supervisor went into the shift manager's office to confer with him without informing the other control room watchstanders. Although not out of eye or ear range of the control room, the shift manager went to the unit supervisor during other observations.

b. The unit supervisor was less than formal in describing his opinion of conducting the charging pump test which would occupy the time of most watchstanders for two shifts because "...two ounces of oil had been removed from a 40 gal sump."

c. The unit supervisor directed one of the operators to prepare to brief the watch section on the steps to shift charging pumps in preparation for the operational test. After a short preparation and the gathering of the necessary personnel, the brief was conducted in the control room. The shift manager did not observe the brief. The control room operator conducted the brief and when complete the unit supervisor did an excellent job of forcing a summary of each persons duties and responsibilities and a number of "what if..." questions to cover what might go wrong and the proper action to take in each case. the unit supervisor was careful to keep the brief focused on shifting the charging pumps because the actual operational test would probably take place on the next shift and should be briefed with them. He planned to conduct an additional brief, if the current watch section happened to start the test late in their shift.

3. I discussed the unit supervisor's leaving the control room red carpet area without relief with the shift manager who showed me the procedure that outlines the limitations for the unit supervisor to remain within eye and ear range of the control panels.

4. This monitor report was discussed with Mike Brothers.

Bill Sheehan

Memorandum

DATE: June 04, 1998

TO: Evan Woollacott and Terry Concannon, CoChair, NEAC

FROM: Bill Sheehan

RE: MONITOR WATCH IN MILLSTONE 3 CONTROL ROOM

1. On June 3, 1998 I spent an hour in the control room of MILLSTONE 3 observing the control room watchstanders. The Reactor Plant was in Mode 4 and the Watchstanders were preparing to conduct a number of tests and surveillances. The following comments are germane:

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

b. The Unit Supervisor conducted a thorough brief of the entire watch section on the Operational Test of the 'A' Service Water Pump. Testing would commence as soon as qualified CBM(maintenance test) personnel were available. The Shift Manager completed the brief by insuring that all persons understood their assignments and actions if test failure occurred.

c. The test briefed above never commenced because the qualified CBM personnel would not be available until the next shift. The unit supervisor was commencing a search of the outstanding surveillances and tests to see if any of them could be conducted or started during the shift.

3. a. I discussed the unavailable personnel with the Shift Manager and he indicated that the CBM organization serviced all three plants and they were currently short handed. There was also some discussiion about scheduling coordination. It was not clear if the 'A' Service Water Test was scheduled on the Maintenance Test Schedule before a Diesel Op test. The personnel currently on shift were qualified for the diesel testing but not the operation and reading of the vibration meters needed for the service water pump test.

b. Comment: I detected some underlying frustration among the watchstanders that they were not able to get as much done as they would like because of the lack of one or two key persons. There is so much to do and not enough time to do it when such delays occur.

4. This monitor report was delayed until it could be discussed with Mike Brothers.

Bill Sheehan

Memorandum - 98-13

DATE: July 02, 1998

TO: Evan Woollacott and Terry Concannon, CoChair, NEAC

FROM: *Bill Sheehan*

RE: MONITOR WATCH IN MILLSTONE 3 CONTROL ROOM

1. On June 24, 1998 I spent from 1500 to 1640 in the control room of MILLSTONE 3 observing the control room watchstanders. The Reactor Plant was in Mode 3 and the Watchstanders were preparing to conduct control roddrive motor generator (CRDMG) tests. The following comments are germane:

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

b. I observed the shift turnover brief and watch relief. The turnover brief appeared complete but the work priority discussed at the brief changed within minutes of watch relief. I was very impressed with the oncoming shift manager's comments concerning a lessons learned briefing he was conducting during the turnover. The lesson learned was not very clear on the appropriate action if the position of a valve to be tagged was in doubt. The shift manager was very clear. STOP and get the valve position verified by whatever means necessary before proceeding. All watch stations in the control room relieved at the same time. I commented to the assistant operations director who was also observing in the control room that staggering the reliefs by a few minutes would cut down on the "babble" of watch relief and insure that at least one watch stander is paying attention to the plant and not to relief efforts.

c. After watch relief, the unit supervisor started to gather the necessary personnel to brief the testing of the Control Rod Motor Generators. About a half-hour was lost as the unit supervisor tried to get all the necessary persons in control room for briefing. Briefing was finally held and personnel dispatched to conduct the test. The test did not occur while I was in control room for reasons noted in d. below.

d. Within minutes of the rod motor generator personnel leaving control, an alarm was received on GWS48(gaseous discharge path monitor). The Unit Supervisor immediately broke out and executed the AOP for this alarm. Actions appeared appropriate and health physics testing was in progress to determine the validity of the alarm (actual discharge vice a malfunctioning monitor) when I departed the control room.

2. a. Except for the noise and simultaneous relief of the watchstanders, watch relief was good. There still appears to be a scheduling disconnect since the priority job at turnover brief became the low priority within minutes of watch relief.

b. The unit supervisor's efforts to get the CRDMG test briefing started was like a grade school teacher's efforts to get the class lined up. Someone was always drifting off (for good reason) just as he was ready to start the brief.

c. The watch stander's handled the GWS48 alarm promptly and calmly. Leaving nothing to chance, the unit supervisor carefully followed the AOP for the alarm.

d. I was impressed with the professionalism of the shift manager and unit supervisor. They make an excellent team.

3. This monitor report was delayed until it could be discussed with Mike Brothers. The GWS48 alarm was due to a faulty monitor vice an actual alarm condition.

Bill Sheehan

Memorandum - 98-14

DATE: July 27, 1998

TO: Evan Woollacott and Terry Concannon, CoChair, NEAC

FROM: Bill Sheehan

RE: MONITOR WATCH IN MILLSTONE 3 CONTROL ROOM

1. On July 25, 1998 I spent from 1725 to 1827 in the control room of MILLSTONE 3 observing the control room watchstanders. The Reactor Plant was at 100% Power and the Watchstanders were preparing to shift dilithium demineralizers. The following comments are germane:

a. Watchstanders were formal in their communications with each other concerning plant operations.

b. Near the end of my observation an unexpected "loose parts" alarm was received and the operators opened their procedures to respond to this alarm.

2. a. An informal discussion occurred between the watchstanders concerning some training that they had recently attended. Their "conclusion" was that some of the training instructors were out of touch with what happened in the plant during certain evolutions because they ended up "teaching" the class after the instructor went through what was in the procedure. They had to fill in what the effects of the procedure were on the plant so the other students would have correct information.

b. I discussed the loose parts alarm with the unit supervisor and shift manager. They said it was a computer-generated alarm that detected "abnormal" vibration of equipment in the reactor compartment. This alarm has been coming in periodically and the engineering evaluation is that it is being caused by a 60 Hz interference vice real "loose parts" impinging on the steam generators and reactor vessel. One theory is that the alarm is set off by the use of an access reader near the computer sensor.

3. A copy of this monitor report was provided to Mike Brothers.

Bill Sheehan

Memorandum - 98-15

DATE: August 20, 1998

TO: Evan Woollacott and Terry Concannon, CoChair, NEAC

FROM: *Bill Sheehan*

RE: MONITOR WATCH IN MILLSTONE 3 CONTROL ROOM

1. On August 19, 1998 I spent from 2012 to 2130 in the control room of MILLSTONE 3 observing the control room watchstanders. The Reactor Plant was shutdown at normal operating temperature and pressure(NOT/NOP) and reactor startup preparations were in progress. When I left, rods were being pulled to approach reactor criticality.. The following comments are germane:

   a. Watchstanders were formal in their communications with each other concerning plant operations.

   b. The prestartup brief was led by the unit supervisor and was thorough. Each operator covered what problems might occur in his area during the brief

   c. The watch section had practiced the startup evolution in the simulator before coming on shift to prepare for the evolution.

2 The startup was observed by a senior operations department manager, a management representative, and a representative from the NRC. Reactor engineers were providing technical support during the startup. The entire evolution was serious and professional.

3. A copy of this monitor report was provided to Mike Brothers.

Bill Sheehan

Memorandum - 98-16

DATE: September 07 1998

TO: Evan Woollacott and Terry Concannon, CoChair, NEAC

FROM: *Bill Sheehan*

RE: MONITOR WATCH IN MILLSTONE 2 CONTROL ROOM

1. On September 05, 1998 I spent from 1115 to 1515 in the control room of MILLSTONE 2 observing the control room watchstanders. The Reactor Plant is defueled and preparations were in progress for electrical circuit breaker testing. The following comments are germane:

   a. Watchstanders were formal in their communications with each other concerning plant operations. When a high temperature alarm occurred on the Bravo RCP, formal communications was immediately introduced as the control room operator commenced trouble shooting the problem. It was resolved when he went behind the panels and cleared the alarming module card.

   b. The unit supervisor and the shift manager discussed in detail the steps they would take to shift electrical buses to conduct the breaker rackout and testing. Because plant conditions permitted the unit supervisor to leave the control room he planned to witness the key breaker rackouts. They also planned to get as many trainees as possible to witness these evolutions.

2. This was my first monitor of Millstone 2 Watchstanders and I was pleased with their professionalism and enthusiasm.

3. A copy of this monitor report was provided to Mike Wilson in Millstone 2 Operations.

Bill Sheehan

Memorandum - 98-17

DATE: September 23, 1998

TO: Evan Woollacott and Terry Concannon, CoChair, NEAC

FROM: *Bill Sheehan*

RE: MONITOR WATCH IN MILLSTONE 2 CONTROL ROOM

1. On September 22, 1998 I spent from 2027 to 2127 in the control room of MILLSTONE 2 observing the control room watchstanders. The Reactor Plant is defueled and electrical circuit breaker maintenance and routine surveillances were in progress. The following comments are germane:

   a. Watchstanders were formal in their communications with each other concerning plant operations. When a ground alarm occurred the watchstanders broke out the ground isolation procedures and followed them correctly.

   b. This was my second monitor of Millstone 2 Watchstanders and I was pleased with their professionalism and enthusiasm considering the current plant conditions.

3. A copy of this monitor report was provided to Mike Wilson in Millstone 2 Operations.

Bill Sheehan

Memorandum - 98-18

DATE: October 08, 1998

TO: Evan Woollacott and Terry Concannon, CoChair, NEAC

FROM: *Bill Sheehan*

RE: MONITOR WATCH IN MILLSTONE 3 CONTROL ROOM

1. On October 07, 1998 I spent from 2015 to 2115 in the control room of MILLSTONE 3 observing the control room watchstanders. The Reactor Plant is at NOT/NOP and 100% Power. Preparations for testing the 'B' CCP Pump (Reactor Component Cooling) were in progress. The following comments are germane:

   a. Watchstanders were formal in their communications with each other concerning plant operations.

   b. The brief conducted by the Unit Supervisor was detailed and covered actions to take if the test did not progress as expected. The watchstanders asked good questions about actual status of the cooling system and scheduled ongoing maintenance of the system.

   c. During part of the actual pump testing, the Shift Manager relieved the Unit Supervisor so he could operate a "sequencer" panel behind the control room panels. When the Unit Supervisor returned the Control Room Operator conducting the test of the 'B' CCP Pump started reporting to the Unit Supervisor before a proper turnover of plant status from the Shift Manager. The Shift Manager directed him to hold the reports until the brief turnover could be accomplished.

3. A copy of this monitor report was provided to Mike Brothers.

Bill Sheehan

Memorandum - 98-19

DATE: October 26, 1998

TO: Evan Woollacott and Terry Concannon, CoChair, NEAC

FROM: *Bill Sheehan*

RE: MONITOR WATCH IN MILLSTONE 2 CONTROL ROOM

1. On October 23, 1998 I spent from 2055 to 2155 in the control room of MILLSTONE 2 observing the control room watchstanders. The Reactor Plant is defueled. Maintenance on Circuit Breakers and Circulating Water Pumps was in progress. The following comments are germane:

   a. Watchstanders were formal in their communications with each other concerning plant operations.

   b. No significant actions occurred during the monitor period. The status of the Millstone 2 surveillance procedures was discussed with watchstanders. They reported that if the system was in commission, the surveillance was conducted when scheduled to insure that the plant was as up to date as possible on scheduled surveillances.

   c. Watchstanders did comment that they wished activities were happening with more of a sense of urgency on the road to restart. Progress seemed to them to be at a routine vice an urgent pace.

3. A copy of this monitor report was provided to Mike Wilson, Millstone 2 Operations.

Bill Sheehan

Memorandum - 98-20

DATE: November 18, 1998

TO: Evan Woollacott and Terry Concannon, CoChair, NEAC

FROM: *Bill Sheehan*

RE: MONITOR WATCH IN MILLSTONE 3 CONTROL ROOM

1. On November 12, 1998 I spent from 1140 to 1240 in the control room of MILLSTONE 3 observing the control room watchstanders. The Reactor Plant was shutdown at NOT/NOP Cleaning of the Sea Water Cooling Intake strainers had completed and preparations for startup were in progress. As I entered the control room, troubleshooting on a leaking valve in the 'C' Steam Generator sample line had just commenced. *The following comments are germane:*

a. Watchstanders were formal in their communications with each other concerning plant operations.

b. The shift manager and unit supervisor were reviewing their alternatives and opted for a three pronged approach that was conservative and yet permitted returning the plant to operation as soon as possible.

1) Conduct the routine surveillance on the leaking valve on the chance that cycling the valve would clear the seat and stop the leak when the valve was shut again.

2) Make preparations for a Containment entry to shut the manual isolation valve inside the containment, permitting repairs to occur outside the containment.

3) Make preparations for plant cooldown and mode shift if that was necessary to affect repairs.

c. Since this was occurring during the day, the shift took ample advantage of getting the extra help necessary to resolve the situation in a safe and correct manner. Although I could not stay to determine the resolution of this problem, I was confident the operators were on the right track.

3. A copy of this monitor report was provided to Mike Brothers, VP Operations. The report is late because I was on some vacation time when the monitor was conducted and away from a PC and fax machine.

Bill Sheehan

Memorandum - 98-21

DATE: December 10, 1998

TO: Evan Woollacott and Terry Concannon, CoChair, NEAC

FROM: Bill Sheehan

RE: MONITOR WATCH IN MILLSTONE 2 CONTROL ROOM

1. On December 09, 1998 I spent from 1825 to 1925 in the control room of MILLSTONE 2 observing the control room watchstanders. The Reactor Plant is defueled. Safety condition was YELLOW due to maintenance and testing on the containment ventilation system. The following comments are germane:

   a. Watchstanders were formal in their communications with each other concerning plant operations.

   b. No significant actions occurred during the monitor period. I was able to observe the shift turnover process and accompany the shift managers as they toured the control room and turned over the watch. Turnover was very detailed.

   c. Although the simultaneous turnover that occurred was satisfactory during current plant conditions, the Operations Department should look hard at modifying the procedure when Millstone 2 is in Mode 4 or below. It is hard to monitor potentially changing plant conditions with the organized "confusion" of the turnover process.

3. A copy of this monitor report was provided to Mike Wilson, Millstone 2 Operations.

Bill Sheehan

Memorandum - 98-22

DATE: December 24, 1998

TO: Evan Woollacott and Terry Concannon, CoChair, NEAC

FROM: Bill Sheehan

RE: MONITOR WATCH IN MILLSTONE 3 CONTROL ROOM

1. On December 23, 1998 I spent from 2030 to 2130 in the control room of MILLSTONE 3 observing the control room watchstanders. The Reactor Plant was in condition Mode 4 at 418psig and 340 F. Watchstanders were commencing the retesting of all MSIV Valves(Steam Generator solenoid operated isolation valves).. The following comments are germane:

   a. Watchstanders were not as formal in their communications with each other concerning plant operations as I have observed them in the past. They were not unsatisfactory but the crispness I had seen earlier was not in the reports or the responses.

   b. Because of the relatively "cold" temperature of the valves, they had to be cycled twice before they latched open and testing could begin.

   c. The 'A' Steam Generator Valve had cycled twice well within specifications when I left. The testing was expected to take the rest of the shift.

   d According to the schedule, if all went well with plant testing, start up was expected to commence noon Christmas Day..

3. A copy of this monitor report was provided to Mike Brothers, Vice President Operations.

Bill Sheehan

APPENDIX 6A

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC SAFETY
DIVISION OF FIRE, EMERGENCY AND BUILDING SERVICES
Office of Emergency Management

January 12, 1998

Ms. Pati Harper
22 Sapia Drive
Niantic, CT 06357

Dear Ms. Harper:

I am enclosing our response to the questions submitted to FEMA on September 9, 1997, which were raised by the Citizens Regulatory Commission (CRC) Emergency Planning Subcommittee. As you are aware, the questions need to be addressed by those agencies with the primary responsibilities for handling them; therefore, the CRC will receive responses to those specific questions from FEMA, NRC and our office. Additionally, the last two question are in response to the CRC's letter to FEMA dated October 10, 1997 concerning the Haddam Neck Station. Our offices' answers to the questions addressing OEM issues are listed below.

Q. 1. The Connecticut Office of Emergency Management (OEM) has stated that more radiation monitoring devices are need 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?

A. 1. ***Seven additional portal monitors have been ordered by Northeast Utilities - one extra portal for each of the seven host communities. Northeast Utilities has funded the portal monitor purchase. The portals are expected to be delivered to NU by the end of December 1997.***

Q. 2. There have been significant changes in the population demographics of 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 the 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.)

A. 2. ***We just received a letter from Governor Rowland and the Commissioner of Public Health, Stephen A. Harriman, which states that a recent study done by the State Department of Public Health, Office of Policy, Planning and Evaluation, estimates that the population in Connecticut as of July 1, 1997 has decreased -12,878 or -.04% during the period of 1990 to 1996. Transient/visiting population (or tourism) has always been figured into our population figures for host communities, in addition to the permanent community population. A major source of increase in tourism has been due to the casinos; however the casinos are outside of the Millstone EPZ. During each plan revision, our office reviews the population figures to assure that there are no major changes in the EPZ populations. (Population numbers shown in the state***

Phone (860)
360 Broad Street, Hartford, CT 06105

Radiological Emergency Response Plan (RERP) are derived from several primary and secondary sources including US Census Bureau data, state health department data, information provided by affected municipalities, and evacuation time estimate studies.) At this time there is no plan to add more evacuation reception centers since the population has remained within a consistent basis. If anything, we may have to review the host community status with an eye toward decreasing or shifting current host communities once the Haddam Neck Nuclear Power Station's license changes for decommissioning and there is no longer a potential for Haddam Neck communities' to be evacuated.

The second part of the question concerns the number of communities designated for each host community. In the Millstone Emergency Planning Zone (EPZ) there are three communities (East Lyme, Lyme, and Old Lyme) assigned to the New Haven host community (Southern Connecticut State University). For the Haddam Neck EPZ, six smaller populated communities are assigned (Chester, Deep River, Durham, Essex, Lyme and Madison.) Designation of host community assignments were originally made on the basis of several factors for both the Haddam Neck and Millstone EPZ's: we took the population of each community (or specifically affected portions of the community in some cases) in that particular EPZ and determined the ease of reaching the host community from the "evacuating" community. Since we were looking at the population figures rather than the number of communities being designated, it did not matter if there were three larger communities designated to one host community or six smaller communities.

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

A. 5. ***The NRC has not recommended that KI be stockpiled and dispensed in areas within five miles of nuclear power plants. The July 1, 1997 NRC notice (No. 97-102) states that NRC has "decided to modify its position regarding the use of Potassium Iodide as a protective measure for the general public in case of a severe nuclear reactor accident. The agency has decided to endorse the Federal Radiological Preparedness Coordinating Committee's (FRPCC) recommended policy to federally fund the purchase of Potassium Iodide for states at their request, and the NRC will provide the funding". Since neither the NRC nor FEMA has recommended the use of KI for the general public, there are no plans to change the state's KI policy or to request a stockpile of KI for the general public.***

Q. 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 has previously

stated that it is not economically feasible to look at every school in all towns. Shouldn't public safety override economic concerns?

A. 6. ***FEMA evaluators went to selected schools where they interviewed district superintendents, school principals and administrators to test their knowledge of school evacuation plans. Day care centers were not involved in this exercise; however, a third of the nursing homes around Millstone-- which, like day care centers are also considered "special needs facilities -- were interviewed to assure that they were knowledgeable about their plans and procedures for evacuation.***

Q. 7. At the Nuclear Energy Advisory Committee 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 evacuations is not a recommended procedure?

A.7. ***The question presented on April 17, 1997 was an excellent one -- one that we had not considered and appreciated being addressed. The answer is that the State Office of Emergency Management will direct that the State Transportation Staging Area run shuttle busses from host community to host community to allow for situations such as this. We appreciate the dedication on the part of teachers who leave their personal transportation in order to assure the safety of their pupils under their responsibility; therefore, we will do every thing in our power to assure that teachers and their families are reunited as quickly as possible. Each host community has a reception center manager and staff, along with representatives of the Red Cross, who can communicate with the other host communities (either directly or through the OEM Area Office/State Emergency Operations Center). In this way, messages can be relayed to allow families to know where and when they will be able to be reunited.***

The second part of the question asks what is being done to inform parents that picking up their children at school is not recommended. We have pre-printed and pre-distributed information in pages 2 & 3 of the local phone books around 10-miles of both nuclear power plants. We also have pre-printed Emergency Alert System (EAS) messages and have included school information in each of our news releases which would be constantly rebroadcast on television and radio during an actual emergency. FEMA has looked very closely at our preprinted materials and, because it is such an important and sensitive area, scrutinizes this area in each of our exercises in the Joint Media Center mock press briefings.

Q.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?

A.8. ***Information on evacuation procedures for schools has been provided to those school superintendents within 10-miles around the power plants. To our knowledge neither the Office of Emergency Management or Northeast Utilities has met with parents and PTA/PTO organizations. As we do training, we can offer this to the school superintendents if they feel there is an interest on the part of these organizations in their community.***

Q. 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 and actual emergency?

A.11. ***There is a fund to reimburse the salaries of those paid staff members or emergency personnel at the local community level. This includes reimbursing the hours worked on the parts of those paid professionals such as firefighters and police officers, whose participation in these exercises happens outside their regular work hours. However, many of Connecticut's emergency workers are volunteers and as such do not get paid. These commendable people volunteer out of a sense of responsibility to their families and community -- not to get paid. We have seen little difference in effectiveness on the part of the volunteers versus the paid staff; and if anything, there are usually more difficulties scheduling training and exercise dates within union regulations or restrictions. Volunteers do not get paid for the many hours of regular training in addition to the hours spent in drills and exercises. Understandably, we are quite proud of the men and women who work long and hard and who's only "reimbursement", if you will, is a meal during the exercise. To jump ahead to the last question, the answer is yes; it is very reasonable to believe that a volunteer will participate during a real emergency. Many of the volunteers we have in Connecticut are volunteer fire fighters and EMTs already; therefore they volunteer regularly during actual fires and emergency situations. We feel very confident in the ability and trustworthiness of our volunteers since they prove themselves every day.***

To answer the second question, paid staff would be reimbursed if there is a real emergency. Town and state employees gets compensated when they are working disasters.

Q. 13. The agreements Massachusetts has with its various evacuation transportation agencies are much more specific that the agreements Connecticut has with its transportation agencies. FEMA should already aware of this. Is there any communication in place so Connecticut can utilize the Massachusetts agreements to tighten up [its] agreements? If not, why not?

A.13. ***The Office of Emergency Management maintains a system of letters of agreement with transportation providers throughout the state. These providers are contacted regularly to assure that the resource list is current and that enough***

resources are available to accommodate the needs of evacuees for both nuclear power plants.

Q. 14. The August 21, 1997 exercise estimated that it would take approximately 6 ½ 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 ½ hours that remain after arrival at the reception centers?

A. 14. ***The Evacuation Time Estimate (ETE) study is based on evacuating the entire population within the 10-mile emergency planning zone.***

The second part of the question refers to NUREG 0654, Section J. 12. which states that "the personnel and equipment available [at the reception centers] should be capable of monitoring within about a 12 hour period all residents and transients in the plume exposure EPZ arriving at relocation centers". FEMA's reference to the 12 hour time-frame does not indicate a stop-watch beginning at the exact moment of the evacuation decision. Rather the criteria is that the personnel are capable of monitoring arriving evacuees within about 12 hours. FEMA has provided this guide as a way of determining how much personnel and equipment will be necessary; it does not mean that after "12" hours that the reception center can close down. There will be some people who will arrive quickly at the reception centers, but there will also be those who may not arrive for a day or two -- they may go to a friends home or have alternate "shelter" and may only come to the reception center to be monitored after they are settled somewhere. The reception centers will remain open as long as they are necessary.

Q. 17. Were 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?

A.17. ***The Niantic women's correctional facility is contacted by the State Office of Emergency Management during every Millstone related exercise. The Department of Correction then implements its own emergency response plan and requests assistance when necessary. Lawrence and Memorial Hospital participates in each Millstone exercise to demonstrate its capability to handle injured and radiologically contaminated persons. FEMA evaluated the L & M Hospital on October 9, 1997 in conjunction with the Millstone required Medical Services Drill. During the week of the October ingestion pathway portion of the Millstone exercise, FEMA evaluators interviewed selected continuing care facility (i.e. nursing home) administrators to assess the adequacy of each facility's response to a radiological emergency.***

The state and utility contracted for a independent study of evacuation time estimates to be done by a company known as Earthtech. This is a requirement of FEMA's and the

study has to take into account the evacuation of <u>all</u> population within 10-miles of the power plant, including special needs facilities such as nursing homes, etc. This evacuation time estimate (ETE) accounts for a wide variety of traffic, weather, and seasonal conditions in calculating evacuation times.

Q. 18. Is there any nuclear evacuation planning for the casinos?

A.18. ***The casinos in Connecticut are located outside of the 10-mile emergency planning zone of Millstone; therefore, there is no need for nuclear evacuation planning for the casinos.***

Q. 1 (Haddam Neck) 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.

A. 1 (Haddam Neck) ***Haddam Neck has a fire company stationed on their side of the Connecticut River and their own Emergency Operations Center (EOC). They coordinate by telephone and radio with the Haddam emergency management director in Haddam's EOC. As with all of the other emergency planning zone communities, the Haddam emergency management director operates out of their town EOC, manages the operation and communicates with the local emergency staff and the State OEM Area Coordinator (who relays information from the state EOC. Haddam successfully conducts business every day with this arrangement. They have been conducting nuclear power plant exercises since 1982 under the scrutiny of federal evaluators, as well as performing day to day operations of protecting their residents during natural emergency operations. We are confident that if the town felt that they were incapable of protecting the public because of the physical split/distance of part of their community, they would have taken steps to change it or bring it to our attention.***

Q. 2. (Haddam Neck) 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.

A. 2. (Haddam Neck) ***There is a discrepancy of terms in this question which needs to be clarified. First, their is only one Haddam Neck emergency planning zone - a term describing an approximate 10-mile radius around the power plant. Second,***

Connecticut has broken the emergency planning zone (EPZ) into three geographical "Zones" which approximate the 2, 5 and 10 mile radius' required for protective action recommendations. (Zone I incorporates a portion of East Haddam and a portion of Haddam; Zone II incorporates the entire towns of Chester, East Haddam, Haddam, and portions of East Hampton and Middletown; Zone III includes the entire towns of Chester, Deep River, East Haddam, East Hampton, Haddam, and Portland, and portions of the towns of Colchester, Durham, Essex, Killingworth, Lyme, Madison, Marlborough, Middletown, and Salem.) Third, the towns in parentheses are the Office of Emergency Management Area Coordinator's office (numbers and) locations, which we believe is the real question being raised: why do we use three area coordinators instead of just one?

The State Office of Emergency Management (OEM) came up with the concept of dividing the state into five parts (approximately 34 towns each), long before the power plants were in existence. The Haddam Neck EPZ involves 15 communities. All of the planning/decision making regarding the nuclear power plants takes place at the State Office of Emergency Management, in Hartford. Decisions made by the State OEM are conveyed to the towns through the OEM Area Coordinator via radio or telephone. Although the concept of using only one area coordinator for all 15 towns would appear to be a reasonable suggestion, we feel it would not be wise to interfere with the already good, long-standing relationships which have been established between OEM Area Coordinator and the towns for which they are responsible. They work together on a daily basis, therefore, continuity of contacts are continued. Since decisions are not made at the area office level but instead are conveyed between state and town, (with all three area coordinators hearing the message on the radio at the same time) three area coordinators can allow for faster dissemination of information and can give more attention to the individual town's needs.

I hope that this answers our part of the Citizens Regulatory Commission's questions. Please let us know if you want to come to the State Emergency Operations Center for a tour. You can contact either myself or Deborah Ferrari, Lead Planning Analyst, at (860) 566-4577.

Sincerely,

Robert A. Plant
State Director

RAP:dsf
cc: Chief of Staff, Opns, REP, cf
DPS (Dep. Comm. Luther)
FEMA (McElhinney)
NU (Mazzola)
DEP (Galloway)

pati.doc

APPENDIX 6B

Federal Emergency Management Agency

Region I

J.W. McCormack Post Office and Courthouse Building

Boston, Massachusetts 02109

January 29, 1998

Ms. Patti Harper
22 Sapia Drive
Niantic, CT 06357

Dear Ms. Harper

In response to your letters of September 9, 1997 and October 10, 1997, the following information is provided:

Question 1: more radiation monitors needed.

Answer: In accordance with FEMA REP 14 and 15 Exercise Manuals' Objective 18, all of Connecticut's Reception Centers supporting Haddam Neck and Millstone Nuclear Power Stations have been evaluated and successfully demonstrated the monitoring of 20 percent of the expected population within the 12 hour time criteria.

Question 3: New London's nonparticipation in the August 21, 1997 exercise

Answer: A Full Participation exercise refers to a joint exercise in which: (1) State and local government and licensee emergency personnel and other resources are mobilized in sufficient numbers to adequately demonstrate and test their planning and preparedness capabilities to respond to a simulated radiological emergency; (2) the integrated capabilities of organizations to adequately assess and respond to a radiological accident are demonstrated; and (3) the implementation of the observable elements of State and/or local and licensee plans and preparedness is tested.

During the August 21,1997, exercise, the State of Connecticut successfully implemented its contingency plan for a jurisdiction that could not or would not respond to a postulated emergency situation. Although the State and FEMA would have preferred to have New London participate, it was not required. Our evaluation of the demonstration of the contingency plan was in compliance with FEMA REP 14 and 15 Exercise Manuals as well as NUREG-0654.

Question 4: NUREG 0654 and revisions

Answer: Since 1979, NUREG 0654 has been revised through revisions and supplements to the base document and through Guidance Memoranda, publication of FEMA REP 14 and 15, and policy letters.

The methodology, planning criteria and assumptions relative to evacuation planning have remained consistent.

Evacuation Time Estimate Studies and the detailed planning for evacuation of Emergency Planning Zones are completed after a 10 percent change in the total population of a given jurisdiction is identified

Question 6: How were the evacuation procedures "tested"

Answer: NRC policy states that the public is not required to participate in exercises. We do, however, attempt to look at and/or interview staff at 1/3 of the special population facilities and schools at each exercise; thus by the end of the six-year cycle all facilities and school have been visited.

The school evacuation process is tested at all levels of government, schools, reception centers and with transportation providers. If the process can be successfully demonstrated for one school it is reasonable to assume that all schools within the same jurisdiction can likewise be protected.

Public Safety is always our main concern. The FEMA employee was absolutely correct when he/she stated that it is not economically feasible to look at every school in all the Towns at each exercise. By reviewing plans, letters of agreement and implementing procedures, through interviews, use of predictive models, and actual demonstrations, an evaluator can determine if an evacuation can be successfully executed.

In accordance with the extent-of-play agreement for the Millstone Exercise, Objective 15 for "Special Populations" was demonstrated by State Department of Public Health personnel making simulated calls to nursing homes; at the local, level through tabletop discussions of identification of special needs populations, transportation requirements and coordination of additional resources; and site interviews with the staff of 5 nursing homes. Objective 16 for schools was demonstrated through interviews with the Superintendent of Schools and a Principal from the Towns of East Lyme, Ledyard and Old Lyme. Additionally, a bus with driver was dispatched to a school in the aforementioned school to drive an evaluator from the school to the Reception Center.

Question 9: Does FEMA feel that radiation monitoring of incoming evacuees at the reception center is important? ...

Answer: The 20% figure is a minimum standard and is considered by many individuals as a conservative estimate.

Offsite officials can provide additional resources to monitor more than the 20% of evacuees, if they choose.

Public education and information is addressed through public meetings that take place after an exercise as well as the annual requirement for public education and information to be disseminated jointly by the utility and the State to the public in the form of brochures, pamphlets, telephone directory inserts, etc.

Question 11: Is it reasonable to expect volunteers to participate during an actual emergency?

Answer: Yes. Over 60 percent of the fire departments in this country are staffed by volunteers who daily answer the call to duty. Annually, those dedicated; loyal and brave individuals willingly place themselves in dangerous situations to protect their neighbors. Volunteers are found in all emergency services and are just as concerned and selfless as those in the fire service. To suggest that these outstanding citizens would abandon a neighbor in a time of need and ignore their oath to protect and serve their community is unthinkable.

Question 12:	During the exercise held on August 21, 1997, what was the status of the following at all of the evacuation reception centers: ...
Answer:	During the 1997 Millstone Ingestion Pathway exercise, the Windham Reception Center was evaluated. There were no exercise issues identified at that location.
Question 13:	The agreements Massachusetts has with it's various evacuation ...
Answer:	FEMA has reviewed the agreements that the State of Connecticut maintains with various transportation providers and has determined them to be adequate.
Question 14:	The August 21, 1997 exercise estimated that it would take approximately 6 ½ hours...
Answer:	During the 1997 Millstone Ingestion Pathway exercise, the Windham Reception Center successfully demonstrated its ability to monitor 20% of the population within the 12 hour time requirement.
Question 15	An addendum to NUREG 0654 was issued for comment in July 1996...
Answer:	Supplement 3 was issued as Interim-use guidance in July 1996. This document as well as all other applicable references was used during the August 1997 exercise.
Question 16:	Most emergency management personnel have expressed the belief...
Answer:	The REP Program is considered by most State and local responders to be the model preparedness program from which other technological and natural preparedness programs have benefited. The Program has specific Planning Standards and Evaluation Criteria that must be judged by FEMA as being adequate to provide reasonable assurance that public health and safety can be protected. If emergency planners actually believe that the possibility of an accident is remote, it is not reflected in their planning and performance during exercises. With respect to other hazard preparedness, REP preparedness is considered to be exemplary.
Question 17	Were 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?
Answer:	Participating jurisdictions for the 1997 Ingestion Pathway exercise were addressed by the State of Connecticut in their letter. Evacuation of these facilities is included in the Evacuation Time Estimate Study and Analysis.
Question 19	Does FEMA review the emergency information contained in local telephone directories?
Answer:	Yes. FEMA annually reviews public information materials, and news media releases planned for use. Connecticut's public information materials were also evaluated during the exercise.
Question	Haddam Neck's geography...
Answer:	There is no REP policy that would limit the number of Emergency Management Directors per jurisdiction. Region I recognize Haddam's unique planning challenges, yet we must evaluate the jurisdiction performance based upon their

own plan. A single command structure is the preferred method for a jurisdiction to manage emergency response.

Question — Geography of the State's Emergency Planning Zones...

Answer: The establishment of planning zones for sheltering and evacuation purposes is a State responsibility. The designation of these planning zones is done after considering several factors including: geo/political subdivisions, clearly identifiable zones, evacuation routes, population density, historical meteorological data, etc. The State has the option to shelter and/or evacuate any and all combinations of the planning zones.

Daniel C. McElhinney
Regional Assistance Committee Chairman
FEMA, Region I

APPENDIX 6C

April 14, 1998

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

Dear Mr. Plant,

My name is Mark Holloway and I am a member of the Connecticut Nuclear Energy Advisory Council. This council was created by the state legislature in response to concerns involving the operation of Connecticut's nuclear power plants. We are tasked with providing the state legislature with information and recommendations to assist them in formulating legislation regarding the state's nuclear plants.

I have been working with The Citizens Regulatory Commission (CRC) Emergency Planning subcommittee to address several areas in which nuclear emergency planning could be improved. As such, I have read your letter dated January 12, 1998 in which your office provided responses to the Citizens Regulatory Commission (CRC) Emergency Planning Subcommittee Chairperson, Ms. Pati Harper, to nuclear emergency planning issues that were directed to OEM by that subcommittee.

After reading OEM's letter, I feel that several of OEM's responses do not really, quite frankly, address the questions posed. I am enclosing a copy of the subject OEM letter so that I might refer to each OEM answer by number without repeating the questions and answers in this letter. My questions and comments to the OEM answers are as follows:

A. 2 - This response does not take into account that tourism has, although not increasing the state's resident population, has certainly increased Connecticut's transient population. Shouldn't OEM factor a large transient population into the equation when planning emergency sheltering requirements ?

Additionally, the increase in tourism has created a situation by which many state highways have become extremely congested. In particular, Routes I-95 and I-395 are, at times, virtual bottlenecks. The fact that the casinos are outside of the Millstone EPZ, does not lessen the traffic impact on sections of I-95 and I-395 which do fall in the Millstone EPZ. This is the reasoning behind the need for additional reception centers along with improved emergency routing.

A. 5 - This OEM response draws a distinction between an NRC endorsement of FRPCC's recommended policy of federally funding Potassium Iodide (KI) for use by the general public versus an NRC recommendation to stockpile and dispense KI for use by the general public. This

seems to be a case of OEM semantical hairsplitting. The fact is the NRC has undergone a major policy shift with their endorsement of KI usage by the general population. Several states; including Alabama, Tennessee and Maine, are either currently or planning to in the near future, stockpile KI for use by the public. KI is available in Connecticut for use by nuclear plant workers and EPZ town officials. What is Connecticut's rationale for not stockpiling KI for public use?

A. 14 - The OEM answer does not adequately address this question. The question, and real issue, is: Can the entire EPZ population; which would include the resident as well as the estimated transient population, be tested at the available reception centers within a 12 hour period? It is critical that radiation monitoring take place within 12 hours of possible radiation exposure. The issue is not whether the reception centers would remain open as long as necessary.

Also, any nuclear emergency planning scenario should base projections on the entire EPZ population, not the 20% figure which is often used in planning emergency sheltering for natural disaster emergencies. Studies after the Three Mile Island accident have shown that the affected population tends to overreact to nuclear accidents, not under react as so often the case with floods, hurricanes, etc.

I would appreciate a response to these questions and comments. My address is: 18 Yorkshire Drive, Waterford CT 06385. Please feel free to call me at (860) 443-7877 if you have any questions. Thank you.

Mark Holloway

Copy to:
CRC Emergency Planning Subcommittee
NEAC

APPENDIX 6D

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC SAFETY
DIVISION OF FIRE, EMERGENCY AND BUILDING SERVICES
Office of Emergency Management

August 10, 1998

Mr. Mark Holloway
18 Yorkshire Drive
Waterford, CT 06385

Dear Mr. Holloway:

We received your letter requesting additional information or clarification on our January 12, 1998 response to Pati Harper of the Citizens Regulatory Commission (CRC) Emergency Planning Subcommittee. I am more than happy to address your concerns and provide additional information, and will attempt to do so.

In regard to your request for more information on our answer to question #2, I would like to get a copy of the reference or study being sited regarding the population figures quoted for the assessment of a "large increase in tourism". This will assure that the figures you are referring to are comparable to ours. You are absolutely correct that factoring in the best figure possible for a transient population is necessary when planning emergency sheltering requirements. Our current figures do already reflect a large transient population based on a study done by a company named Earth Tech of Concord, Massachusetts. Earth Tech was contracted to develop an Evacuation Time Estimate (ETE) study for the Millstone Emergency Planning Zone.

Connecticut has seven designated host communities which would serve to receive evacuees from communities around the nuclear power plants, should the decision to evacuation ever occur. Six of those seven host communities were designated for Millstone's emergency planning zone. Since Haddam Neck's defuel plan (for decommissioning) looks like it may be approved soon by the NRC, we have begun the process of taking a fresh look at the host community program to make sure that each host community is being utilized to its fullest. I can assure you that host community capacities, monitoring capabilities and evacuation routes are being explored in great detail. Your points about the traffic impact on sections of I-95 and I-395 were well expressed. We are exploring every evacuation route currently designated. We have included liaisons from the State Department of Transportation and State Police to work on our host community review committee to assure that we have the very latest traffic planning information available to us.

Number 5 of your letter on Potassium Iodide raises several issues which need to be discussed. You stated that NRC made a "recommendation to stockpile and dispense KI for use by the general public". However, to quote the July 1, 1998 NRC, Office of Public Affairs bulletin # 98-109, they state that the NRC "would require that, as each state develops the range of protective actions, consideration be given, as a supplement to evacuation and sheltering, to the use of potassium iodide, as appropriate". The NRC has

Phone (860) 566-3180
360 Broad Street, Hartford, CT 06105
An Equal Opportunity Employer

in effect *required states to consider* the use of KI as a supplement to evacuation and sheltering (NRC press release # 98-109, dated July 1, 1998), and they have offered to purchase KI for states which decide to adopt the use of KI. They have left the decision up to the individual states.

As you know, the state's current policy does not recommend KI for use by the general public. The state's main intent is to move people away from potential harm well in advance of any possible radionuclide release. Evacuation is the principal effective action used to protect the general public. We do make KI available to the state emergency workers who have to go into or stay within the emergency planning zone (e.g. traffic control; air, water and food monitoring and sampling, etc.) as opposed to the general public which would be evacuated. Towns within the emergency planning zone were given the option of utilizing KI for their emergency workers; however, only Waterford currently has opted to develop a plan and stockpile KI for their emergency workers. Because of this new NRC requirement to consider KI, we have asked the Commissioner of Public Health to review the current policy and determine if it needs to be changed or amended.

Our office has researched the states referred to in your letter. Maine was in the process of researching KI for general public use when their utility decided to apply to decommission their nuclear power plant several months ago. Tennessee distributed KI in the early 1980's and every six years following that distribution instructed the residents within the emergency planning zone communities (a population which is less than a third of Millstone's population) to return and exchange their KI vials. (Tennessee felt that KI had a shelf life of six years.) We were told that for the first six year's change-out, residents had about a sixty percent exchange rate, and the next six years after that about 17% of the residents went to the public health centers to exchange their KI. Our contact in Tennessee stated that they have no plans for follow-up on those not exchanging nor does their plan address people moving, etc. The state conveys nuclear preparedness information and procedures for use of KI by the general public in their annual informational calendar mailing. Tennessee also stockpiles KI for distribution to institutionalized persons (e.g. nursing homes, prisons, etc.) upon an incident occurring; they do not stockpile KI at the institutions themselves. Alabama did not go door to door with KI for the general public, however, they do have a plan for stockpiling KI at the reception centers, for the general public to receive after they have evacuated.

In NRC's paper entitled "*Assessment of the Use of Potassium Iodide (KI) as a Public Protective Action During Severe Reactor Accidents*", they state that "KI protects the thyroid from internal exposure to radioiodines. KI does not protect against internal exposure to other radioisotopes and does not protect against external irradiation." The use of KI is not a panacea. There are medical issues around pre-distributing KI to the general public. If a person is allergic to seafood, there is a strong possibility that they will be allergic to KI; also, KI would not be good for a person to take if they are on a potassium restricted diet. Outside of the main concern - the health aspect - distribution of KI and follow-up is a huge undertaking. A lot of questions would have to be worked out such as who would keep track of the homes when people move; apartments with new

tenants; making sure that residents understand that they must keep it, as all medicine, accessible yet away from small children. Other issues include the shelf life of KI (expiration), and who would be responsible for physically exchanging it. Stockpiling of KI within the Millstone community could mean traffic jams and delays (this may mean that individuals might be exposed outside longer than what is necessary just to receive KI - time that would be better spent evacuating). The decision to use KI and the implementation of that decision is a very complex issue - one requiring a great deal of thought and careful planning. The Health Commissioner is reviewing the NRC's publication on this issue and will make a decision.

Your letter on question # 14, concerns monitoring of evacuees at host communities. There are 28 portal monitors to support the host community program. Each is capable of monitoring approximately 4,300 people within a 12 hour period. In addition to the portal monitors each host community has emergency workers who are trained to conduct hand-held dosimeters which are used to manually monitor evacuees. The Federal Emergency Management Agency (FEMA) attests to the fact that Connecticut has adequate monitoring capability and shelter capacity each time they evaluate our host communities. Every federally evaluated exercise uses a stringent set of checklist questions called the Radiological Emergency Preparedness Exercise Evaluation Methodology (EEM). The state and host communities have to demonstrate the adequacy of facilities, equipment, supplies, personnel and procedures for congregate care of evacuees. The subject of monitoring and decontamination of the evacuee population is an area of great concern to FEMA also. They spend a lot of time in conducting their calculations to assure that the host community can monitor and decontaminate the population arriving at the host community. FEMA's Exercise Manual (FEMA Rep-14) states that "each reception center is responsible for monitoring 20% of that portion of the plume emergency planning zone (EPZ) allocated to the reception center. Connecticut utilizes this FEMA/NRC planning standard and goes well beyond the 20% of the permanent and transient population.

I hope that this letter addresses the concerns you have stated. If you have further questions, please contact me again. I would like to take this opportunity to offer the same invitation that Bob Plant made prior to his retirement, which is an open invitation to meet with me and my staff and tour the State Emergency Operations Center.

Sincerely,

George E. Luther
Deputy Commissioner, Public Safety

GEL:dsf
cc: REP (D. Ferrari)
OEM
cf

APPENDIX 6E

June 26, 1998

MEMORANDUM TO: L. Joseph Callan
Executive Director for Operations

FROM: John C. Hoyle, Secretary /s/

SUBJECT: STAFF REQUIREMENTS - SECY-97-245 and SECY-98-061 - STAFF OPTIONS FOR RESOLVING A PETITION FOR RULEMAKING (PRM-50-63 AND 50-63A) RELATING TO A RE-EVALUATION OF THE POLICY REGARDING THE USE OF POTASSIUM IODIDE (KI) BY THE GENERAL PUBLIC AFTER A SEVERE ACCIDENT AT A NUCLEAR POWER PLANT and COMSECY-97-028 - FEDERAL REGISTER NOTICE ON POTASSIUM IODIDE

The Commission has disapproved the staff's recommendation to deny the petition for rulemaking and approved Option 1. As such, the staff should proceed with rulemaking to change 10 CFR 50.47(b)(10) by inserting the following sentence, or similar words, after the first sentence: "In developing this range of actions, consideration has been given to evacuation, sheltering, and, as a supplement to these, the prophylactic use of potassium iodide (KI), as appropriate." In addition, the Federal Register notice and the statements of considerations for the proposed and final rules should be modified to include a statement to the effect that State and local decision makers, provided with proper information, may find that the use of KI as a protective supplement is reasonable and prudent for specific local conditions. The Federal Register notice should be reviewed by the Commission before the notice is given to the other relevant agencies for their review. The Commission notes that, consistent with the Commission's decision on the June 30,1997, SRM, the Federal government (most likely NRC) is prepared to fund the purchase of a stockpile of KI for the States upon request. The NRC staff should work with other relevant agencies to ensure that there are established procedures to enable the national stockpile to be effectively and timely used by states that have not established local stockpiles and wish to make use of the national stockpiles in the event of a severe nuclear power plant accident.

To assist the State and local decision makers, the staff should submit its paper, "Assessment of the Use of Potassium Iodide (KI) as a Public Protective Action During Severe Reactor Accidents," for public comment. Staff is encouraged to submit the assessment in whole, or in part, to peer reviewed journals for publication.

Following receipt and evaluation of the public comments, the staff should revise the paper, as appropriate, subject to Commission review. Using this as a basis, the staff should complete and issue a user-friendly information brochure containing the essential data and analyses in the technical assessment attached to SECY 98-61 to assist State and local planners in reaching an informed decision as to whether KI is an appropriate protective supplement.

(EDO)(SECY Suspense: Draft Federal Register Notice
Notice of proposed rulemaking
Issuance of final assessment report
Issuance of brochure7/15/98
10/29/98
10/29/98
no later than final rule)

cc:Chairman Jackson
Commissioner Dicus
Commissioner Diaz
Commissioner McGaffigan
OGC
CIO

APPENDIX 6F

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

August 27, 1998

Governor John G. Rowland
State Capitol
Hartford CT 06106

Dear Governor Rowland,

The State of Connecticut Nuclear Energy Advisory Council (NEAC) met on August 20, 1998 in Waterford, Connecticut. Among the items discussed at this meeting was a subcommittee report regarding the stockpile, distribution and public education on the use of potassium iodide (KI) in the event of a severe accident at the Millstone Nuclear Power Plant. We have heard a recurring concern from some members of the general public on this matter. Additionally, the Nuclear Regulatory Commission (NRC) has recently adopted the following position: "In developing this range of actions, consideration has been given to evacuation, sheltering, and, as a supplement to these, the prophylactic use of potassium iodide, as appropriate." A copy of this NRC Memorandum is attached.

By majority vote, the NEAC has taken the following position:

1. NEAC endorses and supports the decision of the Nuclear Regulatory Commissioners regarding KI and the specific actions directed by them in a Memorandum to Mr. L. Joseph Callan, Executive Director for Operations dated June 26, 1998 (Copy Attached).
2. NEAC recommends that the State of Connecticut (Departments of Public Health and Environmental Protection) take action to request appropriate quantities of KI pills from the Federal government (at no cost) for stockpiling and distribution to residents within the Millstone Site Emergency Planning Zone (EPZ-5 mile radius).
3. NEAC recommends that the State of Connecticut (Department of Public Health) develop, implement, and evaluate a two-year program for voluntary distribution of KI pills to residents within the Millstone Site EPZ. This program should include the following elements:

a. Public education/information program regarding the use of KI pills.
b. A signed medical release as a requirement before any individual is provided a KI pill.
c. Utilize local municipal activities to stockpile and pre-distribute KI pills to individual residents on a voluntary basis.
d. Encourage schools, hospitals, nursing homes, prisons, and other restricted/high density population activities to stockpile quantities of KI pills (subject to medical release waiver requirement noted above).
e. Stockpile sufficient quantities of KI pills at the reception Centers in Evacuation Plans for each evacuee.
f. Submit a report to the State Legislature regarding the effectiveness of the voluntary participation program at the end of the two-year trial period.

We would appreciate your consideration of our recommendations and would be pleased to meet with you to discuss the issues involved in stockpiling and distributing potassium iodide.

For the Nuclear Energy Advisory Council

Terry Concannon
Co-Chair

Evan W. Woollacott
Co-Chair

TC/mf

cc: Senator Kevin B. Sullivan, President Pro Tempore
Thomas D. Ritter, Speaker of the House
Senator Melodie Peters, Co-Chair, Energy & Technology Committee
State Representative Mary U. Eberle, Co-Chair, Energy & Technology Committee
Arthur J. Rocque, Commissioner DEP
Stephen A. Harriman, Commissioner DPH
First Selectman Thomas Sheridan, Waterford
Mayor Patrick Dougherty, Montville
Mayor Lloyd Beachey, New London
First Selectman Wayne L. Fraser, East Lyme

APPENDIX 7

DETAILED SUBCOMMITTEE REPORT/S

Alternative Energy

June 23, 1988, the U.S. Senate Committee on Energy and Natural Resources held a hearing in Washington, DC. James Hansen, Director of NASA's Goddard Institute for Space Studies, a leading and respected atmospheric scientist, testified that human activities were, and are, continuing to affect the climate and more rapid change is likely in upcoming decades. He presented a record of significant global warming going back to 1880.

Subsequently, the United Nations formed the Intergovernmental Panel on Climate Change (IPCC). After nine years of meetings the leading climate scientists concluded that human activities were, indeed, affecting the climate and the CO2 concentration was a main contributing factor. The coincidental eruption of Mount Pinatubo in the Philippines provided an opportunity for model calibration useful for forecasting purposes. Controversy continues regarding the validity of the IPCC conclusion. Some prestigious scientists contend that the data used is too flimsy to be reliably predictive and they see no reason for alarm. The attached clipping from *Time* (August 24, 1998), indicates that there is a trend and that it appears to be increasing. The second clipping from *World Watch* (Nov/Dec. 1994) shows the global average temperature and carbon dioxide concentration over a period of 160,000 years.

What is alarming is where CO2 concentration stands now, where it may go, and the apparent association of recent extreme weather events with the rise in temperature. Equally alarming is the possibility that the fury of recent hurricanes, the deluge rainfall and the prolonged El Nino phenomenon are related. This concern was at the heart of the treaty drafted in Kyoto, Japan, in December 1997, which binds all parties to attaining specific reductions in CO2 concentration – decreasing it by ~60%, in order to achieve "normal" levels. The Kyoto Treaty will become U.S. law after ratification by the Senate, and is the center of much controversy because of the enormous cost attached.

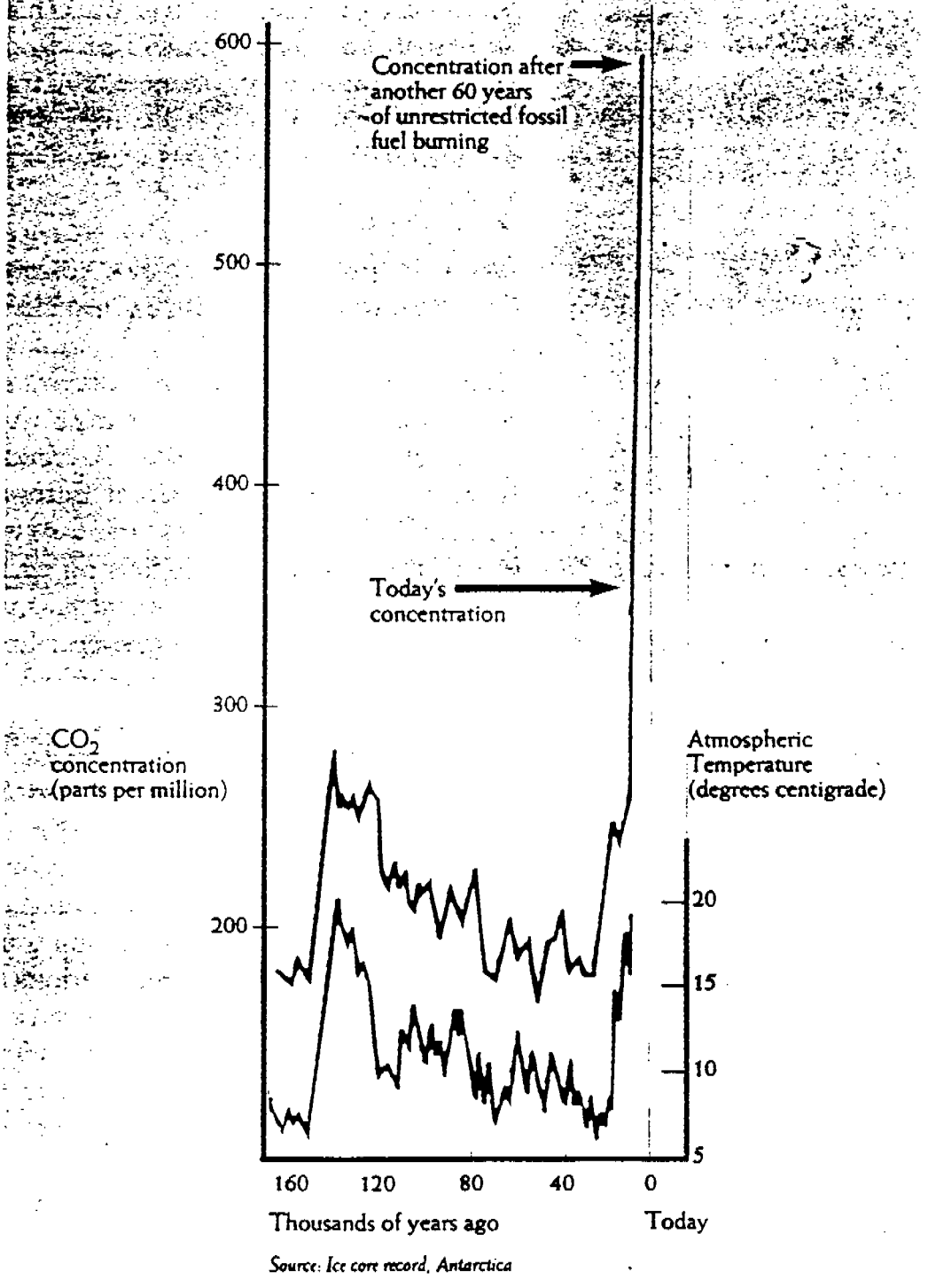
The foregoing was articulated in order to develop the context for evaluating the fact that the nuclear energy systems currently in use do not emit greenhouse gas into the atmosphere (cf attachment 3).

The potential for renewable sources of energy (solar origin) to help in reducing the greenhouse problem is useful in some situations, but limited overall by dilution and low efficiency.

CONCLUSION

1. Nuclear energy is the only (energy) technology capable of producing enough electricity to meet society's needs in a practicable manner without discharging CO2 into the atmosphere.
2. Society's leaders must make the decision to utilize nuclear energy where practical for environmental reasons.
3. Renewable energy sources; direct sunlight, wind, hydropower, biomass, are each solar in origin, and are, in toto, inadequate for supporting the needs of modern civilization. Reliance on solar power alone would require draconian reduction of most energy-using activities.
4. Fuel cells, fueled by hydrogen, operate without discharging greenhouse gas to the atmosphere, but the procurement/production of hydrogen fuel is a major impediment for large-scale use. On the other hand, fuel cells, fueled with natural gas, discharge CO2.

Global Average Temperature and Carbon Dioxide Concentration, 158,000 B.C.-1994 A.D.



Source: Ice core record, Antarctica

Attachment 1.

Recent Highs

122°F (50°C)
BAHRAIN
In a place used to a merciless sun, 56 workers suffer heat exhaustion

113°F (45°C)
CALIFORNIA
Early August heat wave brings blackouts and "spare the air" days to the San Francisco Bay Area

106°F (41°C)
GERMANY
Record hot streak produces severe smog. In some areas, vehicles without antipollution devices are banned

95°F (35°C)
SWITZERLAND
Scorching heat sends kids home from school

124°F (51°C)
INDIA
Worst hot spell in 50 years kills about 3,000 people

117°F (47°C)
TEXAS
A month of 100°-plus temperatures kills more than 120 people and destroys about a third of the cotton crop

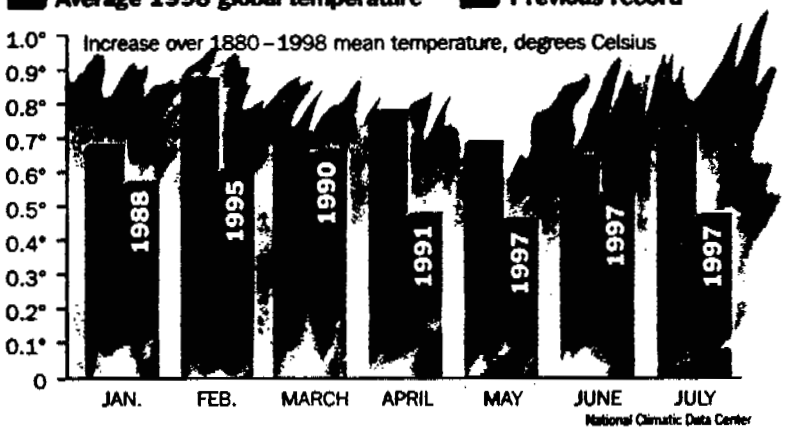
110°F (43°C)
CYPRUS
Worst heat wave in 40 years kills at least 55 people and sends 3,200 to hospitals

100°F (38°C)
FRANCE
Sun withers 20% of the grapevines in some areas of Bordeaux

TIME Graphics by Ed Gabel

Global Warming: It's Here...

Scientists are increasingly convinced that the earth is getting hotter because of the buildup in the atmosphere of carbon dioxide and other gases produced largely by the burning of fossil fuels. For each month this year, average global temperatures have been the highest on record.



...And almost certain to get worse

The Intergovernmental Panel on Climate Change, an international group of scientists, projects that the surface temperature of the earth could rise by about 1.8° to 6.3°F (1° to 3.5°C) by 2100. That could have serious consequences:

- In the next 100 years sea levels could rise 1.6 ft. (0.5 m), threatening heavily populated coastal areas from Mississippi to Bangladesh
- Extreme weather events, from hurricanes to droughts, could become more frequent and more severe
- Warmer temperatures could foster crop production in Northern Europe and Canada but dry out important growing regions in the U.S., eastern South America and Southeast Asia
- Tropical diseases like malaria may move northward and southward

WHAT YOU CAN DO

Attachment 2

CONVERSION EFF. AND AIR POLLUTANTS
VARIOUS LARGE SCALE
ELECTRICITY GENERATING TECHNOLOGIES

ALT	Power Generating Technology	Thermal Eff %	Effluent Gas Emission Grams/Kwhr NO_x	SO_2	CO_2	Remarks
1	Coal/Oil Conventional Steam Cycle*[a] No Scrubbers	36	1.29	17.2	884	2.2% sulfur content in fuel
2	Coal/Oil*[a] With Scrubbers	36	1.29	0.86	884	
3	Fluidized Bed*[a] Coal	37	0.42	0.84	861	Not in widespread use
4	Coal Gasification Combined Cycle*[a]	42	0.11	0.30	758	Sweet water demo plant successful
5	Natural Gas Fueled Gas Turbine/Steam Combined Cycle*[a] (STAG)	50[b]	0.10[a]	0.00	345[a]	Cleanest, most efficient fossil fuel burning
6	Light Water Nuclear (LWR) Reactor*[b]	28	0.00	0.00	0.00	Considered not licensable after EOL because of generic loss of coolant characteristics and reactor vessel embrittlement
7	High Temperature Liquid Metal Cooled Reactor*[b]	38	0.00	0.00	0.00	Considered not licensable based on French and Japanese experience and presence of a generic loss of coolant characteristic similar to LWR[b]
8	Heavy Water Reactor (HWR)[b]	28	0.00	0.00	0.00	Widespread use in Canada considered not licensable after EOL for same reasons as LWR
9	Modular High Temperature Gas Cooled Reactor (MHTGR)[b]	38	0.00	0.00	0.00	Licensable based on successful prototype scale loss of coolant test, favorable U.S. and West German experience and capability of a modular design to pass a full scale loss of coolant test.

[a]*Based on World Watch Institute Paper No. 119, June 1994
[b]*TransPLEX, Inc. Data

Attachment 3

APPENDIX 8

University of Connecticut
College of Agriculture and Natural Resources

Natural Resources
Management and Engineering

The Honorable Terry Concannon
Room 4100
Capitol Avenue
Hartford, CT 06106

December 31, 1998

Dear Representative Concannon,

The purpose of this letter is to report, as you requested, on the progress of the Connecticut Academy of Science and Engineering study committee on cancer incidences near the Connecticut Yankee Nuclear Plant (CYN).

The following progress has been made to date:

- A literature review of previous studies and the state of the knowledge of cancer incidences around nuclear facilities was completed.
- An air pollution plume computer model has been used to estimate the geographic distribution of material emitted from CYN. These "proportions" have been apportioned on a town by town basis. This work was completed by committee member Gale F. Hoffnagle at TRC Environmental Corporation.
- The results above are now being used to calculate potential radiation exposure "dosages" on a town by town basis. This work is being done by committee member Kenneth W. Price, Director of the Office of Radiation Safety at the University of Connecticut, Health Center. These calculations have involved many hours of computer programming and are nearing completion.
- Decisions on which cancers to look for and how to prepare the data from the cancer registry have now been made after a number of discussions with personnel at the Connecticut Department of Health. The DOH personnel are currently preparing the data for our use. Andrew Salner, Chief of Radiological Oncology at Hartford Hospital, is conducting the ongoing discussions with DOH.

1376 Storrs Road, W.B. Young Building, Room 308, U-87
Storrs, Connecticut 06269-4087

Telephone: (860) 486-2840
Facsimile: (860) 486-5408
web: www.cnre.uconn.edu/nrme

When the cancer data is ready, we plan to compare, town by town, the potential dosages with the cancer incidences. This comparison analysis may take a little time, but should not drag out too long. After it is completed we will write a final report.

If I can give you any more information or details, please don't hesitate to let me know.

Sincerely yours,

David R. Miller
CYN Committee Chair

cc. Wetstone, CASE
Committee Members

UNIVERSITY OF
CONNECTICUT

COLLEGE OF AGRICULTURE AND NATURAL RESOURCES
Department of Natural Resources
Management and Engineering

The Honorable Terry Concannon
Co-Chair, Nuclear Energy Advisory Council
Room 4035, LOB
Capitol Avenue
Hartford, CT 06106

June 12, 1998

Dear Representative Concannon,

This note is to let you know the status of our CASE study committee on Cancer Incidences Near the Connecticut Yankee Nuclear Plant. We have assembled a group of air pollution, nuclear engineering and radiation cancer researchers who have agreed to help and a list of current members is attached.

Our first step has been to assemble data on the emissions and associated weather data history of the plant, which was obtained from NU. Gale Hoffnagle of TRC Environmental is currently using the data to run air dispersion models for the site to determine potential exposures at various locations in the region.

Our second step, which is just starting, is to gather the appropriate cancer incidence and population data for the region. Dr. Salner, Dr. Price and I met with officials at the state health department on May 28 and discussed the data we need and what might be available from the cancer registry. We found them very cooperative and helpful. We hope to be able to accumulate the data that we need by the end of the summer.

Once these two steps are complete, we will try to match the potential exposures to cancer incidence data.

Sincerely yours,

David R. Miller
Chair

cc. David Wetstone, Connecticut Academy of Science and Engineering

1376 Storrs Road, U-87, Storrs, Connecticut 06269-4087 (860) 486-2840 Fax: (860) 486-5408

APPENDIX 9

Three Questions Submitted to NRC Chairman, Shirley Jackson, with her Responses

Waterford, February 2, 1998

Now - I would like to respond to questions solicited in advance. Groups that have been actively monitoring Millstone activities were provided the opportunity to submit questions in advance in an effort to ensure that those groups have their important questions heard and addressed at this time. My staff informs me that the Nuclear Energy Advisory Council(NEAC) has been particularly involved in all aspects of this process; however, I thank you all for your interest and participation.

NEAC #1) **Among the root causes of the problems that have lead to the current situation at Millstone Station is shortcomings in the oversight and enforcement activity by the Nuclear Regulatory Commission (NRC). The May 1997 Government Accounting Office (GAO) Report on Nuclear Regulation presents ample and specific evidence of the deficiencies and ineffectiveness of the NRC. What action has the NRC taken to address and correct the root causes that contributed to the shutdown of Millstone Station, and how can we be assured that the NRC will effectively ensure public health and safety and prevent the current situation from reoccurring at nuclear power plants in Connecticut?**

In response to the events at Millstone and other related activities, the NRC conducted a broad-based review of NRC programs and guidance in the areas of inspection, licensing, enforcement and licensee reporting. This review, referred to as the "Millstone Lessons Learned" considered, in part, Millstone and Haddam Neck inspection results, Millstone employee concerns review, the results of the fuel pool cooling and core off-load procedures review, and the results of Updated Final Safety Analysis Report (UFSAR) inspections conducted at all nuclear power plants. This effort involved individuals who were not part of the day-to-day oversight of Millstone, so that an impartial assessment of the situation could be obtained. This review was completed, and the Commission was briefed, last February.

A number of changes have already come out of this, and related reviews, aimed at strengthening our oversight and licensee performance of activities in each of these and other areas.

NRC managers currently responsible for review efforts associated with the Millstone Lessons Learned will be held accountable to take the actions necessary to ensure that weaknesses in the NRC's oversight activities have been addressed and that the lessons learned from this experience are used to strengthen the NRC's overall programs.

The GAO report of May 1997 provided three recommendations to the NRC for enhancing licensees' accountability. I responded to the GAO's recommendations in a letter last August. I stated that the NRC had: implemented a number of enhancements and (was) already working on a number of initiatives that directly related to issues discussed in the GAO report. These actions included extensive evaluation and enhancement of the senior management meeting process, development and issuance of improved guidance regarding the content and accuracy of each licensee's safety analysis report, and development of a process to improve the NRC management and verification of licensee commitments. In addition, the strategies adopted in our strategic plan are aimed at correcting previously identified problems and findings in internal and external audit and investigative reports.

Let me provide more context in three areas. First, the Millstone "Lessons-Learned" Review, and concurrent reviews of the use and updating of the Final Safety Analysis Report (FSAR) and of 10 CFR 50.59 (the very extensively used NRC regulation governing plant changes for which a licensee does not have to come to the NRC beforehand), at the Commission's direction, have been combined into an overall comprehensive review of these areas. The Commission has before it, and is acting on, a paper containing recommendations and options aimed at clarifying regulatory requirements, and strengthening our oversight of all of these areas. But changes already have occurred to strengthen our tracking of licensee commitments, to ensure the proper updating of each licensee's safety analysis report, to direct our inspectors to review the FSAR before inspecting a licensee's facility, and to be more vigilant to signs of a "chilling" environment, and to properly disposition allegations which come to us. Secondly, we have undertaken several explicit initiatives to strengthen the Senior Management Meeting to make it more objective, scrutable and fair.

The Commission has now tasked the staff to undertake a comprehensive and integrated review of our

complete reactor assessment process and to come back with a new paradigm that more explicitly and clearly lays out all of our regulatory requirements, inspects against them, assesses licensees' performance in the most objective way possible, and ensures that prompt, effective regulatory action is taken to address the problems that are found, in a way commensurate with their safety and regulatory significance. Thirdly, all of this is taking place against the backdrop of a major reorganization of the NRC which the Commission approved one year ago. The new structure groups line regulatory programs in a way to enhance synergy and to help build in line accountability. We have created a new Regulatory Effectiveness organization which groups and draws upon the strengths of the offices of Research, Analysis and Evaluation of Operational Data (AEOD), Investigation, and Enforcement, to allow the NRC to more properly track and trend licensee performance in key areas, to do this outside the day-to-day regulatory program areas, but to feed into them. We have a number of regulatory effectiveness and regulatory excellence initiatives underway to strengthen how we conduct our business in all areas from inspection, to licensing, to enforcement, to the development of regulations. Finally, essentially all of our Senior Management Team is new, within the last year and a half. All of them are committed, and are being held accountable through performance standards and performance appraisals to ensure that our regulatory program works, and accomplishes its intended objectives, and thereby engenders public trust. In fact, our new Executive Director for Operations, Joe Callan is here with me today. He has the responsibility to ensure that our day-to-day regulation is strong, and that the various initiatives underway come together to strengthen further our regulatory program. He and the management team he directs are committed to this.

In summary, the NRC has evaluated and assigned corrective action responsibilities, as necessary, and has taken other actions to address the shortcomings found by the GAO staff regarding the NRC's processes for licensee oversight.

NEAC #2. The volume of Deficiency Reports generated by Sargent & Lundy at Millstone 3 is of serious concern, even though the number of Level 3 and high safety related items has been relatively small. The findings of the Out-of-Scope Safety System Functional Inspection (SSFI) and their causes are equally troubling. What criteria will you/have you used to decide whether or not to expand either the Third Party Corrective Action Verification Program (ICAVP) and the NRC SSFI program. If no expansion has or will be directed, how can we be assured that the NU CMP has and will protect public health and safety?

The NRC is fundamentally using acceptance criteria linked to conformance, or identified nonconformance, with the plant licensing/design bases for evaluating any possible expansion of ICAVP scope. The criteria lay out four significance levels being used by the NRC staff to categorize the ICAVP findings. Specifically, Levels 1-3 involve findings of nonconformance with the licensing/design bases, and Level 4 involves relatively minor findings which do not result in nonconformance.

The NRC staff, at a meeting with the public last week, and, in recently-issued correspondence to NEAC, the ICAVP contractors and the licensee, recently has provided additional discussion on acceptance criteria, the findings and possible ICAVP scope expansion. The recent letter states that the ICAVP oversight plan, as currently established, allows the NRC staff to make informed judgments based not only on an assessment of the individual issues, but also on the licensee's corrective actions for that issue including the identification of root cause(s) and causal factors associated with the issue, the proposed resolution of the issue, the applicability of the issue to other systems, and broader programmatic and operational issues. As such, an important element in the ICAVP process is the NRC staff's or ICAVP contractor's independent verification of corrective actions being taken by the licensee in response to ICAVP findings. This independent verification of the adequacy of corrective actions results in additional ICAVP evaluations of the plant's licensing and design bases.

For example, even for Level 4 findings, which do not involve nonconformance with the licensing/design bases, the staff will evaluate them for any trends which might raise a question about the license/design bases and which should require additional ICAVP review.

The ICAVP, with or without any expansion of the original scope, must be judged as effective in confirming the plant's licensing/design bases before restart. If additional action by the licensee, the

ICAVP contractor or the NRC staff is required to conclude, with confidence, that the plant is in conformance - those actions will be taken before any Commission-approved restart.

NEAC #3. (a) What actions will the NRC take to ensure that the health and safety of the public is protected during the decommissioning of Connecticut Yankee? (b) Does the NRC intend to modify the existing regulations?

(a) The NRC will continue to provide significant oversight of the decommissioning at Connecticut Yankee. The resident inspector will remain onsite for the beginning of the decommissioning, and there will be specialist inspections performed by Region I, and Headquarters staff. We have a defined inspection program that covers all major aspects of the decommissioning. Regional responsibility for the site is with a branch that is solely responsible for decommissioning projects, to further emphasize the importance of a safe and expeditious cleanup.

Contacts will be maintained with state and local groups as the decommissioning proceeds.

(B) During recent public meetings, our regulations were criticized in that they do not require the opportunity for a hearing until the end of the process, when the licensee submits the License Termination Plan. The public wants a hearing earlier, when the Post-Shutdown Decommissioning Activities Report (PSDAR) is submitted. By regulation we must hold a public meeting within 90 days of receipt of the PSDAR, and accept public comments. Unless the NRC objects, the licensee can proceed with major decommissioning activities, at the end of this 90-day period. The public meeting is explicitly intended to allow public input with respect to the PSDAR. The hearing opportunity at the end of the process is meant to allow public input and appropriate intervention before the license is formally terminated.

There are no rulemaking changes being initiated by the staff at this time.

APPENDIX 10A

DECOMMISSIONING COMES EARLY TO A CONNECTICUT HAMLET

Representative Terry Concannon
Co-chair, Connecticut Nuclear Energy Advisory Council (NEAC)

American Nuclear Society Annual Meeting – Nashville, TN - June 8, 1998

Ten years ahead of schedule, Connecticut Yankee is about to be decommissioned. The town of Haddam and its citizens, who for the most part have looked on the power plant as a good neighbor for twenty-eight years, are not prepared. Whether one is pro or anti-nuclear or some place in between, the fact is that this will affect all of us economically. Jobs, taxes, the town's infrastructure, all are potentially in jeopardy, and ours is the challenge to deal with the situation in the best way possible

Haddam was settled in 1662 by Englishmen originating from the Massachusetts Bay Colony who "paid" the Indians for the land with 30 coats and it has grown to a population of some 7,000. Located on both sides of the Connecticut River in the south-central area of the state, it has retained its colonial rural character. We are recognized for our excellent school system, for the fact that one of our two main thoroughfares is designated a Scenic Highway, a high percentage of the land is open space in Cockaponsett State Forest, bald eagles nest by the river in late winter and commercial development is minimal.

I moved to Haddam with my family in 1974. We settled across the Connecticut River from the power plant, about one mile as the crow flies. We cannot see it from our house, but can hear the pumps 'humming' in the still of the night. Property taxes were very low in the town in the seventies and eighties because Connecticut Yankee contributed more than 50% of our tax base. In 1988, as chair of the newly created Long-Range Capital Planning Committee, I felt somewhat like a sheep crying out in the wilderness when I spoke at public meetings exhorting the residents to support the funding of needed projects such as a new fire house, town garage, playing fields, road improvements, and so on. I reminded them that there was much to be done before 2007, when "CY" was due to be decommissioned. That was then. This is now. The fire house town garage, playing fields, and so on, have yet to materialize. Some money was set aside but little headway has been made. The cautious Yankee temperament won out. Instead of working cooperatively with the utility to develop a long-term fiscal strategy, we focused on the here and now in a unilateral manner.

The impact of decommissioning is bound to be fiscal. A major concern is that the consequences might be severe and with self-defeating results. This could happen if we were to allow our flagship school system to deteriorate. The natural wooded, hilly beauty of our town, the quality of life and the quality of education constitute the main drawing cards - now that low property taxes are a thing of the past! People are afraid that our

property values will suffer and that our homes, the proverbial family nest egg will not deliver the hoped-for results at retirement or for the next generation.

We have not been afforded the luxury of TIME. We no longer have the time to plan and prioritize for the future. It has arrived ten years too early. Economic Development is now the buzz phrase - the focus of efforts to alleviate the pending gloom. Coincidentally, Haddam has been dealt a double whammy due to the fact that we lost the case over the town's assessment of the nuclear power plant during revaluation in 1991, an exercise which has taken place at ten-year intervals in Connecticut. By the time the litigation drew to a close, we found ourselves with a bill of some $14,000,000 and the townspeople voted to bond $10 million of this repayment due to Connecticut Yankee. In 1995 our grand list was approaching $1 billion. Last year it was $565 million, and now the reality of further reductions over the course of decommissioning has to be addressed. Frankly, the thought of it is somewhat terrifying. People are starting to have trouble paying their property taxes and they have been allowed to adopt payment schedules. Even people of means are having problems. Some landowners are taking advantage of the tax break available to those who commit their acreage to open space for a minimum term of ten years. I have seen my taxes increase by 52% since 1995, and the impact of decommissioning has yet to be felt.

What do we do? Well, there are plans to up-grade and improve out two commercial areas in town, the appeal to tourism needs to be enhanced, an 'incubator' park is under consideration and, most importantly, the town's leadership is pursuing the reuse of the property in Haddam Neck as a site for alternative electric generation. This will all take some time. However, I am observing a break with the traditional Yankee cautiousness towards progress. People are eager to move ahead ant to tackle the planning which should have been an on-going process between the town and the utility over the years.

Although, I still rate as a 'newcomer' in Haddam, I have been involved in town life since my arrival. My four daughters helped to make this happen. I was elected to the Board of Education in the eighties and served four years as the vice-chair with budget oversight. Then in 1992, I ran for state office and have served as State Representative for the 34th District since January 1993. Haddam is, of course, one of the towns which I represent. This fact led to my being appointed to the newly created Nuclear Energy Advisory Council in 1996. Concern about the shut-down of the three nuclear plants (Millstone) in Waterford led to the creation of this statutory council. Our charge is to ensure that the health and safety of persons living, specifically, within a 5 mile radius of the state's nuclear plants is protected. As an advisory body, we have no clout in that we cannot require anything to happen. However, we do make recommendations to which the various entities do pay attention. We have been very involved in the Restart activities at Millstone, monitoring the activities of Northeast Utilities, the NRC and the firms contracted to undertake the Corrective Action Verification Program. We report to the

Legislature and the Executive bodies and relate with the public. When the law was enacted in May 1996, Connecticut Yankee was still humming along very nicely, and concern focused on Millstone. I was pleased to be appointed. It was a natural progression for me and I have served as co-chair.

On July 22, 1996, "CY" was shut down and plans for a refueling outage were moved forward. Little did we suspect then that the shut-down was going to be forever. An economic analysis of the plant was under way. NEAC's first meeting was held on August 1, and the decision to permanently shut down "CY" was announced on December 6. Now, we are involved on all fronts due to the inclusion of the ramifications of decommissioning.

There are issues relating to safety at CY, and this comes under the aegis of NEAC. We are following the Decommissioning very closely. Our role is to represent the citizens and to ensure, to the extent possible, that the process is executed safely and effectively, both for the workers and for the residents of Haddam. Radiological problems, including on-site and off-site contamination issues have made headlines. Prompt attention is given to addressing each situation by the management at the power plant. Nevertheless, the impact is disquieting to many. It is important that the public be informed and involved to the extent possible during the entire decommissioning experience.

There are aspects of Connecticut Yankee which we shall always remember; the record-breaking days of continuous production, the job opportunities for surrounding communities, the loyalty of the workers, the "good-neighbor" activities of the staff in sponsoring and helping with evens such as the Special Olympics and the annual Native-American Rendezvous in Haddam Meadows. However, these will tend to fade into the background temporarily, as we deal with the immediate overwhelming impact of the Decommissioning and the uncertainty of our future in Haddam. As has been said, we no longer have "the goose with the golden egg".

APPENDIX 10B

International Conference on Topical Issues in Nuclear, Radiation and Radioactive Waste Safety

Vienna, Austria

Panel Discussion: September 2, 1998
Communicating Nuclear, Radiation, and Radioactive Waste Safety Information

Terry Concannon, Connecticut State Legislator, Co-Chair, Nuclear Energy Advisory Council (NEAC)

On January 31, 1996, the Nuclear Regulatory Commission (NRC) placed the 3 Millstone nuclear power generating plants on the Watch List. This was the first time that a nuclear plant in Connecticut had been put on the watch list and it followed a series of safety violations over a period of years, as well as the intimidation of employees who raised safety concerns.

Legislators from southeastern Connecticut, where the Millstone plants are located in the town of Waterford, determined that they needed to take action to ensure that the health and safety of the citizens of the state were, and are, protected. Many residents were variously troubled, angry, frightened or confused and they sought explanations and reassurance from an entity they might trust. Thus, the Nuclear Energy Advisory Council (NEAC) was created by Connecticut state statute and we came into being, August 1, 1996.

Our charge is:

- To hold regular public meetings to discuss issues relating to the safety and operation of nuclear power plants located in the state and to advise the governor, legislature and municipalities within a five-mile radius (Emergency Planning Zone) on these issues;
- To work with federal, state and local governments and the companies operating such plants to ensure the public health and safety;
- To communicate, through reports and presentations, with the plants' operators about safety or operational concerns at the plants; and
- To review the current status of the plants with the NRC.

NEAC has 14 members appointed by the leadership in the General Assembly and local town officials, and its members have diverse

backgrounds. The fact that we vary in our perspectives regarding nuclear power adds more diversity and credibility to the council. Without a model on which to base our activities, we have created one. It has proved to be a significant one to which the members of the council have dedicated themselves, and it has involved an extraordinary amount of time on the part of a number of us. Our chief goal is to maintain an objective position in order to ensure our credibility, and to communicate with all of the entities accordingly. We provide the forum which welcomes the public, sponsors presentations on topical issues given by the NRC, Northeast Utilities (NU) and the firms contracted to review the operational safety of the plants and employee concerns, and it responds to the concerns of the citizens. We have held monthly meetings and public forums on occasion, usually 'on location' in Waterford. In addition, one or more of us attend and monitor the many meetings that take place between the NRC, NU and the contractors who are undertaking the Independent Corrective Action Verification Program (ICAVP) and reviewing the Employee Concerns Program (ECP). One member qualified to be 'badged' so that he can enter the Millstone plants, unescorted, at any time and he has been monitoring the activities in the control rooms on a regular basis.

The major issues undertaken by NEAC include:

- Monitoring the Millstone recovery process in detail;
    - review of the independence of the Corrective Action Verification Program,
    - direct assessments of NU, NRC and the contractors, which include out-of-state visits to the contractors' offices,
    - ensuring a safety conscious work environment.

- Monitoring the decommissioning at Connecticut Yankee, which came as a surprise, as it was operating at the time NEAC was created and still had 10 years of license life. I live 2 kilometers from CY in Haddam. The early retirement of Millstone 1, recently announced, will also involve our oversight to ensure that the health and safety of the public are protected.

NEAC has formed sub-committees, when necessary, in order to study some issues in depth and to make recommendations, which are detailed in our annual reports. Most were undertaken at the behest of the public and include:

- Impact of deregulation of the electric industry on nuclear power plants,
- Emergency planning,
- High-level radioactive waste storage,
- Alternative energy and conservation,
- Decommissioning, and
- Potassium iodide (KI) stockpiling and distribution in the Millstone EPZ.

Our recommendations are made to the Governor, the General Assembly, the NRC and members of Congress in Washington, DC. Some, such as the hiring of a person with nuclear background in the state's Office of Policy & Management, received favorable response. The matter of long-term high-level radioactive waste storage is stalled in Congress. The stock-piling and distribution of KI to the public in the Millstone EPZ is NEAC's current recommendation. This follows the NRC's adding the prophylactic use of KI as a supplement to Evacuation and Sheltering for immediate courses of action following a severe nuclear power plant accident. The state is now considering whether it should avail itself of the offer of KI, free-of-cost, made by the federal government.

NEAC is constantly evolving as we respond to the wishes of the public. We adjust to the demands of changing circumstances and to the various unexpected crises, which are headlined in the media. One such example was the widespread alarm generated by leading officials in Connecticut last September in response to a report provided in support of the Public Utility Control's rate case before the Federal Energy Regulatory Commission. This relates to the decommissioning of Connecticut Yankee, and the report inferred a cover-up of contamination incidents by the utility. Tests conducted at the plant have subsequently shown no threat to public health and safety. However, the Governor and other members of the administration broadcast news of contamination, warned people to stay away from Haddam, where the plant is located, and offered information on radiation sickness etc. Members of NEAC spent some six weeks on damage control following the administration's ill-prepared 15-minute press conference. We met with the governor, as well as the other leaders, and the governor visited Haddam on two occasions to try to dispel the fear and anxiety that had been caused. We organized a public forum to educate the public in basic radiation facts, and to inform them of the actual situation at the power plant. (Presentations are kept as simple as possible, e.g. exposure dose rates are compared with that of a chest x-ray) Since the real estate market was severely impacted, we also provided a seminar for realtors to educate them, and to provide the information necessary to enable them to answer questions posed by prospective home-buyers. We have found that we must always be prepared for the unexpected.

NEAC shall remain in existence until such time as the public and the legislature deem that there is no further need for our participation.

APPENDIX 11

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 preperation 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,

R. M. Kacich
Director, Special Projects

nc

cc:
J. (Bill) W. Sheehan

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

January 30, 1998

The Honorable Terry Concannon
Nuclear Energy Advisory Council
Room 4035
Legislative Office Building
Capitol Avenue
Hartford, CT 06106

Mr. Evan Woollacott
Nuclear Energy Advisory Council
128 Terry's Plain Road
Simsbury, CT 06070

Dear Ms. Concannon and Mr. Woollacott:

In order to reemphasize the objective of the Independent Corrective Action Verification Program (ICAVP), and the regulatory standard/acceptance criteria upon which the licensee's performance is being measured by the U.S. Nuclear Regulatory Commission (NRC), the NRC staff is providing the following information to further explain and specify the process by which the staff will assess the results of the ICAVP. Contained in this information is a discussion of the process being used by the staff to determine if ICAVP findings, which are being categorized in one of four levels of significance, warrant an expansion of ICAVP scope.

As stated in the NRC Confirmatory Order of August 14, 1996, the purpose of the ICAVP is to confirm the effectiveness of the licensee's program in assuring that the plant's physical and functional characteristics are in conformance with its licensing and design bases. Accordingly, the regulatory standard being used to evaluate the licensee's performance and restart readiness is conformance with the plant's licensing and design bases. Consistent with the ICAVP purpose, the staff established in SECY-97-003, dated January 3, 1997, the term "defect" to represent any condition, identified during the ICAVP review, that results in the plant being outside its licensing and design bases. The acceptance criteria being applied for the ICAVP are conformance with the plant's licensing and design bases. Nonconformances with the licensing and design bases are being assessed through the identification of any "defects," identified during the ICAVP reviews.

In addition to the identification of "defects," the ICAVP reviews include the identification and assessment of other errors that do not meet the definition of a "defect" (e.g., minor calculational errors). Although such findings do not involve nonconformance with the licensing and design bases, they are being reviewed to determine if any programmatic trends raise a question about conformance with the plant's licensing and design bases.

As a result of questions/concerns from members of the public, expressed in periodic briefings held by the NRC, the NRC staff developed four levels of significance which are being used to categorize findings from the ICAVP. The levels illustrate findings (Levels 1, 2, and 3) which

would indicate nonconformance with the licensing and design bases (i.e., defects) and findings (Level 4) which would not question the licensing and design bases. As such, the condition represented by each level serves to illustrate the type of findings which would result in the plant being outside its licensing and design bases (Levels 1-3). These levels further indicate the graded significance the staff would associate with such findings. This is important since, given the technical complexity of the ICAVP reviews, the significance of an identified "defect" could vary markedly. The significance levels developed by the NRC staff are viewed as appropriate for establishing a clear hierarchical grouping of the ICAVP findings.

In addition to the establishment of the graded significance levels, the NRC staff developed a listing of likely or potential NRC actions corresponding to each significance level. A listing of predetermined NRC actions resulting from ICAVP findings has been requested by some. However, the complexity inherent in detailed licensing and design reviews does not lend itself to the establishment of automatic thresholds to trigger an expansion of ICAVP scope. The NRC's existing process for performing these reviews, relying on established regulatory requirements and risk insights, provides for a broad consideration of possible ICAVP findings and is consistent in its use of the licensing and design bases as the regulatory standard for measuring the licensee's performance.

The ICAVP oversight plan, as currently established, allows the NRC staff to make informed judgments based not only on an assessment of the individual issues, but also on the licensee's corrective actions for that issue including the identification of root cause(s) and causal factors associated with the issue, the proposed resolution to the issue, the applicability of the issue to other systems, and broader programmatic and operational implications. As such, an important element in the ICAVP process is the NRC staff's or ICAVP contractor's independent verification of corrective actions being taken by the licensee in response to ICAVP findings. This independent verification of the adequacy of corrective actions results in additional ICAVP evaluations of the plant's licensing and design bases.

In carrying out its evaluations of ICAVP findings and the licensee's corrective actions, the staff is using, in part, the requirements of 10 CFR 50, Appendix B, Criteria XVI, and the guidance contained in NRC Generic Letter No. 91-18 (GL-91-18) Revision 1, dated October 8, 1997. Both Appendix B and GL-91-18 address actions necessary for the resolution of degraded and nonconforming conditions. These actions include evaluation for both operability and reportability to NRC, and prompt disposition of the finding using an effective corrective action program. An important element of effective corrective action, in accordance with Appendix B, is to ensure that the root cause is identified and the issue is fully addressed in a timely manner.

A further discussion of corresponding NRC actions related to the ICAVP findings, as follows, is intended to better explain and document the process being used by the NRC staff.

Level 1: System does not meet licensing and design bases and cannot perform its intended function.

NRC Action: Would likely result in selection of additional system(s) for ICAVP review

Additional Discussion:

If either the ICAVP contractor review or the NRC staff review confirms a Level 1 finding, the NRC staff anticipates that, as a minimum, an additional system or systems will be added to the current scope of the ICAVP review. Following confirmation of a Level 1 finding, the Special Projects Office (SPO) staff will immediately present the finding and recommendations for ICAVP scope expansion to the Director, Office of Nuclear Reactor Regulation (NRR), and the Executive Director for Operations (EDO). Expansion of ICAVP scope will involve an additional system or systems review by the ICAVP contractor, the NRC staff, or both. Absent a negative determination by the EDO, the SPO staff will require the expansion of the ICAVP scope. The NRC staff determination and bases for requiring scope expansion will be communicated to the licensee by written correspondence.

Level 2: Single train of redundant system does not meet licensing and 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

Additional Discussion:

If either the ICAVP contractor review or the NRC staff review confirms a Level 2 finding, the NRC staff anticipates that the scope of the ICAVP would be expanded to, as a minimum, require the evaluation of similar operational, procedural, or design attributes in other safety-related or risk-significant systems for potential nonconformances. Following confirmation of a Level 2 finding, the SPO staff will immediately present the finding and recommendations for ICAVP scope expansion to the Director, NRR. The extent of reviews required under any expansion of the ICAVP will be based on (1) an NRC staff assessment of the licensee's root cause of the Level 2 finding, and (2) an NRC staff assessment of the corrective actions taken by the licensee to address both the staff's specific finding and any broader programmatic implications. Absent a negative determination by the Director, NRR, the SPO staff will require the appropriate expansion of the ICAVP scope. The NRC staff determination and bases for requiring scope expansion will be communicated to the licensee by written correspondence.

Level 3: System does not meet licensing and 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

Additional Discussion:

If either the ICAVP contractor review or the NRC staff review confirms a Level 3 finding, the NRC staff will consider expanding the scope of the ICAVP to require the evaluation of similar operational, procedural, or design attributes in other safety-related or risk-significant systems

for potential nonconformances. The SPO staff will present confirmed Level 3 findings and recommendations regarding ICAVP expansion to the Millstone Restart Assessment Panel (RAP). The staff recommendation on possible ICAVP expansion for individual findings will consider the specific finding, and the effectiveness of the licensee's corrective actions. The effectiveness of corrective actions will be independently verified by the NRC staff, or the ICAVP contractor, and will consider the requirements of Appendix B, Criterion XVI, and the guidance of GL-91-18. The staff expects that, for an individual Level 3 finding, effective licensee corrective, action to address both the specific "defect," as well as any broader implication for other systems, would lead to an NRC staff determination that the ICAVP need not be expanded. Conversely, a negative determination on effective licensee corrective action would be expected to result in a decision to expand the ICAVP. The RAP decision on ICAVP expansion will be documented in the RAP meeting minutes, and the Director, NRR, will approve any expansion of ICAVP scope. The NRC staff determination and bases for requiring scope expansion will be communicated to the licensee by written correspondence.

In addition to evaluating individual Level 3 findings, the NRC staff (Chief, ICAVP Branch, SPO, NRR), will periodically, at least biweekly, consider the collective group of confirmed Level 3 findings identified during the conduct of the ICAVP reviews. Negative trends established by these Level 3 findings, which raise a question about licensing and design bases conformance in other systems, would, in the absence of effective corrective actions by the licensee, be expected to result in expansion of the ICAVP to address possible similar nonconformances in other systems. In its evaluation of possible trends, the NRC staff will consider whether or not (1) the findings represent a large fraction of items reviewed; (2) the findings are implementation errors (e.g., program or procedural requirements were not properly performed; (3) the findings are concentrated in a particular discipline (e.g , mechanical, electrical, instrument and controls, or structural); and (4) the findings are concentrated in a particular type of document (e.g., operating procedure, calculation, drawing, FSAR, maintenance procedure). Any decision to expand the scope, based on negative trends associated with Level 3 findings, will be approved by the Director, NRR. The NRC staff determination and bases for requiring scope expansion will be communicated to the licensee by written correspondence.

Level 4: System meets licensing and 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

Additional Discussion:

Although they do not result in the plant being outside its licensing and design bases (i.e., the ICAVP regulatory standard/acceptance criteria), Level 4 findings will be assessed by the NRC staff Level 4 findings will be assessed to determine whether trends exist which could raise a question regarding the plant's licensing and design bases. Confirmed Level 4 findings are being assessed initially by the contractors to determine if licensee corrective actions are appropriate. The NRC staff, on an ongoing basis, is also reviewing these findings for

identification of multiple examples of specific findings and corresponding trends. In its evaluation of possible trends, the NRC staff will consider whether or not (1) the findings represent a large fraction of items reviewed; (2) the findings are implementation errors (e.g., program or procedural requirements were properly performed); (3) the findings are concentrated in a particular discipline (e.g., mechanical, electrical, instrument and controls, or structural); and (4) the findings are concentrated in a particular type of document (e.g., operating procedure, calculation, drawing, FSAR, maintenance procedure). The staff anticipates that if licensee corrective actions are determined to be effective, and trends which raise questions about the licensing and design bases are not identified, the scope of the ICAVP would not be expanded. The status of Level 4 findings are periodically presented to the RAP. Any expansion of ICAVP scope resulting from Level 4 findings will be approved by the EDO. The NRC staff determination and bases for requiring scope expansion will be communicated to the licensee by written correspondence.

Sincerely,

William Travers

William D. Travers, Director
Special Projects Office
Office of Nuclear Reactor Regulation

Docket No. 50-336

cc: See next page

State of Connecticut
HOUSE OF REPRESENTATIVES
STATE CAPITOL
HARTFORD, CONNECTICUT 06106-1591

REPRESENTATIVE TERRY CONCANNON
THIRTY-FOURTH DISTRICT

76 TIMMS HILL ROAD
HADDAM CONNECTICUT 06438
TELEPHONE
HOME (860) 345-4141
CAPITOL (860) 240-8585
TOLL FREE 1-800-842-8267

VICE-CHAIR
APPROPRIATIONS COMMITTEE

MEMBER
PUBLIC HEALTH COMMITTEE

Senator Melodie Peters
Co-Chair, Committee on Energy & Technology
Room 3000, Legislative Office Building
Hartford, CT 06106

February 19, 1998

Dear Melodie;

I have made several attempts to contact you without success, and so I thought I would write a note instead. Presently, I am aboard Amtrak returning from the NRC meeting held in Rockville, Maryland, today. The subject was, Progress Toward Restart Readiness and Long-Term Improvement at Millstone Station. NEAC was referred to by Michael Morris, Sargent & Lundy and the NRC staff from the Special Projects Office. It is possible that we will be asked to make a statement at the next meeting, following which the commissioners are likely to vote on Restart. I wanted to get a sense of the "lay of the land," so to speak. Let me tell you that it is somewhat intimidating, and Chairman Jackson rules the roost very effectively. Once again, she repeated the fact that the Commission decision will be based on results. Economic factors will not be entertained, and I feel that this is most reassuring when we consider the health and safety of the citizens of Southeastern Connecticut, in particular.

Last week the 1997 NEAC report was finalized, the vote of approval for the contents having been taken at our January 29th meeting. I did leave a set of our recommendations with the Energy Committee for you information. I know that you have been more than busy with the Restructuring bill and I did not want to bother you. However, there are several issues that are common to your proposed legislation and to NEAC's charge. I have read HB 5005 and see that most of the recommendations we made have been addressed in some manner by various sections of the bill. I also understand that you have a special concern about the Securitization aspect. In that the recovery of stranded costs, including decommissioning costs, affects a licensee's ability to obtain sufficient funds to protect public health and safety, this does relate to the charge of NEAC. Whether Securitization is the option chosen, or some other cost recovery mechanism in the form of a non-bypassable charge, the point is that the nuclear plants cannot be allowed to cut corners and avoid critical expenditures as they have done in the recent past. A repeat of the Millstone debacle would be untenable. I have every confidence that you and the Energy Committee leadership will recognize and facilitate this process.

The matter of premature decommissioning is also most important and relevant. Currently, Connecticut Yankee is making headway with its plans, and I would not be surprised if Millstone 1 were to follow suit in the next year. The financial decision in both cases has/will be influenced by the restructuring of the electric industry. The NRC expects that FERC/DPUC will determine a cost recovery mechanism for prudently incurred costs. At issue is the determination of what is "prudently incurred." This poses a difficult problem for you. However, the joint issues of health and safety are involved and I hope that you will be able to address this concern adequately,

I would very much like to sit down with you to discuss all of this in person. Apart from spending available time taking care of my tax practise (weekends and evenings), I am in Hartford most of the time, and would be happy to meet with you at your convenience.

Thanks for all the good work that you are doing in the energy arena,

Truly

Terry Concannon

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

CHAIRMAN

March 24, 1998

The Honorable Terry Concannon
Mr. Evan Woollacott
Co-Chairs, Nuclear Energy
Advisory Council
Room 4035
Legislative Office Building
Capitol Avenue
Hartford, Connecticut 06106

Dear Ms. Concannon and Mr. Woollacott:

I am responding to your letter of December 31, 1997, in which you requested the U.S. Nuclear Regulatory Commission (NRC) to continue to maintain the resident inspector position at the Haddam Neck site and participate in the monthly Community Decommissioning Advisory Committee (CDAC) meetings.

We agree that the level of regulatory oversight is an important component of building public trust and confidence. Although our regulatory activities include rulemaking, licensing, investigation, and enforcement, you mention inspection and public participation as the aspects of greatest interest to your constituents.

Our inspection activities make use of specialist inspectors, subject matter experts, and project managers, as well as the resident inspector. The mix of resources allocated to inspection during a given period depends on the decommissioning activities occurring at the site, emerging issues, and the expertise best suited to evaluating the licensee's performance. Thus, although we are committed to continuing vigilant regulatory oversight throughout the decommissioning and license termination processes, the resident inspector position is only one of several methods available to provide an onsite presence to monitor regulated activities.

The current NRC practice is to maintain the resident inspector onsite for approximately one year after a plant permanently shuts down. At present, a resident inspector is budgeted for Haddam Neck through fiscal year 1998, which ends on September 30, 1998. However, as part of the NRC's Strategic Assessment and Rebaselining Initiative, the Commission has considered the issue of reactor decommissioning. This issue paper is available on NRC's Internet home page. In its deliberations on this issue, the Commission directed the staff to consider a number of emerging concerns, including options affecting resident inspector staffing for permanently shutdown facilities. The staff is considering options such as placing an inspector onsite only during specific phases of decommissioning (e.g., during active dismantlement) or centralizing reactor decommissioning inspection programs in headquarters. The staff expects to provide its recommendations on these emerging issues to the Commission in the near future.

Regarding NRC presence at the monthly CDAC meeting, the resident inspector has been attending these evening and weekend sessions when possible. Consistent with staff availability and other NRC activities, we expect to continue to attend the meetings, since we agree that they provide a valuable conduit for information exchange. Our resources do not permit us to commit to attend every meeting; however, if you anticipate that an NRC presence would be especially beneficial at an upcoming meeting, please contact Dr. Ronald R. Bellamy, Chief, Decommissioning and Laboratory Branch, at 610-337-5200 to make arrangements.

Sincerely,

Shirley Ann Jackson

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

March 25, 1998

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 a request made during the February 26, 1998, Nuclear Energy Advisory council meeting. At that meeting I was asked several questions regarding the number and status of allegations received by the Nuclear Regulatory Commission (NRC) concerning activities at Millstone station. At the meeting I committed to provide you with additional information on Millstone allegations. You also requested information on recent changes made to improve NRC processes for handling allegations.

Enclosed is information with respect to the number of Millstone allegations received by the NRC. The information includes statistics on total allegations received, the number of allegations that involve discrimination, the number of allegations substantiated, and the number of allegations that remain open. The enclosed includes information for all sites with operating reactor facilities that may be useful for comparison with the Millstone data. Also enclosed is NRC's annual report on the agency's allegation process. The report describes some of the recent enhancements made to NRC's allegations process.

I trust you will find the information responsive to your questions. Should you have any questions or comments, please do not hesitate to call me at (301) 415-2240.

Sincerely,

Phillip F. McKee
Deputy Director, Licensing
Special Projects Office

Docket Nos. 50-245, 50-336, and 50-423

Enclosures: 1. Allegation Statistics
2. Status of Allegation Program, Annual Report

April 14, 1998

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

Dear Mr. Plant,

My name is Mark Holloway and I am a member of the Connecticut Nuclear Energy Advisory Council. This council was created by the state legislature in response to concerns involving the operation of Connecticut's nuclear power plants. We are tasked with providing the state legislature with information and recommendations to assist them in formulating legislation regarding the state's nuclear plants.

I have been working with The Citizens Regulatory Commission (CRC) Emergency Planning subcommittee to address several areas in which nuclear emergency planning could be improved. As such, I have read your letter dated January 12, 1998 in which your office provided responses to the Citizens Regulatory Commission (CRC) Emergency Planning Subcommittee Chairperson, Ms. Pati Harper, to nuclear emergency planning issues that were directed to OEM by that subcommittee.

After reading OEM's letter, I feel that several of OEM's responses do not really, quite frankly, address the questions posed. I am enclosing a copy of the subject OEM letter so that I might refer to each OEM answer by number without repeating the questions and answers in this letter. My questions and comments to the OEM answers are as follows:

A. 2 - This response does not take into account that tourism has, although not increasing the state's resident population, has certainly increased Connecticut's transient population. Shouldn't OEM factor a large transient population into the equation when planning emergency sheltering requirements ?

Additionally, the increase in tourism has created a situation by which many state highways have become extremely congested. In particular, Routes I-95 and I-395 are, at times, virtual bottlenecks. The fact that the casinos are outside of the Millstone EPZ, does not lessen the traffic impact on sections of I-95 and I-395 which do fall in the Millstone EPZ. This is the reasoning behind the need for additional reception centers along with improved emergency routing.

A. 5 - This OEM response draws a distinction between an NRC endorsement of FRPCC's recommended policy of federally funding Potassium Iodide (KI) for use by the general public versus an NRC recommendation to stockpile and dispense KI for use by the general public. This

seems to be a case of OEM semantical hairsplitting. The fact is the NRC has undergone a major policy shift with their endorsement of KI usage by the general population. Several states; including Alabama, Tennessee and Maine, are either currently or planning to in the near future, stockpile KI for use by the public. KI is available in Connecticut for use by nuclear plant workers and EPZ town officials. What is Connecticut's rationale for not stockpiling KI for public use?

A. 14 - The OEM answer does not adequately address this question. The question, and real issue, is: Can the entire EPZ population; which would include the resident as well as the estimated transient population, be tested at the available reception centers within a 12 hour period? It is critical that radiation monitoring take place within 12 hours of possible radiation exposure. The issue is not whether the reception centers would remain open as long as necessary.

Also, any nuclear emergency planning scenario should base projections on the entire EPZ population, not the 20% figure which is often used in planning emergency sheltering for natural disaster emergencies. Studies after the Three Mile Island accident have shown that the affected population tends to overreact to nuclear accidents, not under react as so often the case with floods, hurricanes, etc.

I would appreciate a response to these questions and comments. My address is: 18 Yorkshire Drive, Waterford CT 06385. Please feel free to call me at (860) 443-7877 if you have any questions. Thank you.

Mark Holloway

Copy to:
CRC Emergency Planning Subcommittee
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

April 24, 1998

The Honorable Shirley Jackson
Chairman, Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Dear Dr. Jackson:

Thank you for your response of March 24, 1998 to our letter of December 31, 1997 concerning the maintenance of the resident inspector during the decommissioning of Connecticut Yankee (CY) at Haddam Neck. We read it to the public and discussed it at the April 16, 1998 Nuclear Energy Advisory Council (NEAC) meeting at Haddam Neck where the Council was briefed by Dr. Ronald R. Bellamy, Chief, Decommissioning and Laboratory Branch, Nuclear Regulatory Commission (NRC) and CY Resident Inspector Bill Raymond.

During this briefing, it was mentioned that there is no job description for a Decommissioning Resident Inspector. The NRC Inspection Manual Chapter 2561-06.09 discusses the duties and qualifications of a Decommissioning Inspector. This would be an excellent start in developing the job description.

The Strategic Assessment Issue Paper (DSI 24: Decommissioning - Power Reactors) used in the NRC Strategic Assessment and Rebaselining Initiative discussed in your letter of March 24, 1998 proposes on page 15 three possible alternatives for resident site inspectors: "2. Placing resident site inspector during all phases of decommissioning, only during specific phases of decommissioning, or not at all."

To promote maximum public health and safety in a decommissioning plant, the Connecticut NEAC urges the adoption of a Decommissioning Resident Inspector (the first option noted in DSI 24) who would be specifically qualified to monitor decommissionings and be on site during all stages of decommissioning for continuity and enhanced public confidence in the

decommissioning process.

The members of NEAC, who were able to be at Millstone on February 2, 1998, were very pleased to meet you and truly appreciated your taking the time to listen to us and to sharing your perspective on Restart with us. In addition, we welcomed your responses to our written questions at Waterford High School that evening.

On behalf of the NEAC, we value and thank you for your communications.

For the Nuclear Energy Advisory Council

Terry Concannon
Co-Chair

Evan W. Woollacott
Co-Chair

TC/mf

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

May 5, 1998

Mr. John C. Markowicz
9 Susan Terrace
Waterford, CT 06385

Dear John:

Our journey down the road to recover and restart the first of our nuclear power plants at Millstone Station is nearing an end. As we all know, the efforts to effect this recovery at Millstone have been unprecedented in the history of the commercial nuclear power industry. In accomplishing this recovery, we have set new standards for Millstone Station. As we continue to improve our operations, we anticipate setting the standards - once again - for the industry.

This paragraph above is, perhaps, a long preamble to offer you sincere thanks, from myself and NU, for your participation at the May 1, 1998 briefing at the Commission. You have been an important, valuable participant in and witness to the long, often arduous process in which we have engaged. Your help, guidance, feedback, and constructive criticism have been a part of what has allowed us to come this far. We have not quite reached the end of our journey, but we are very close to the successful restart of Millstone Unit 3.

It is my hope that as we go forward and once again operate Millstone Station, that we can continue to develop positive, mutually supportive working relationships. It is commitment to open, honest and fair evaluation and communication. This, also, will begin to set a new standard for how we at Millstone Station must continue to interact with everyone.

Thank you again for your time, your concern and, your willingness to be an important part of our restart process.

Sincerely,

Bruce Kenyon

cc: M. Morris
T. Concannon
E. Woollacott

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

COMMISSIONER

May 5, 1998

The Honorable Terry Concannon
Nuclear Energy Advisory Council
Room 4035
Legislative Office Building
Capitol Avenue
Hartford, CT 06106

Dear Representative Concannon:

During our meeting on April 6, 1998, we discussed the indicators that an electric utility could use to track its plant performance and benchmark against the industry average. For your information, I have enclosed examples of industry average Performance Indicators generated by NRC's Office for Analysis and Evaluation of Operational Data (AEOD) and the Performance Indicators generated by the World Association of Nuclear Operators (WANO). We also discussed that some plants that have the best safety records also operated economically. I want to provide you with two examples from NUREG/CR-6577, "U.S. Nuclear Power Plant Operating Cost and Experience Summaries" that have relatively low operating costs and high cumulative capacity factors, namely, Monticello and North Anna Unit 2 (annual unit production cost around $80 million and capacity factors at 76% and 78%, respectively). These two nuclear stations not only operated economically but also have excellent safety records as reflected in their recent Systematic Assessment of Licensee Performance (SALP) reports.

Again, I appreciate the opportunity to meet with you and I hope you find the above information helpful.

Sincerely,

Nils J. Diaz

Enclosure:
As stated

cc:PDR

NJD394

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

SECRETARY

May 11, 1998

The Honorable Terry Concannon
Co-chair
Connecticut Nuclear Energy Advisory Council
Room 4035
Legislative Office Building
Capitol Avenue
Hartford, Connecticut 06106

Dear Ms. Concannon:

I want to express the Nuclear Regulatory Commission's appreciation for Mr. Markowicz's participation in the May 1 Commission Meeting on Millstone. As you know, the May 1 meeting was intended as the first of two sessions in which the Commission would be briefed on outstanding issues related to the Millstone 3 unit's readiness for restart, and the Commission focused its attention on the Millstone Employee Concerns Program, the safety conscious work environment, deferred items management, and management oversight and quality assurance.

The Commission is now planning a second meeting to cover the remaining issues relevant to the Commission's decision on whether to authorize the restart of Millstone 3. The Commission plans to hear from the licensee, Sargent and Lundy, the NRC staff, and invited representatives of the public. The focus of the meeting will be on the principal issues remaining to be evaluated by the Commission, including the Independent Corrective Action Verification Program, the Corrective Action Program, and the results of NRC's Operation Safety Team Inspection.

I am pleased to extend to the Nuclear Energy Advisory Council an invitation to make a presentation at this meeting, which is currently scheduled for June 3, 1998. The Commission anticipates that this meeting will be an all-day session, with the licensee and Sargent and Lundy making presentations in the morning, and members of the public and the NRC staff presenting their views in the afternoon portion of the meeting. The procedures governing the June 3 meeting will be the same as those used on May 1.

Please notify Mr. William Hill of my staff as soon as possible whether you or Mr. Markowicz intends to participate in the June 3 meeting so that the NRC can prepare a final agenda for this meeting. If the NEAC does participate, your presentation should be limited to 15 minutes or

less, and the Commission will need to receive copies of your written statement by Monday, May 25, 1998. If you have any questions, please contact Mr. Hill by telephone at (301) 415-1661, by electronic mail (WMH @nrc.gov), or by fax ((301)-415-1672).

Sincerely,

John C. Hoyle

cc: Mr. John Markowicz

Identical letter sent to: Mr. Evan Woolacott

STATE OF CONNECTICUT
EXECUTIVE CHAMBERS
HARTFORD, CONNECTICUT
06106

JOHN G. ROWLAND
GOVERNOR

TO : REPRESENTATIVE TERRY CONCANNON

FROM : SIDNEY J. HOLBROOK, CHIEF OF STAFF

DATE : MAY 15, 1998

IN FOLLOWING UP ON OUR MEETING ON WEDNESDAY REGARDING THE APPOINTMENT OF AN INDIVIDUAL TO ACT IN THE CAPACITY OF A NUCLEAR ADVISOR, I CONTACTED DEPUTY SECRETARY MARC RYAN AT OPM. MARC TOLD ME THAT YOU HAD CONTACTED HIM THE DAY OF OR TWO DAYS AFTER OUR MEETING.

MARC INFORMED ME OF YOUR CONVERSATION REGARDING RESTRUCTURING OF THE ENERGY OFFICE AT OPM. IN MY CONVERSATION WITH MARC IT WAS MY UNDERSTANDING THAT WHEN THIS RESTRUCTURING OCCURS AN INDIVIDUAL CAN BE PLACED IN THE CAPACITY OF AN ADVISOR. MARC ALSO INFORMED ME THAT HE WILL KEEP YOU INFORMED AS TO THE PROGRESS OF THIS RESTRUCTURING.

IT IS MY HOPE THAT THIS WILL ACHIEVE WHAT WE ALL BELIEVE TO BE MUTUALLY BENEFICIAL NOT ONLY TO ALL OF US CONCERNED WITH THIS MATTER, BUT UTMOST TO THE PEOPLE OF THE STATE OF CONNECTICUT.

CC: MARC RYAN, OPM
PAM SUCATO, LEGISLATIVE DIRECTOR

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

June 22, 1998

Mr. Donald W. Downes, Chairman
State of Connecticut
Department of Public Utility Control
10 Franklin Square
New Britain, CT 06051

Chairman Downes:

During the Nuclear Energy Advisory Council (NEAC) meeting of Thursday, June 18, a motion was unanimously carried to send a communication to your office regarding the DPUC decision to remove Millstone Unit 3 from the rate base effective July 1, 1998, unless the specified criterion of at least 95% power for 100 continuous hours is met. This letter is in fulfillment of that motion.

Fundamentally, NEAC is most concerned about the possible safety ramifications of the DPUC decision. The fact that the Millstone workforce is aware that Unit 3 will be removed from the rate base, unless the above criterion is met, is a disincentive to safety. We say this with the recognition that the DPUC has to perform its economic regulatory function, balancing the needs of the many stakeholders involved. We also acknowledge that an extensive proceeding took place leading up to this decision.

At the same time, we ask that you recognize that our charter as established by the legislature requires us to "work with Federal, state and Local agencies and the Companies operating such plants to ensure public health and safety." It is in the spirit of this provision that we are obliged to call to your attention the fact that the existing decision has the potential to encourage workers to take actions that are not necessarily in the interest of the health and safety of the public. Our experience, since the creation of the Council in mid-1996, has sensitized us greatly to the unique work environment at Millstone and the many subtleties influencing employee behavior. The Millstone workforce is well aware of the financial challenges facing the organization, and it is impossible to shield them from this fiscal reality.

We think the better course of action is to modify the existing decision in such a way that conservative decision-making which may lead to schedule delays is not discouraged. Given that the NRC Commissioners on June 15 voted unanimously to change the status of Millstone Unit 3 to a Category 2 Watch List plant, startup would appear to be imminent. We are therefore sending this communication promptly following our June 18 meeting with the recommendation that the existing criterion of 95% power for at least 100 consecutive hours be changed. While we leave it to your expertise to determine the best approach, we would recommend consideration of an approach that would satisfy the "imminent and certain" standard, and simultaneously address our concern.

Thank you for considering the views of the Council on this important safety issue.

For the Nuclear Energy Advisory Council

Terry Concannon
Co-Chair

Evan W. Woollacott
Co-Chair

TC/sv

cc:
G. Arthur
L. J. Kelly Arnold
J.W. Betkoski, III
J.R. Goldberg

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

July 8, 1998

The Honorable Terry Concannon
Mr. Evan Woollacott
Co-Chairs, Nuclear Energy
Advisory Council
Room 4035
Legislative Office Building
Capitol Avenue
Hartford, Connecticut 06106

Dear Ms. Concannon and Mr. Woollacott:

Thank you for your April 24, 1998, letter describing the Nuclear Energy Advisory Council's (NEAC's) position on a number of items associated with the Nuclear Regulatory Commission's (NRC's) inspection oversight of decommissioning power reactor licensees. In particular, you stated that the NRC staff should adopt the option evaluated in DSI-24: Decommissioning—Power Reactors, which proposed that a Decommissioning Resident Inspector be assigned during all phases of decommissioning at power reactor facilities. Further, you noted that there is no job description for a Decommissioning Resident Inspector and that to promote maximum public health and safety, an NRC staff individual, assigned at the facility, should be specifically qualified to monitor the decommissioning process, thus enhancing public confidence.

The efficient and effective regulatory oversight of licensed activities at decommissioning power reactor facilities is one of the most important missions of the NRC. As articulated in the letter we sent you on March 24, 1998, our current practice is to have an inspector at the site for some period after permanent cessation of power operations. This time period, which is continually reevaluated by the staff on a per site basis is based in part on the type and schedule of decommissioning activities being conducted at the site and licensee performance. Typically, we maintain a Resident Inspector at the site for about a year following shutdown. However, if the activities at the facility do not warrant continuous site coverage, we may transfer this individual and conduct inspections from the regional office.

Regarding your comment on Decommissioning Resident Inspectors, we have already begun to assess and improve our guidance in this area. First, we are developing a Resident Inspector transition training plan (for inspectors assigned to plants that have announced that they will permanently shut down) to ensure that our onsite inspectors are appropriately retrained in the rules and regulations governing decommissioning. Secondly, we have recently revised our NRC Inspection Manual Chapter (IMC 1245) on inspector

training to implement a new qualification program entitled "Decommissioning Inspector." This individual would be the onsite replacement for the Resident Inspector (a title historically reserved for onsite inspectors at operating power plants), if a Decommissioning Inspector is assigned. And lastly, we have committed to reviewing and revising, as necessary, IMC 2561, "Decommissioning Power Reactor Inspection Program," to incorporate recent lessons learned and to strengthen our guidance on the use of Resident Inspectors and Decommissioning Inspectors at decommissioning power plants.

Thank you again for communicating your opinions and views regarding NRC's oversight of licensed activities.

Sincerely,

/s/
Jack W. Roe, Acting Director
Division of Reactor Program Management
Office of Nuclear Reactor Regulation

STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC UTILITY CONTROL

July 14, 1998

DONALD W. DOWNES
CHAIRPERSON

The Honorable Terry Concannon, Co-Chair
Evan W. Woollacott, Co-Chair
Nuclear Energy Advisory Council
Room 4035
Legislative Office Building
Capitol. Avenue
Hartford, CT. 06106

Dear Ms. Concannon and Mr. Woollacott:

The Department of Public Utility Control (Department) is in receipt, on June 24, 1998, of your letter on behalf of the Nuclear Energy Advisory Council (Council), in which the Council expresses concern regarding possible safety ramifications of the Department's Decision removing Millstone Unit 3 from rate base as of July 1, 1998, and for it not to be restored to rate base until it has reached 95% power for at least 100 hours. In support of its concern, the Council states that the workforce at Millstone is aware of the fiscal reality of the removal of the unit from rate base and that the Decision has the potential to encourage workers to take actions that may not be in the best interest of the health and safety of the public. The Council further suggests that the automatic mechanism for restoration to rate base be altered in such a way as not to discourage conservative decision making that could lead to schedule delays.

The Department's decision to remove the plant from rate base was reached in its role as an economic regulator, after thorough review of the issues. As an economic regulator, the Department is charged with balancing the relevant public interests, both existing and foreseeable. During the more than two-year period that the plant has been out of service, the Department has had to weigh the delicate financial condition of The Connecticut Light and Power Company (Company) against the economic burdens placed on ratepayers. Even with the plant removed from rate base, the Department is allowing the Company to recover replacement power costs in full. In any balancing exercise, there are some interests that are not fully satisfied. Given the prolonged period during which plant was out of service but not out of rate base (in which case some argue that the Company was economically advantaged) and the recovery of replacement power at the present time, the Department believes that it has achieved a fair balancing of the public interests.

The Department appreciates the Council's concerns regarding conservative and safe operations. However, the Department has every reason to believe that the Nuclear Regulatory Commission and Company management will take all steps necessary to insure that any actions to bring Millstone Unit 3 back to service will be consistent with the safety conscious work environment the Company has worked so conscientiously to foster. The rate order should not have any effect on this positive work environment. Indeed, the NRC's authorization for Millstone Unit 3 to restart came after the Department's Decision.

For the foregoing reasons, the Department is not persuaded that it is necessary to alter its Decision.

Sincerely,

Donald W. Downes
Chairperson

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC SAFETY
DIVISION OF FIRE, EMERGENCY AND BUILDING SERVICES
Office of Emergency Management

August 10, 1998

Mr. Mark Holloway
18 Yorkshire Drive
Waterford, CT 06385

Dear Mr. Holloway:

We received your letter requesting additional information or clarification on our January 12, 1998 response to Pati Harper of the Citizens Regulatory Commission (CRC) Emergency Planning Subcommittee. I am more than happy to address your concerns and provide additional information, and will attempt to do so.

In regard to your request for more information on our answer to question #2, I would like to get a copy of the reference or study being sited regarding the population figures quoted for the assessment of a "large increase in tourism". This will assure that the figures you are referring to are comparable to ours. You are absolutely correct that factoring in the best figure possible for a transient population is necessary when planning emergency sheltering requirements. Our current figures do already reflect a large transient population based on a study done by a company named Earth Tech of Concord, Massachusetts. Earth Tech was contracted to develop an Evacuation Time Estimate (ETE) study for the Millstone Emergency Planning Zone.

Connecticut has seven designated host communities which would serve to receive evacuees from communities around the nuclear power plants, should the decision to evacuation ever occur. Six of those seven host communities were designated for Millstone's emergency planning zone. Since Haddam Neck's defuel plan (for decommissioning) looks like it may be approved soon by the NRC, we have begun the process of taking a fresh look at the host community program to make sure that each host community is being utilized to its fullest. I can assure you that host community capacities, monitoring capabilities and evacuation routes are being explored in great detail. Your points about the traffic impact on sections of I-95 and I-395 were well expressed. We are exploring every evacuation route currently designated. We have included liaisons from the State Department of Transportation and State Police to work on our host community review committee to assure that we have the very latest traffic planning information available to us.

Number 5 of your letter on Potassium Iodide raises several issues which need to be discussed. You stated that NRC made a "recommendation to stockpile and dispense KI for use by the general public". However, to quote the July 1, 1998 NRC, Office of Public Affairs bulletin # 98-109, they state that the NRC "would require that, as each state develops the range of protective actions, consideration be given, as a supplement to evacuation and sheltering, to the use of potassium iodide, as appropriate". The NRC has

Phone (860) 566-3180
360 Broad Street, Hartford, CT 06105
An Equal Opportunity Employer

in effect *required states to **consider*** the use of KI as a supplement to evacuation and sheltering (NRC press release # 98-109, dated July 1, 1998), and they have offered to purchase KI for states which decide to adopt the use of KI. They have left the decision up to the individual states.

As you know, the state's current policy does not recommend KI for use by the general public. The state's main intent is to move people away from potential harm well in advance of any possible radionuclide release. Evacuation is the principal effective action used to protect the general public. We do make KI available to the state emergency workers who have to go into or stay within the emergency planning zone (e.g. traffic control; air, water and food monitoring and sampling, etc.) as opposed to the general public which would be evacuated. Towns within the emergency planning zone were given the option of utilizing KI for their emergency workers; however, only Waterford currently has opted to develop a plan and stockpile KI for their emergency workers. Because of this new NRC requirement to consider KI, we have asked the Commissioner of Public Health to review the current policy and determine if it needs to be changed or amended.

Our office has researched the states referred to in your letter. Maine was in the process of researching KI for general public use when their utility decided to apply to decommission their nuclear power plant several months ago. Tennessee distributed KI in the early 1980's and every six years following that distribution instructed the residents within the emergency planning zone communities (a population which is less than a third of Millstone's population) to return and exchange their KI vials. (Tennessee felt that KI had a shelf life of six years.) We were told that for the first six year's change-out, residents had about a sixty percent exchange rate, and the next six years after that about 17% of the residents went to the public health centers to exchange their KI. Our contact in Tennessee stated that they have no plans for follow-up on those not exchanging nor does their plan address people moving, etc. The state conveys nuclear preparedness information and procedures for use of KI by the general public in their annual informational calendar mailing. Tennessee also stockpiles KI for distribution to institutionalized persons (e.g. nursing homes, prisons, etc.) upon an incident occurring; they do not stockpile KI at the institutions themselves. Alabama did not go door to door with KI for the general public, however, they do have a plan for stockpiling KI at the reception centers, for the general public to receive after they have evacuated.

In NRC's paper entitled "*Assessment of the Use of Potassium Iodide (KI) as a Public Protective Action During Severe Reactor Accidents*", they state that "KI protects the thyroid from internal exposure to radioiodines. KI does not protect against internal exposure to other radioisotopes and does not protect against external irradiation." The use of KI is not a panacea. There are medical issues around pre-distributing KI to the general public. If a person is allergic to seafood, there is a strong possibility that they will be allergic to KI; also, KI would not be good for a person to take if they are on a potassium restricted diet. Outside of the main concern - the health aspect - distribution of KI and follow-up is a huge undertaking. A lot of questions would have to be worked out such as who would keep track of the homes when people move; apartments with new

tenants; making sure that residents understand that they must keep it, as all medicine, accessible yet away from small children. Other issues include the shelf life of KI (expiration), and who would be responsible for physically exchanging it. Stockpiling of KI within the Millstone community could mean traffic jams and delays (this may mean that individuals might be exposed outside longer than what is necessary just to receive KI - time that would be better spent evacuating). The decision to use KI and the implementation of that decision is a very complex issue - one requiring a great deal of thought and careful planning. The Health Commissioner is reviewing the NRC's publication on this issue and will make a decision.

Your letter on question # 14, concerns monitoring of evacuees at host communities. There are 28 portal monitors to support the host community program. Each is capable of monitoring approximately 4,300 people within a 12 hour period. In addition to the portal monitors each host community has emergency workers who are trained to conduct hand-held dosimeters which are used to manually monitor evacuees. The Federal Emergency Management Agency (FEMA) attests to the fact that Connecticut has adequate monitoring capability and shelter capacity each time they evaluate our host communities. Every federally evaluated exercise uses a stringent set of checklist questions called the Radiological Emergency Preparedness Exercise Evaluation Methodology (EEM). The state and host communities have to demonstrate the adequacy of facilities, equipment, supplies, personnel and procedures for congregate care of evacuees. The subject of monitoring and decontamination of the evacuee population is an area of great concern to FEMA also. They spend a lot of time in conducting their calculations to assure that the host community can monitor and decontaminate the population arriving at the host community. FEMA's Exercise Manual (FEMA Rep-14) states that "each reception center is responsible for monitoring 20% of that portion of the plume emergency planning zone (EPZ) allocated to the reception center. Connecticut utilizes this FEMA/NRC planning standard and goes well beyond the 20% of the permanent and transient population.

I hope that this letter addresses the concerns you have stated. If you have further questions, please contact me again. I would like to take this opportunity to offer the same invitation that Bob Plant made prior to his retirement, which is an open invitation to meet with me and my staff and tour the State Emergency Operations Center.

Sincerely,

George E. Luther
Deputy Commissioner, Public Safety

GEL:dsf
cc: REP (D. Ferrari)
OEM
cf

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

August 27, 1998

Governor John G. Rowland
State Capitol
Hartford CT 06106

Dear Governor Rowland,

The State of Connecticut Nuclear Energy Advisory Council (NEAC) met on August 20, 1998 in Waterford, Connecticut. Among the items discussed at this meeting was a subcommittee report regarding the stockpile, distribution and public education on the use of potassium iodide (KI) in the event of a severe accident at the Millstone Nuclear Power Plant. We have heard a recurring concern from some members of the general public on this matter. Additionally, the Nuclear Regulatory Commission (NRC) has recently adopted the following position: "In developing this range of actions, consideration has been given to evacuation, sheltering, and, as a supplement to these, the prophylactic use of potassium iodide, as appropriate." A copy of this NRC Memorandum is attached.

By majority vote, the NEAC has taken the following position:

1. NEAC endorses and supports the decision of the Nuclear Regulatory Commissioners regarding KI and the specific actions directed by them in a Memorandum to Mr. L. Joseph Callan, Executive Director for Operations dated June 26, 1998 (Copy Attached).
2. NEAC recommends that the State of Connecticut (Departments of Public Health and Environmental Protection) take action to request appropriate quantities of KI pills from the Federal government (at no cost) for stockpiling and distribution to residents within the Millstone Site Emergency Planning Zone (EPZ-5 mile radius).
3. NEAC recommends that the State of Connecticut (Department of Public Health) develop, implement, and evaluate a two-year program for voluntary distribution of KI pills to residents within the Millstone Site EPZ. This program should include the following elements:

a. Public education/information program regarding the use of KI pills.
b. A signed medical release as a requirement before any individual is provided a KI pill.
c. Utilize local municipal activities to stockpile and pre-distribute KI pills to individual residents on a voluntary basis.
d. Encourage schools, hospitals, nursing homes, prisons, and other restricted/high density population activities to stockpile quantities of KI pills (subject to medical release waiver requirement noted above).
e. Stockpile sufficient quantities of KI pills at the reception Centers in Evacuation Plans for each evacuee.
f. Submit a report to the State Legislature regarding the effectiveness of the voluntary participation program at the end of the two-year trial period.

We would appreciate your consideration of our recommendations and would be pleased to meet with you to discuss the issues involved in stockpiling and distributing potassium iodide.

For the Nuclear Energy Advisory Council

Terry Concannon
Co-Chair

Evan W. Woollacott
Co-Chair

TC/mf

cc: Senator Kevin B. Sullivan, President Pro Tempore
Thomas D. Ritter, Speaker of the House
Senator Melodie Peters, Co-Chair, Energy & Technology Committee
State Representative Mary U. Eberle, Co-Chair, Energy & Technology Committee
Arthur J. Rocque, Commissioner DEP
Stephen A. Harriman, Commissioner DPH
First Selectman Thomas Sheridan, Waterford
Mayor Patrick Dougherty, Montville
Mayor Lloyd Beachey, New London
First Selectman Wayne L. Fraser, East Lyme

University of Connecticut
College of Agriculture and Natural Resources

Natural Resources
Management and Engineering

The Honorable Terry Concannon
Room 4100
Capitol Avenue
Hartford, CT 06106

December 31, 1998

Dear Representative Concannon,

The purpose of this letter is to report, as you requested, on the progress of the Connecticut Academy of Science and Engineering study committee on cancer incidences near the Connecticut Yankee Nuclear Plant (CYN).

The following progress has been made to date:

- A literature review of previous studies and the state of the knowledge of cancer incidences around nuclear facilities was completed.
- An air pollution plume computer model has been used to estimate the geographic distribution of material emitted from CYN. These "proportions" have been apportioned on a town by town basis. This work was completed by committee member Gale F. Hoffnagle at TRC Environmental Corporation.
- The results above are now being used to calculate potential radiation exposure "dosages" on a town by town basis. This work is being done by committee member Kenneth W. Price, Director of the Office of Radiation Safety at the University of Connecticut, Health Center. These calculations have involved many hours of computer programming and are nearing completion.
- Decisions on which cancers to look for and how to prepare the data from the cancer registry have now been made after a number of discussions with personnel at the Connecticut Department of Health. The DOH personnel are currently preparing the data for our use. Andrew Salner, Chief of Radiological Oncology at Hartford Hospital, is conducting the ongoing discussions with DOH.

1376 Storrs Road, W.B. Young Building, Room 308, U-87
Storrs, Connecticut 06269-4087

Telephone: (860) 486-2840
Facsimile: (860) 486-5408
web: www.canr.uconn.edu/nrme

When the cancer data is ready, we plan to compare, town by town, the potential dosages with the cancer incidences. This comparison analysis may take a little time, but should not drag out too long. After it is completed we will write a final report.

If I can give you any more information or details, please don't hesitate to let me know.

Sincerely yours,

David R. Miller
CYN Committee Chair

cc. Wetstone, CASE
Committee Members

STATE OF CONNECTICUT
OFFICE OF POLICY AND MANAGEMENT

www.opm.state.ct.us

Ms. Terry Concannon
Mr. Evan W. Woollacott
Co-Chairs of the Nuclear Energy Advisory Council

Dear Ms. Concannon and Mr. Woollacott:

On August 27, 1998, you sent a letter to Governor Rowland outlining the Nuclear Energy Advisory Council's (NEAC) recommendation that the State take a proactive stance in pursuing the stockpiling and distribution of potassium iodide (KI) as a supplemental emergency planning measure to evacuation. The Office of Policy and Management has convened an interagency working group to reassess the State's policy on this issue. The group comprises staff from OPM, the Department of Public Health, the Department of Environmental Protection, the Office of Emergency Management, and the Department of Corrections. The DEP is represented by Dr. Edward Wilds who also serves on NEAC.

In December 1998, the Nuclear Regulatory Commission convened a KI Core Group to address comments received on its draft, "Assessment of the Use of Potassium Iodide as a Public Protective Action During Severe Reactor Accidents," that was released in June 1998. The NRC plans to re-issue a "substantially revised document" by September 1999 that "will fairly discuss the factors that need to be weighed in the State and local decisions...as to whether KI is an appropriate protective supplement."

Since it would not be prudent to speculate on the outcome of the NRC study, I want to assure you that the interagency working group, under OPM's guidance, will continue to actively monitor the situation in order to expedite a resolution to this matter once the NRC guidance is finalized. Attached are notes from the group's two previous meetings, the most recent of which included presentations by Dr. Gerard Burrow of Yale University and Dr. Martin Chemiak of the UConn Health Center.

Please contact Dan Morley of my staff at 418-6343 if you have any questions or would like to arrange a meeting to discuss this issue in further detail.

Sincerely,

Marc S. Ryan
Secretary

Attachment

cc: James Bentivegna
Leonard F. D'Amico