

NORTHEAST UTILITIES



THE CONNECTICUT LIGHT AND POWER COMPANY
WESTERN MASSACHUSETTS ELECTRIC COMPANY
HOLYOKE WATER POWER COMPANY
NORTHEAST UTILITIES SERVICE COMPANY
NORTHEAST NUCLEAR ENERGY COMPANY

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October 6, 1989

Docket No. 50-213

50-245

50-336

50-423

B13365

Re: Inspections

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

Gentlemen:

Haddam Neck Plant
Millstone Nuclear Power Station, Unit Nos. 1, 2, and 3
Impact of Inspections and Special Meetings

This letter is being submitted by Connecticut Yankee Atomic Power Company and Northeast Nuclear Energy Company to provide information and to convey some observations regarding the nature and frequency of the many inspections, meetings, and visits to our facilities. While the NRC clearly is the organization which visits our facilities most frequently, other organizations involved include INPO, NUMARC, ANI, and other entities, such as foreign delegations. One of the purposes of submitting this letter is to potentially heighten your awareness of the frequency and nature of these visits, so that the scheduling of future inspections may be performed with this broader perspective in mind.

These activities are gradually increasing in number and duration at the sites and in the corporate headquarters. Many aspects of these activities are constructive or rewarding as they provide valuable feedback from broad experience bases within the industry, useful recommendations, and opportunities for in-depth assessment. Conversely, the frequency and scope of these activities has raised some questions as to the efficient allocation of resources, the ability to optimally focus on the priority safety issues, and the ability to most effectively manage and safely operate the plants. One reason for this is the fact that most inspections or visits involve considerable management time and attention.

The routine inspections that are performed mostly by the NRC Resident Inspectors are mutually beneficial. The day-to-day interface between these inspectors and plant management provides continuous, open communication on virtually all of the important regulatory issues. In addition to these routine inspections, there are a number of major inspections. Attachments 1 and 2 identify the major inspections and meetings at the Haddam Neck Plant and the Millstone Station, respectively, over a typical four-month period, (mid-May thru mid-September 1989). In each case we have summarized the key aspects of the

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meeting or the value derived from it. Attachment 3 is a combined chronological list of inspections and special meetings which have taken place during this period with an approximation of the number of inspection hours involved.

A review of the data indicates that approximately three man-years (7,349 hours) of inspection (or visit) activity occurred over this four month period, which we believe to be representative. This equates to ten man-years of inspection each year. We conservatively estimate that two to four hours of licensee time is required for preparation, interface, support and follow-up, for every one hour of inspection time. This would project to twenty to forty man-years of licensee time collectively spent each year to support inspections at our four plants. We say this with the recognition that our facilities receive fewer inspections than the average Region I facility.⁽¹⁾ Of course, the pace varies from time to time. Occasionally there are comparatively few inspections, and at other times the activity is very intense. We greatly appreciate the accommodations that the NRC makes to adjust inspection initiatives whenever it is known well in advance that a more optimum schedule can be arranged.

One general observation we can make from these inspections is that the team inspections are resource intensive for the NRC and for our plants. When team inspections are performed during refueling outages they can have a significant impact on our ability to manage outage work. When such large inspections are scheduled during normal operation, any day-to-day operational issues can impact our ability to support the team inspections as well as we would like. It is very beneficial that the NRC recognizes that plant initiatives and good performance can reduce the need for team inspections. A particularly valuable example is Safety System Functional Inspections. We have completed our own SSFIs on Millstone Unit Nos. 1 and 2 and we will be doing them in the near future on Millstone Unit No. 3 and the Haddam Neck plant. The use of our own resources has enabled us to fully internalize and recognize some common elements from our SSFIs that are related to configuration management and other initiatives. We have shared our SSFI objectives and findings in meetings with the NRC. In addition, the ability to schedule this work has provided us the flexibility to use our resources in an optimum manner that is advantageous to all four of our plants.

In summary, the inspections and meetings have an overall substantial benefit to us. We encourage such activities where mutual benefits are derived. We do have some concern that from time to time, the number of inspections and the number of inspectors and visitors at the sites at any given time may challenge our resources, but we have not let this affect our ability to safely operate the plants. We view this as a necessary part of our job, but one that could

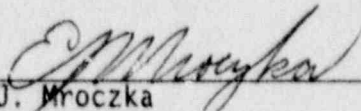
(1) Refer to ACRS Regional Subcommittee Programs Meeting with NRC Region 1, August 29 and 30, 1989, briefing material.

U.S. Nuclear Regulatory Commission
B13365/Page 3
October 6, 1989

perhaps be improved upon by enhanced communication. Your willingness to consider alternative schedules, when reasonable justification is provided, is helpful. It is equally important to us that you have a more complete appreciation of this aspect of nuclear power plant management, and we trust this letter will confirm, if not enhance, your awareness of this aspect of our operation.

Very truly yours,

CONNECTICUT YANKEE ATOMIC POWER COMPANY
NORTHEAST NUCLEAR ENERGY COMPANY



E. J. Mroczka
Senior Vice President

cc: W. T. Russell, Region I Administrator
M. L. Boyle, NRC Project Manager, Millstone Unit No. 1
G. S. Vissing, NRC Project Manager, Millstone Unit No. 2
D. H. Jaffe, NRC Project Manager, Millstone Unit No. 3
A. B. Wang, NRC Project Manager, Haddam Neck Plant
W. J. Raymond, Senior Resident Inspector, Millstone Unit Nos. 1, 2, and 3
J. T. Shedlosky, Senior Resident Inspector, Haddam Neck Plant

Attachment 1

Haddam Neck Plant
Reactive Inspections and Special Meetings

o NRC Inspection - Event V, July 24 - August 4, 1989

The NRC Staff conducted a two-week audit at the Haddam Neck Plant with respect to Event V/Interfacing Systems LOCA. Event V/ISLOCA represents a postulated "beyond design-basis" event that involves the leakage of high-pressure reactor coolant system (RCS) fluid into lower pressure systems connected to the RCS, such as the low-pressure safety injection system and the high-pressure safety injection system. Such postulated back-leakage could result in a LOCA outside of containment and the disabling of safety injection systems.

The "one item of concern" involved the NRC Staff's suggestion that CYAPCO perform leak testing of the valves (both manual and motor operated) that are on the RCS side of valve DH-MC'-310 in the drain system. These valves have been addressed in previous in-service test (IST) submittals to the NRC Staff in which we explained why these valves were not being leak tested. All of this was discussed with the NRC team during the audit. The NRC team has requested that we reconsider including these valves in the IST program for leak testing in the future, and we are evaluating the merits of this possible change. Follow-up with the Staff in the near future is anticipated.

o NRC Inspection - Switchgear Building & Appendix R, August 14-17, 1989

Two members of the NRC Region I Staff conducted an inspection of the New Switchgear Building and Fire Protection programs at Haddam Neck. The inspection focused on the electrical construction aspects of the New Switchgear Building and included the normal annual Region I inspection of the plant's fire protection program.

No deficiencies were noted by the NRC Staff. The NRC Staff stated at the exit meeting that after discussions with their management, a determination will be made, based on the results of this inspection, of whether any additional inspections of the New Switchgear Building will be required prior to start-up from the upcoming outage. However, as far as an Appendix R inspection is concerned, the NRC stated that they did not know if an inspection would be conducted during this outage or what impact the current inspection results may have on the schedule for the Appendix R audit.

o NRC Inspection - EEQ Follow-up Audit, September 11-15, 1989

The Region I NRC Staff conducted a follow-up EEQ Audit for the Haddam Neck Plant at our corporate offices. The purpose of this audit was to close-out all open and unresolved items as a result of the first-round EEQ audit conducted in November 1987. The NRC Inspector visited the Haddam Neck Plant on September 14, 1989 to inspect various equipment associated with the close-out of open items. An exit meeting was held on September 15. Results of this audit have not been received, but it is anticipated that most, if not all, open and unresolved items from the November 1987 audit have been resolved and closed.

Attachment 2

Millstone Station
Reactive Inspections and Special Meetings

o NRC Inspection - Millstone Unit No. 1 - Hydrolazer Contamination, May 17-18, 1989

An inspection of the shipment of a high pressure pump and trailer with removable external radioactive contamination from the licensee's reactor site to a vendor site in Morristown, New Jersey was conducted during May 17-18, 1989.

Two apparent violations were identified:

- 1) The failure to establish adequate procedural controls to prevent contamination of the hydrolazer equipment, and
- 2) As a result of the above failure, there were transportation violations under Title 49 of the Code of Federal Regulations: inadequate examination and testing, contamination in excess of 49CFR173.443 Table 10 limits, and lack of shipping papers adequately describing the material.

o NRC Inspection - Millstone Station - Maintenance Team Inspection, May 30 - June 16, 1989 and July 10-14, 1989

Seven NRC inspectors (staff and contractors) performed an in-depth team inspection of the Millstone Nuclear Power Station, Unit Nos. 1, 2, and 3 maintenance program and its implementation. The inspection included a review of maintenance documents and observations of maintenance work in progress. The inspectors used the NRC Maintenance Inspection Guidance, dated September 1988, and Temporary Instruction 2515/97, dated November 3, 1988.

The inspection team evaluated three major areas: (1) overall plant performance as affected by maintenance, (2) management support of maintenance, and (3) maintenance implementation. Under each of these major areas, elements considered important for proper functioning of the area were inspected. For each element, the inspectors evaluated both the program and how effectively the program was implemented.

The inspection was performed as part of NRC's industry-wide effort to evaluate the effectiveness of maintenance activities at licensed power reactors. We believe the NRC found that the Millstone station has an extremely good maintenance training facility. Also, we believe that the NRC's maintenance inspection module provides an effective means for self assessment. The team concluded that management is strongly committed to

improving maintenance activities at Millstone as evidenced by the numerous maintenance improvement initiatives that were instituted.

No unresolved items or violations were identified.

o NRC Inspection - Third Party Vendor Parts Refurbishment, June 6-7, 1989

An inspection was conducted by two representatives of the Office of Nuclear Reactor Regulation (NRR).

The inspection included information gathering for the two inspectors, to determine the extent that Millstone Station uses third party vendors as the supplier of refurbished electrical equipment. The reason the inspectors were looking for this information was due to the potential for refurbished items having been supplied by a third party vendor, and installed in Millstone Station Category 1 systems. These items were suspected of being substandard.

The inspectors were satisfied with the as-installed equipment, although follow-up continues.

o NUMARC Visit - Millstone Station - Familiarization, June 26 - September 1, 1989

A NUMARC senior project manager spent nine weeks at Millstone and one week at our corporate offices, to gain a broad understanding of NU operations. The exposure of this individual to our organization and facilities appeared to accomplish the original objectives.

o Russian Delegation Visit - Millstone Station, July 18, 1989

Four scientists from the Soviet's Kurchatov Institute of Atomic Energy visited Millstone for a daylong overview of NU's nuclear training program. The Institute, a major national nuclear power planning and research agency, recently purchased two interactive nuclear simulators from Singer Link Miles.

The day's activities featured presentations on each of the Training Department's major areas of instruction. The group then observed a simulated steam generator tube rupture with loss of normal power and control air at the CY simulator.

o NRC Inspection - Millstone Station - Station Blackout, July 18-21, 1989

Five NRC inspectors and two NRC contractors conducted a Station Blackout (SBO) Audit at Millstone Unit Nos. 1, 2, and 3. The main purpose of the audit was to permit the NRC and its contractors to examine the documentation and calculations supporting our April 17, 1989 and May 30, 1989 SBO

submittals. The most significant result of the audit is that some NRC Staff members believe the Millstone Unit No. 1 and 2 crosstie is not adequately designed to withstand a single failure and therefore cannot be credited as currently designed, for an alternate AC power source. The NRC team leader acknowledged this is a generic issue focusing on differing opinions in interpreting the previously endorsed NUMARC 87-00 Report on SBO. Additionally, less significant action items resulted from the audit. Information on these issues has been provided to the NRC.

o NRC Inspection - Millstone Unit No. 3 - Thimble Tube Wear, July 25-26, 1989

An NRC Staff member and a contractor conducted an inspection to review the program for monitoring Millstone Unit No. 3 thimble tube performance. The NRC staff reviewed the following documentation as a part of their inspection:

- o NU's inspection report/results
- o Design drawings
- o Analysis supporting acceptance criteria and inspection frequency.

It appeared that the NRC was satisfied with the Millstone Unit No. 3 thimble tube wear program.

o Russian Delegation Visit - Millstone Station, August 4, 1989

A delegation of three high-level Soviet nuclear safety engineers, one of which was a member of the ruling body of the U.S.S.R. Academy of Sciences, visited Millstone Unit No. 3 control room simulator.

Four NNECO control room operators demonstrated a mock emergency which included loss of reactor coolant and loss of electricity to the control facility. The Soviets observed the operators assessing the simulated emergency, shutting down the plant, sending mock alerts to company and regional officials, and finally giving the order to evacuate unnecessary personnel from the Millstone complex.

The visit to Millstone was part of the three-day visit of the U.S. by the three top civilian advisors to the Soviet government which reflects increased cooperation among international nuclear experts as a result of the Chernobyl accident.

o Brookhaven National Laboratory - Nuclear Power Plant Training, August 9, 1989

A representative of Brookhaven spent one day between the corporate offices and the Millstone site familiarizing himself with NU's nuclear power operations in preparation for his upcoming lecture on Nuclear Power in the Soviet Union.

o INPO Inspection - Millstone Station - Plant Evaluation, August 14-25, 1989

INPO performed an evaluation of Millstone Station against INPO's standards of excellence. This was a relatively intense evaluation involving twenty four (24) inspectors for two weeks. The results will be reported in a Plant Evaluation Report which is expected to be published by mid-October, 1989.

o NRC Visit - Millstone Unit No. 3 - MOV Operability, August 29, 1989

This meeting provided the NRC (AEOD) with an opportunity to receive first hand operating experience and discuss MOV testing & surveillance in general with someone they believed had some useful information on the subject. While the exchange was originally prompted in part by a Millstone Unit No. 3 LER, the NRC interest included all four NU units to the extent NU has operating experience and technically based opinions which relate to understanding the safety significance of the MOV testing and surveillance issue and our proposed action in response to Generic Letter 89-10.

o NRC Visit - Accident Management, August 29, 1989

On August 29, 1989, five members of the NRC Staff and two contractors visited the NU Corporate Emergency Operations Center (EOC) to discuss NU's efforts in the Accident Management (AM) area. During this visit, NU demonstrated our data transmission system between the stations and the corporate EOC, thermal hydraulics calculational capability on a PC, and the PRA models on the PC. The meeting was one of several NRC visits to licensees to learn about existing AM capabilities.

o NRC Inspection - Millstone Unit No. 3 - Engineering Support, September 18-22, 1989

An NRC inspection from the Region I Staff performed an inspection of NU's Corporate Engineering Support for Millstone Unit No. 3. The objective of this inspection was to assess the adequacy of NU's engineering program for design control, internal and external interfaces, management support, staffing levels and experience, training and NU's response to NRC requirements and requests. Engineering support is one of the SALP categories and the results of this inspection will be reflected in the next SALP report for Millstone Unit No. 3.

ATTACHMENT 3

CHRONOLOGICAL LIST OF AUDITS, INSPECTIONS AND VISITS (FROM MAY 1989)

10/6/89

UNIT	SUBJECT / ORGANIZATION	DATE	INSPECTOR / VISITOR MAN / HOURS
CY	Routine / NRC	May-3 - Jun-13	205
MP2	Routine / NRC	May-5 - Jun-15	183
MP1	Routine / NRC	May-9 - Jun-15	263
MP1 & 2	Routine / NRC	May-15 - May-19	40
MP3	Routine / NRC	May-15 - Jun-12	160
MP1	Hydrolazer Contamination / NRC	May-17 - May-18	16
MPS	Maintenance / NRC	May-30 - Jul-14	640
MP1 & 2	Third Party Vendor Parts Refurbishment / NRC	Jun-6 - Jun-7	32
CY	Radiological Controls / NRC	Jun-7 - Jun-9	24
MP3	Routine / NRC	Jun-13 - Jul-17	273
CY	Routine / NRC	Jun-14 - Jun-16	24
CY	Routine / NRC	Jun-14 - Jul-25	199
MP1	Routine / NRC	Jun-16 - Jul-17	67
MP2	Routine / NRC	Jun-16 - Jul-26	162
MPS	Routine / NRC	Jun-19 - Jun-23	40
MP3	Routine / NRC	Jun-26 - Jun-30	40
CY	Routine / NRC	Jun-26 - Jun-30	80
MPS	Familiarization / NUMARC	Jun-26 - Sep-1	400
MP1 & 2	Routine / NRC	Jul-11 - Jul-14	32
MPS	Russian Delegation	Jul-18	32
MP1	Routine / NRC	Jul-18 - Aug-21	* 200
MPS	Station Blackout / NRC	Jul-18 - Jul-21	224
MP3	Routine / NRC	Jul-24 - Jul-28	40
CY	Event V / NRC	Jul-24 - Aug-4	640
MP3	Thimble Tube Wear / NRC	Jul-25 - Jul-26	32
CY	Routine / NRC	Jul-26 - Sep-5	181
MP2	Routine / NRC	Jul-27 - Aug-30	* 200
CY	Routine / NRC	Jul-31 - Aug-4	44
MP3	Routine / NRC	Aug-1 - Sep-5	* 200
MPS	Russian Delegation	Aug-4	24
CY	Routine / NRC	Aug-7 - Sep-11	* 200
MPS	ATWS / NRC	Aug-7 - Aug-11	40
GEN.	Nuclear Power Training / Brookhaven	Aug-9	8

CHRONOLOGICAL LIST OF AUDITS, INSPECTIONS AND VISITS (FROM MAY 1989)

10/6/89

UNIT	SUBJECT / ORGANIZATION	DATE	INSPECTOR / VISITOR MAN / HOURS
MPS	Plant Evaluation / INPO	Aug-14 - Aug-25	1920
CY	Swgr. Bldg. & Append. R / NRC	Aug-14 - Aug-17	64
MP3	Routine / NRC	Aug-17	4
MP1	Routine / NRC	Aug-22 - Sep-15	* 144
MP3	MOV Inoperability / NRC	Aug-29	8
GEN.	Accident Mgmt. / NRC	Aug-29	56
MP2	Routine / NRC	Sep-1 - Sep-15	* 80
MP3	Routine / NRC	Sep-6 - Sep-15	* 40
MPS	NMSS Great Neck Warehouse / NRC	Sep-11	8
MPS	Routine / NRC	Sep-11 - Sep-15	40
CY	EEQ Follow-up Audit / NRC	Sep-11 - Sep-15	40
Total			7349

ACTIVITIES AFTER MID - SEPTEMBER PERIOD

MP3	NU Engineering Support / NRC	Sep-18 - Sep-22	40
MPS	Familiarization / INPO	Sep-18 - Dec-22	* 600
MP3	Operator Requalification / NRC	Sep-18 - Sep-22	160
MPS & BERLIN	Operator Requalification & Rosemount / NRC	Sep-26 - Sep-27	32
MPS & CY	Familiarization / NRC (Commissioner Rodgers)	Sep-28 - Sep-29	* 16
BERLIN	Eddy Current Testing	Oct-3	40
MPS & CY	Operator Requalification / NRC	Oct-3	* 8
MP1	Emergency Preparedness Exercise / NRC	Oct-4	* 240
MP1	Operator Requalification / NRC	Oct-16 - Oct-27	* 320
MPS & CY	Regulatory Impact Survey / NRC	Oct-23	* 48
MP1	EOP Inspection / NRC	Oct-23 - Oct-27	* 120
MPS & BERLIN	ACRS	JAN	* 32

* Estimate