

NORTHEAST UTILITIES



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

General Offices • Selden Street, Berlin, Connecticut

P.O. BOX 270
HARTFORD, CONNECTICUT 06141-0270
(203) 665-5000

September 20, 1985

Docket No. 50-423
B11727

Director of Nuclear Reactor Regulation
Mr. B. J. Youngblood, Chief
Licensing Branch No. 1
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

- References:
1. J. F. Opeka letter to B. J. Youngblood, "Millstone Nuclear Power Station, Unit No. 3, Safety Evaluation Report Open Items, Shift Technical Advisor and Hot Participation Experience," dated June 24, 1985.
 2. B. J. Youngblood to J. F. Opeka, "Request for Additional Information for Millstone Nuclear Power Station, Unit No. 3," dated September 10, 1985.

Dear Mr. Youngblood:

Millstone Nuclear Power Station, Unit No. 3
Hot Participation Experience

In Reference (1), we provided our current position on the Millstone Unit No. 3 Safety Evaluation Report open item regarding hot participation experience. Since then, we have had several discussions with the NRC Staff concerning our position on this item. In addition, we recently received a Request for Additional Information (Reference 2) asking for further information on this topic. The purpose of this letter is to provide the additional information requested, including a revised, more detailed table showing the qualification and experience levels of our proposed operating shifts (see Attachment I).

Our position concerning hot participation experience was developed in conjunction with other factors such as the requirements for STA, operator licensing constraints, and providing for the maximum transfer of experience from our operating plants. We participated with NUMARC since its inception on the resolution of the hot participation issue which resulted in the guidelines endorsed by Generic Letter 84-16. However, because we felt that the proposed NUMARC guidelines were specific to the NTOL plants under consideration at that time, we elected to propose alternate, equivalent methods for meeting the hot participation guidelines. We have always had an integrated approach to shift staffing which we feel has resulted in the best possible operating shift mix for Millstone Unit No. 3. For those shifts that do not meet the specific guidelines of Generic Letter 84-16, we have equivalent hot participation experience through a

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combination of BWR experience, nuclear Navy experience, start-up experience, and simulator experience.

To justify this position, it is important to realize some of our assumptions regarding this experience. First of all, we do not agree with the differentiation made between PWR/BWR commercial experience. Although we agree that the experience required would be most valuable if it were obtained on a large, same type reactor, we do not feel that this is necessary, per se, without a review and crediting of other important factors. For example, at the Millstone Nuclear Power Station there are three different nuclear units, each of a different vintage and NSSS type. However, there is only one set of administrative controls governing the site. All three units are operated in accordance with specific procedures (i.e., operating, emergency operating, surveillance, and maintenance procedures) utilizing the same fundamental content and format requirements. Supervision and control of work activities involving preventive and corrective maintenance, as well as modifications to the plant design, are not unique to each unit but are common to all of our nuclear units. There are basic differences between the individual unit designs, but these differences are primarily addressed through plant-specific training, including plant specific simulator training.

In the case of the Millstone Unit No. 3 operating staff, all previous commercial operating experience was obtained on a Northeast Utilities operating nuclear unit (Haddam Neck, Millstone Unit No. 1 or Millstone Unit No. 2). Therefore, this experience is extremely valuable because of the proficiency already gained in utilizing Northeast Utilities operating procedures and administrative control procedures. For example, Northeast Utilities has one basic equipment safety tagging procedure for all production facilities.

We would also like to reiterate the fact that all of our Millstone Unit No. 3 operators have been participating on-shift in the start-up program since September, 1983. At this time, the majority of our operators will have at least three years experience on Millstone Unit No. 3. During this time, the operators have been extensively involved in the turnover and testing of plant equipment, components, and systems. The operating shifts are directly responsible for the control of post-turnover work activities, the establishing of proper start-up test procedure initial conditions, and the operation of the unit to conduct start-up testing. The entire start-up test program is being performed under the supervision and control of our NNECO engineering and operations staff and not by the architect-engineer, as is the case with most other utilities. This experience, along with the extensive classroom and plant-specific simulator training received by each operator, provides unparalleled familiarity and intimate knowledge of the plant prior to start-up.

Our shift staffing program was established long before the development of the specific hot participation experience guidelines. It has always been NNECO's intention to provide well-balanced shifts addressing both the concern for shift operating experience and engineering expertise on shift which is congruous with the NRC's long-term objectives. It should be further noted that NNECO has provided individuals on-shift who have both engineering expertise as well as credible previous reactor operating experience (nuclear Navy). Attachment I provides the shift experience and qualification levels for each of our six typical operating shifts. As a minimum, we will provide one of the following shift

compositions until each of our operating shifts achieves three months of experience at power operation:

- o One Millstone Unit No. 3 licensed SRO per shift with previous hot PWR commercial license experience in excess of 6 months.
- o One Millstone Unit No. 3 licensed SRO per shift with previous hot BWR commercial license experience in excess of 12 months, plus a second Millstone Unit No. 3 licensed SRO who, as a minimum, has a bachelor's degree in engineering or a physical science.
- o One Millstone Unit No. 3 licensed SRO per shift with a bachelor's degree in engineering or a physical science, plus an individual previously licensed on a commercial PWR.

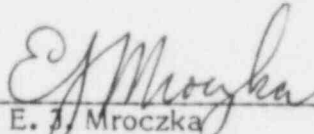
We trust that the information provided herein is sufficient to allow you to complete your evaluation for this item. Should you have further questions, please contact our licensing staff.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY



J. F. Opeka
Senior Vice President



By: E. J. Mroczka
Vice President

cc: Mr. W. T. Russell, Acting Director
NRC Division of Human Factors

Mr. F. R. Allenspach
NRC Licensee Qualification Branch

Dr. T. E. Murley, Regional Administrator
NRC Region I

ATTACHMENT I
MILLSTONE NUCLEAR POWER STATION, UNIT NO. 3
PROPOSED OPERATING SHIFTS - QUALIFICATIONS AND EXPERIENCE LEVELS (In Months)

	EDUCATION	COMMERCIAL OPERATING EXPERIENCE			NUCLEAR NAVY EXPERIENCE			TOTAL NUCLEAR EXPERIENCE (Note 2)	LICENSE APPLIED FOR
	Degree - Field	Licensed Experience	Reactor Type - Unit*	License	Total Commercial Experience	Experience	Highest Qualification*		
SHIFT A									
Shift Supervisor (E. Fetterman)	(Note 1)	141	PWR-CY	SRO	183	77	EO	260	SRO
Supervising Control Operator	(Note 1)	15	BWR-MP1	SRO	29	78	EWS	107	SRO
Control Operator	--	0	--	-	8	72	EWS	80	SRO
Control Operator	--	0	--	-	23	69	EO	92	RO
Plant Equipment Operator	--	0	--	-	4	72	EWS	76	RO
SHIFT B									
Shift Supervisor (R. Martin)	B.S. - Math	0	--	-	1	60	Engineer	61	SRO
Supervising Control Operator	(Note 1)	79	PWR-CY	SRO	128	53	RO	181	SRO
Control Operator	A.A.	0	--	-	6	123	EWS	129	SRO
Control Operator	--	0	--	-	14	104	ERS	118	RO
Plant Equipment Operator	--	0	--	-	14	72	ERS	86	RO
SHIFT C									
Shift Supervisor (R. Walker)	(Note 1)	124	BWR-MP1	SRO	134	79	EWS	213	SRO
Supervising Control Operator	A.A.	9	PWR-MP2	RO	46	184	EWS	230	SRO
Control Operator	--	0	--	-	0	72	EWS	72	SRO
Control Operator	--	0	--	-	3	72	EO/SRO	75	RO
Plant Equipment Operator	(Note 1)	0	--	-	15	176	EWS	191	SRO
SHIFT D									
Shift Supervisor (J. Ruttar)	B.S.-Oceanography	0	--	-	1	60	Engineer	61	SRO
Supervising Control Operator	(Note 1)	80	PWR-MP2	SRO	124	57	ERS	181	SRO
Control Operator	(Note 1)	0	--	-	13	227	EOOW	240	SRO
Control Operator	--	0	--	-	6	71	RO	77	SRO
Plant Equipment Operator	--	0	--	-	0	144	EWS	144	RO
SHIFT E									
Shift Supervisor (K. Covin)	B.A.-Math/Physics	0	--	-	1	92	Engineer	93	SRO
Supervising Control Operator	(Note 1)	35	BWR-MP1	SRO	94	60	EO/SRO	154	SRO
Control Operator	--	0	0	0	47	0	-	47	RO
Control Operator	--	0	0	0	4	69	RO	73	SRO
Plant Equipment Operator	--	0	0	0	0	18	(Note 3)	72	RO

	EDUCATION	COMMERCIAL OPERATING EXPERIENCE			NUCLEAR NAVY EXPERIENCE			TOTAL NUCLEAR EXPERIENCE	LICENSE APPLIED
	Degree - Field	Licensed Experience	Reactor Type - Unit*	License	Total Commercial Experience	Experience	Highest Qualification*	(Note 2)	FOR
SHIFT F									
Shift Supervisor (G. Olson)	M.S.-Nucl. Eng.	0	--	-	1	98	Engineer	99	SRO
Supervising Control Operator	(Note 1)	15	BWR-MP1	SRO	54	74	ERS	128	SRO
Control Operator	--	0	--	-	4	61	EWS	65	SRO
Control Operator	--	0	--	-	5	74	RO	79	RO
ALTERNATES									
Shift Supervisor (J. Catlin)	B.S.-Mech. Eng.	0	--	-	1	72	SS (Note 4)	73	SRO
Shift Supervisor (A. Horton)	B.S.-Matls. Eng.	0	--	-	1	51	EOOW	52	SRO
Operations Assistant	B.S.-Oceanography	0	--	-	0	66	Engineer	66	SRO
Operations Assistant	B.S.-Chemistry	0	--	-	0	55	Engineer	55	SRO

NOTES

- (1) Engineering degree equivalence through STA programs described in the W.G. Council letter to D.G. Eisenhower, dated November 18, 1983.
- (2) Millstone Unit No. 3 experience not credited. By September 1985, the minimum time spent at Unit 3 for all license candidates listed will be 2 years. The majority of candidates will have greater than 3 years experience on Millstone Unit No. 3.
- (3) Licensed on Fast Flux test facility. Completed Plant Equipment Operator Qualifications on Millstone Unit No. 2
- (4) Combustion Engineering (S1C)

***KEY**

- CY - Connecticut Yankee (Haddam Neck)
- MP1 - Millstone Unit No. 1
- MP2 - Millstone Unit No. 2
- EO - Electrical Operator
- EWS - Engineering Watch Supervisor
- Engineer - Chief Engineer
- RO - Reactor Operator
- ERS - Engine Room Supervisor
- SRO - Senior Reactor Operator
- EOOW - Engineering Officer of the Watch