RC (3)

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

September 28, 1973

Docket No. 50-219

Jersey Central Power & Light Company
ATTN: I. R. Finfrock, Jr.
Vice President - Generation
Madison Avenue at Punch Bowl Road
Morristown, New Jersey 07960

Gentlemen:

You were informed by our letter dated September 7, 1973, of our concern about the possibility that your control rods fabricated by the General Electric Company may have inverted poison tubes. Prior to startup following your present outage you will have completed requested shutdown reactivity margin measurements to assure an adequate shutdown margin existed at the time of the measurements. We are conti..ing our review of this possible occurrence and have concluded that insufficient data exists to conclude that poison redistribution cannot occur. Therefore, you are requested to submit the following information for our review: (1) analyses of possible length and location of poison voids which could be caused by boron carbide redistribution, (2) the effect of such redistribution on normal operation, transients, and accidents, (3) proposed changes to technical specifications which will assure that all safety margins stated or implied in your FSAR are maintained, (4) surveillance requirements to maintain adequate shutdown reactivity margins and monitor changes in poison distribution, (5) your plans and schedules for changeout of control rods, (6) expected curve of reactivity vs burnup for remainder of current operating cycle, and (7) a comparison of predicted vs measured criticality measurements for the 3 fuel cycles at Oyster Creek as well as a summary of the results of the control rod inventory checks required by Technical Specification 4.2.F including any corrections made to the predictions based upon previous data.

Copies of the "Reactor Control Blade Evaluation" special report and supplement submitted by The Millstone Point Company along with our reply and safety evaluation are enclosed to serve as guidance in the preparation of your submittal. It is requested that any proposed changes within your Technical Specifications to account for poison redistribution in inverted

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poison tubes be implemented upon submittal pending completion of our review of your proposed changes. Your response is requested within 90 days as three signed and thirty-seven additional copies.

Sincerely,

Donald J. Skovholt

Donald J. Skovholt
Assistant Director for
Operating Reactors
Directorate of Licensing

Enclosures:
1. Millstone ltrs dtd 7/23 & 7/26/73 transmitting Reactor Control Blade Evaluation and Supplement
2. AEC ltr to Millstone dtd 7/27/73 and Safety Evaluation

cc w/enclosures: see next page

cc: George F. Trowbridge, Esquire
Shaw, Pittman, Potts, Trowbridge
& Madden
910 - 17th Street, N. W.
Washington, D. C. 20006

GPU Service Corporation
ATTN: Mr. Thomas M. Crimmins
Safety & Licensing Manager
260 Cherry Hill Road
Parsippany, New Jersey 07054

J. Lester Yoder, Jr., Esquire
206 Horner Street
Toms River, New Jersey 08753

Mr. Kenneth B. Walton
Brigantine Tutoring
309 - 21st Street, South
Brigantine, New Jersey 08203

Miss Dorothy R. Horner
Township Clerk
Township of Ocean
Waretown, New Jersey 08753

Ocean County Library
15 Hooper Avenue
Toms River, New Jersey 08753

Jersey Central Power & Light Company

MADISON AVENUE AT PUNCH BOWL ROAD • MORRISTOWN, N. J. 07960 • 539-6111

August 27, 1973

Mr. A. Giambusso
Deputy Director for Reactor Projects
Directorate of Licensing
United States Atomic Energy Commission
Washington, D. C. 20545

Dear Mr. Giambusso:

Subject: Oyster Creek Station
Docket No. 50-219
Fuel Densification

Your letter of August 24, 1973 requested that the Commission be informed by 12:00 noon Eastern Standard Time today what actions have been taken to comply with the Order for Modification of License and the maximum power level attainable at the Oyster Creek Nuclear Generating Station consistent with that Order.

Action was initiated upon receipt of your letter to adjust the core power distribution and power level to comply with the AEC Order. The maximum generating capability of the plant varies with the overall core power distribution and the fuel type which may be limiting. This variation is presented in Table 1. The Oyster Creek Nuclear Generating Station is currently operating at 1754 MWt (90.8% of rated power).

Very truly yours,

R. H. Sims
Vice President

pk

Attachment

cc: Directorate of Regulatory Operations
Region I

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TABLE 1

ALLOWABLE POWER LEVEL VS. GPF AT OYSTER CREEK

(In Accordance with August 24, 1973 AEC Letter)

FUEL TYPE	POWER (MWt)	GPF	MAPLHGR
I	1930	1.91	10.9 KW/Ft
	1900	1.94	
12,800 MWD/T*	1800	2.05	
	1676	2.20	
	1582	2.33	
II	1930	1.97	11.25 KW/Ft
6,000 MWD/T*	1900	2.00	
	1800	2.11	
	1729	2.20	
	1632	2.33	
III & IIIB**	1930	1.82	10.4 KW/Ft
	1900	1.85	
	1800	1.95	
	1600	2.20	
	1510	2.33	

*Approximate present fuel type average exposure.

**No exposure dependence yet docketed for densification limitations.

UNITED STATES
ATOMIC ENERGY COMMISSION
DIRECTORATE OF REGULATORY OPERATIONS
REGION I
631 PARK AVENUE
KING OF PRUSSIA, PENNSYLVANIA 19406

H. D. Thornburg, Chief
Field Support & Enforcement Branch
Directorate of Regulatory Operations, HQ

September 28, 1973

FACF RO I/73-8 (APPARENT UNCOUPLING OF CONTROL RODS)

The subject information on Oyster Creek and Nine Mile Point is contained in Report Nos. 50-219/73-11 and 50-220/73-06, respectively.

The subject information for Pilgrim 1, Millstone 1 and Vermont Yankee is as follows:

1. Plant procedures for each facility require a rod coupling test be made every time a rod is pulled to the full out position (notch 48). A notch out signal is given when the rod is at notch 48; if the rod is uncoupled, the position light will go out and a "rod overtravel" alarm is sounded.

   Rods that are partially withdrawn are monitored by the nuclear instrumentation to insure reactivity change with rod motion.

   These tests are performed during each startup and weekly during power operation while performing the rod exercising.

2. Plant management is to be notified of any rod uncoupling.

3. Operator action - If a rod is found to be uncoupled, the operator is to attempt recoupling by driving the rod in two or three notches, and withdrawing the rod to notch 48, giving another coupling check. If these attempts fail to recouple the rod, it then must be fully inserted, electrically disarmed, drive water isolated, and the scram accumulator discharged and vented.

4. Only Millstone 1 has experienced rod uncoupli . On 7/24/73 CR 18-35 was found uncoupled. During a reactor shutdown on 7/26/73, CRD 18-35 was replaced with a previously overhauled drive. The same uncoupling problem was present. The rod was then fully inserted and electrically disarmed.

~~8304120707~~ 2pp.

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OFFICE ▶	OPS					
SURNAME ▶	Young/hwr	Carlson				
DATE ▶	9/28/73					

Form AEC-318 (Rev. 9-53) AECM 0240

5. Control room operators were interviewed at each facility and all appeared to be thoroughly familiar with the procedures in question.

6. Both the CRD position indicating system and the overtravel alarm circuits were reported to have given good service in past operations.

R. T. Carlson, Chief
Facility Operations
Branch