



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

NOV 5 1973

Robert J. Schemel, Chief, ORB #1, L

MEETING WITH JERSEY CENTRAL POWER & LIGHT COMPANY

Date, Time & Place:

November 13, 1973

9:30 a.m.

Rm. 100 Woodmont Bldg.

Regulations Attendees:

T. V. Wambach, ORB#1

F. Liederbach, QAB

S. Cummins, QAB

R. Glasscock, RO:I

Other Attendees:

N. Trikouros, GPU

D. Gaines, JPC&L

Purpose of Meeting:

To review draft QA Plan for Operations
for Oyster Creek

T. V. Wambach

T. V. Wambach

Operating Reactors Branch #1

Directorate of Licensing

cc: Docket File

AEC PDR

Local PDR

L Reading

RP Reading

E. G. Case

A. Giambusso

R. S. Boyd

RP Assistant Directors

D. J. Skovholt

T. J. Carter

RP Branch Chiefs

J. M. Hendrie

TR Assistant Directors

TR Branch Chiefs

R. F. Fraley, ACRS

T. V. Wambach

R. Bevan

Attorney, OGC

RO (3)

Principal Staff Participants

Receptionist

ACRS (3)

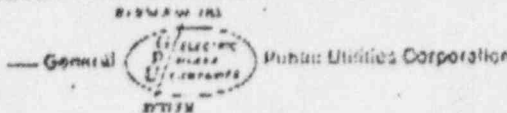
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Jersey Central Power & Light Company



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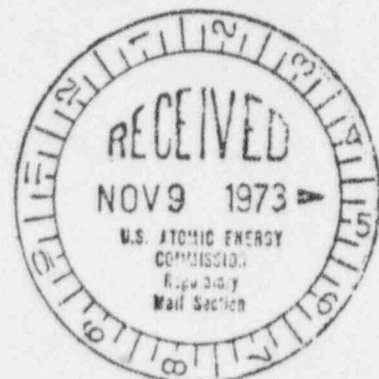


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ATTN: TOM WAMBACH — RUSH

Mr. Donald J. Skovholt
Assistant Director for Operating Reactors
Directorate of Licensing
United States Atomic Energy Commission
Washington, D. C. 20546



Dear Mr. Skovholt:

By letter dated October 26, 1973, you requested revised curves representing the limits for the average planar linear heat generator rate for GE type I and II fuel assemblies in the Oyster Creek reactor. These revised curves are to present the results of detailed heater calculations following a postulated LOCA at exposures greater than 15,000 HND/T.

By letter dated October 31, 1973, you requested similar calculations and curves defining limiting conditions for the EXXON type III-E fuel in the Oyster Creek reactor. These calculations were to be done under specified conditions. Further, a sensitivity analysis was requested in support of our September 7, 1973, Request for Change to the Oyster Creek Technical Specifications.

Attachment I presents the revised limiting curves for Types I, II, and III-E fuel. The limiting curve for Type III fuel is also shown for completeness. These curves were generated using the conditions specified in your two letters.

Attachment II presents the results of a parametric study performed to measure the sensitivity of the peak clad temperature to changes in the spray heat transfer coefficients at the time of passive rod quenching and to changes in quenching time. In short, this study shows that under the worst case assumption, reduction of the applicable spray heat transfer coefficients to a value of zero at the time of passive rod wetting, the calculated peak clad temperature is increased by only 6°F.

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Mr. Donald J. Skovholt
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In view of the power derate effect at Oyster Creek as a result of the August 24, 1973 AEC order to change the Oyster Creek Technical Specifications, it is requested that a timely review be performed and approval be granted in this matter.

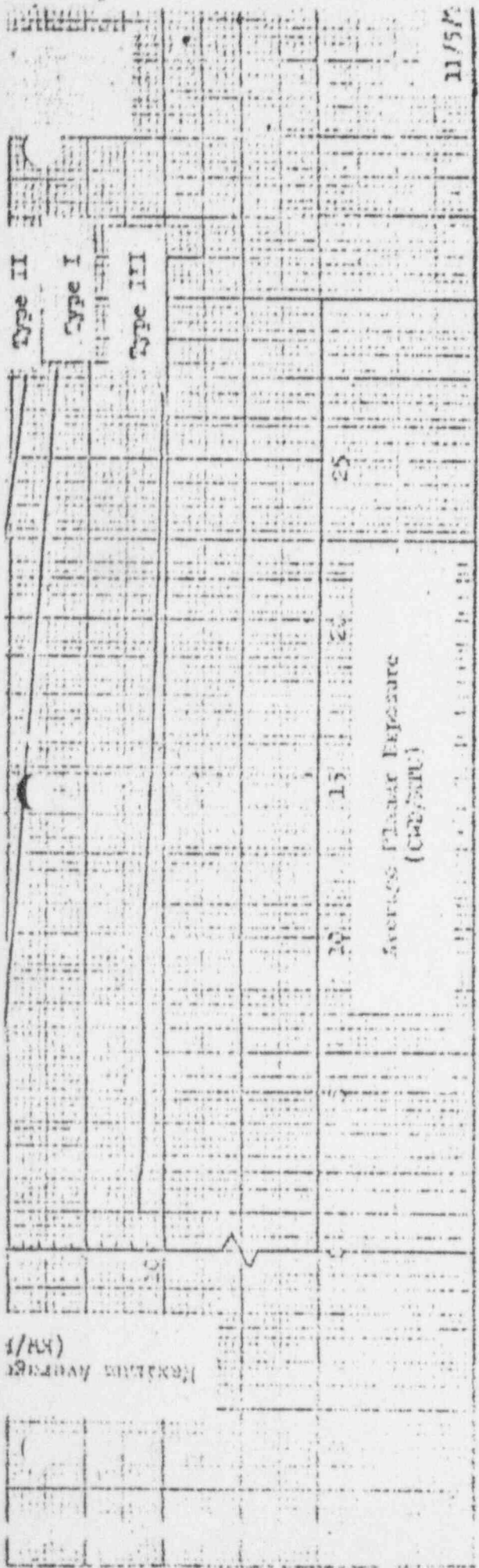
Very truly yours,



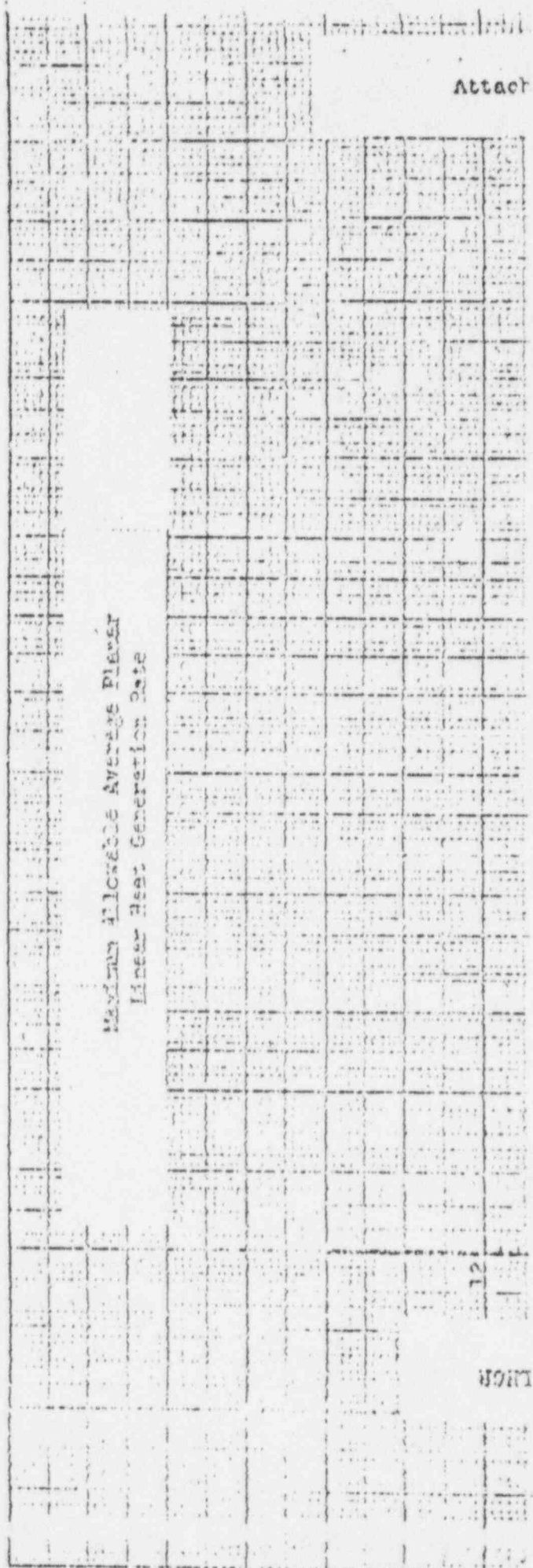
Ivan R. Finrock, Jr.
Vice President

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Attachments



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Attach

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TABLE 1

SPRAY COEFFICIENT ANALYSIS

HEAT FLUX = 10.91 kw/ft.

INPUT (sec)	h_{eff}^*	BOR Wet		PEAK CLAD TEMP		Temp (°F)	h_{eff}^*
		Time (sec)	Time (sec)	Time (sec)	Rod No**		
0	--	--	960	204		2198	100%
6	50%	36 - 00	36	150	9	2173	100%
0	50%	50 - 00	50	150	9	2170	100%
5	50%	75 - 00	75	150	9	2166	100%
00	50%	100 - 00	100	150	9	2165	100%
25	50%	125 - 00	125	150	9	2166	100%
50	50%	150 - 00	150	150	14	2171	100%
75	50%	175 - 00	175	175	15	2189	100%
00	50%	200 - 00	200	200	15	2200	100%
25	50%	225 - 00	225	204	15	2198	100%
50	50%	250 - 00	250	204	15	2193	100%
75	50%	375 - 00	375	204	15	2193	100%
00	50%	500 - 00	500	204	15	2198	100%
00	0%	200 - 00	200	200	15	2204	100%

active spray coefficient in Btu/hr-ft²-°F:

- h_{eff} : Group 3 = 1.5 Group 4 = 1.75
- h_{eff} : Group 2 = 0.75 Group 4 = 0.875
- h_{eff} : Group 1 = 0.0 Group 4 = 0.0

Figure 1. Bare rod submerging system.

ATTACHMENT II

Requested Parametric Study - Exxon Type III-E Fuel

Parametric studies were performed to illustrate the sensitivity of the peak clad temperature to the assumed inert spacer capture rod wetting time and to assumed variations in the spray heat transfer coefficients occurring at that time. The assumed spacer capture rod wetting time was varied from the time of rated spray to the previously calculated conservative Yamamoto quench time. For each case the spray coefficients for rod groups 3 and 4 were halved at the assumed spacer capture rod wetting time. The results of these calculations are given in Table 1. In addition, as a further measure of the sensitivity of PCT to the assumed spray heat transfer coefficients, the spray heat transfer coefficients for rod groups 3 and 4 were assumed to drop to zero concurrently with an assumed spacer capture rod wetting time of 200 seconds. The results of this assumption is shown on the last line of Table 1. As the analysis indicates, the peak clad temperature is relatively insensitive to the time of assumed spacer capture rod wetting, even when it is accompanied by very conservative assumed changes in the spray heat transfer coefficients.

