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

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(203) 665-5000

November 19, 1985

Docket No. 50-423
B11884

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, Response to Safety Evaluation Report (SER) Confirmatory Item 58, dated July 12, 1985.

(2) J. F. Opeka letter to B. J. Youngblood, Millstone Nuclear Power Station, Unit No. 3, Additional Information Concerning Response to SER Confirmatory Item 58, dated October 21, 1985.

Gentlemen:

Millstone Nuclear Power Station, Unit No. 3
Revised Response to SER Confirmatory
Item 58

In Reference (1), Northeast Nuclear Energy Company (NNECO) submitted a response to SER Confirmatory Item 58 concerning the emergency diesel generator fuel oil storage and transfer system (SER Section 9.5.4.2). In Reference (2), as requested by the Staff, NNECO provided justification as to when operation of a spent fuel pool cooling pump and reactor plant component cooling water pump must be initiated following a loss of power with design bases accident conditions. In a telephone conversation on November 12, 1985, the Staff requested that we evaluate the elapsed time required before 140°F, instead of 200°F, is reached in the spent fuel pool for the diesel generator load shedding scenario. Attachment 1 provides NNECO's revised responses to the Staff's concern. Figure 8.3-1 (sheets 5 and 6), the emergency diesel generator load - shedding table, is provided as it will appear in Amendment 18 to the FSAR.

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We trust this information will fully resolve the Staff's concern. If there are any additional questions, please contact our licensing representative directly.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY
et., al.

BY NORTHEAST NUCLEAR ENERGY COMPANY
Their Agent

J. F. Opeka
Senior Vice President

By: C. F. Sears
Vice President

cc: Ms. E. L. Doolittle, NRC Project Manager
Mr. Robert J. Giardina, NRC Power Systems Branch
Mr. Jerry N. Wilson, NRC Auxiliary Systems Branch

STATE OF CONNECTICUT)
) ss. Berlin
COUNTY OF HARTFORD)

Then personally appeared before me C. F. Sears, who being duly sworn, did state that he is Vice President of Northeast Nuclear Energy Company, an Applicant herein, that he is authorized to execute and file the foregoing information in the name and on behalf of the Applicants herein and that the statements contained in said information are true and correct to the best of his knowledge and belief.

Notary Public
My Commission Expires March 31, 1989

ATTACHMENT I

Revised Responses
To
SER Confirmatory Item 58

SER Confirmatory Item 58 - Emergency Diesel Engine Fuel Oil Storage and Transfer System

In SER Section 9.5.4.2, the Staff requested further information regarding the emergency diesel generator load-shedding/fuel capacity analysis. The purpose of this analysis is to demonstrate that, with a reduction of loads, the emergency diesel generators will have the capability to be operated continuously for a minimum period of 5-1/2 days with margin that allows approximately 6 days.

Revised Response

The emergency diesel generator load-shedding/fuel capacity analysis indicates that 8 hours into the worst case fuel consumption accident, which is a DBA coincident with a LOP, the loads may be reduced to approximately 60% of rated capacity on Train A and to approximately 35% on Train B. The load on Train A remains constant where the load on Train B would increase to approximately 60% at 4 hours. As requested by the Staff, please find attached the Emergency Diesel Generator Load-Shedding Tables which provide a listing of the loads to be shed or placed onto the bus and at what point in the transient this is to be accomplished.

Revised Response:

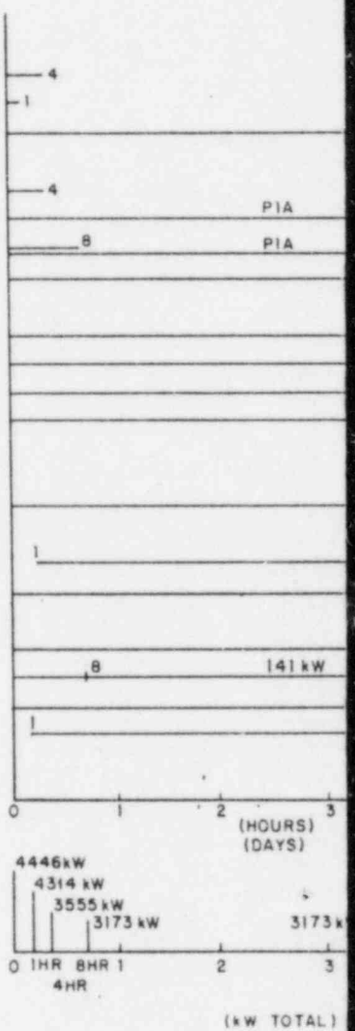
In a recent discussion, the Staff requested clarification of NNECO's October 21, 1985 submittal regarding the emergency diesel generator load-shedding/fuel capacity analysis. Specifically, justification was requested as to when operation of a spent fuel pool cooling pump and reactor plant component cooling water pump must be initiated following a loss of power with DBA conditions. The Staff requested that we evaluate the elapsed time required before 140°F, instead of 200°F, is reached in the spent fuel pool for the diesel generator load shedding scenario.

For the diesel generator load shedding scenario, an elapsed time of approximately 5¼ hours is required before 140°F is reached. This is based on the same fuel loading configuration in the spent fuel pool as described in FSAR Section 9.1.3.3, but assumes 25 days following reactor shutdown. The 25 day criteria is a conservative time for return to power following a shutdown for refueling. With the fuel pool loading configuration as discussed, the heat load is 1.48×10^7 BTU/hr. The initial pool temperature, under these conditions and assuming a maximum CCP temperature, would be 118.9°F. The rate of temperature rise in the fuel pool, following a loss of cooling, would be 3.95°F/hr. At this rate, the fuel pool temperature would reach 140°F after 5.34 hrs. Once 140°F has been reached a reactor plant component cooling water and spent fuel pool cooling pump will be started. As can be seen in revised Table 8.3-1 (Sheets 5 and 6), the spent fuel pool cooling pump and the reactor plant component cooling water pump could be reinitiated at a conservative delay of 4 hours and would have a negligible effect on the ability to meet a diesel generator fuel oil supply for a minimum period of 5 - ½ days.

DIESEL RATING CONTINUOUS, 4986 kW, 2000 HR., 5335 kW;
160 HR., 5486 kW, 30 MIN., 5988 kW.

LOSS OF POWER WITH DB
TRAIN A

		NAME PLATE	kW
CONTROL BUILDING WATER CHILLER	3HVK*CHL1A	370 HP	0
QUENCH SPRAY PUMP	3QSS*P3A	500 HP	305
RESIDUAL HEAT REMOVAL PUMP	3RHS*P1A	450 HP	380
SAFETY INJECTION PUMP	3SIH*P1A	450 HP	346
REACTOR PLANT COMPONENT COOLING WATER PUMP	3CCP*P1A	800 HP	0
STEAM GENERATOR AUXILIARY FEEDWATER PUMP	3FWA*P1A	600 HP	454
SERVICE WATER PUMP	3SWP*P1A/C	600 HP	456 EA
CONTAINMENT RECIRCULATION PUMP	3RSS*P1A/C	500 HP	367 EA
CVCS CHARGING PUMP	3CHS*P3A/C	600 HP	527
MOTOR CONTROL CENTER	3EHS*MCC1A1		79
MOTOR CONTROL CENTER	3EHS*MCC1A2		198
MOTOR CONTROL CENTER	3EHS*MCC1A4		81
MOTOR CONTROL CENTER	3EHS*MCC1A5		28
CONTAINMENT RECIRCULATION FAN	3HVU-FN1A	250 HP	0
MOTOR CONTROL CENTER	3EHS-MCC1A3		237
PRESSURIZER HEATER B/U GROUP A	3RCS*HI1A	346 kW	0
FUEL BUILDING FILTER (3EHS*HCC1A2)	3HVR*FLT-2A		150
AUXILIARY BUILDING AIR FILTER UNIT	3HVR*FLT-1A	2X90 kW	180
FUEL POOL COOLING PUMP	3SFC*P1A	150 HP	0
MOTOR CONTROL CENTER	3EHS*MCC3A1		223
MOTOR CONTROL CENTER	3EHS*MCC3A2		156
AUXILIARY BUILDING EXHAUST FAN	3HVR*FN6A	75 HP	62
FUEL BUILDING EXHAUST FAN	3HVR*FN10A1&2	2X75 HP	98
CONTROL ROD DRIVE MECHANISM COOLING FAN	3HVU-FN2A	200 HP	0
CONTROL BUILDING AIR CONDITIONING FAN	3HVC*ACU2A	75 HP	0



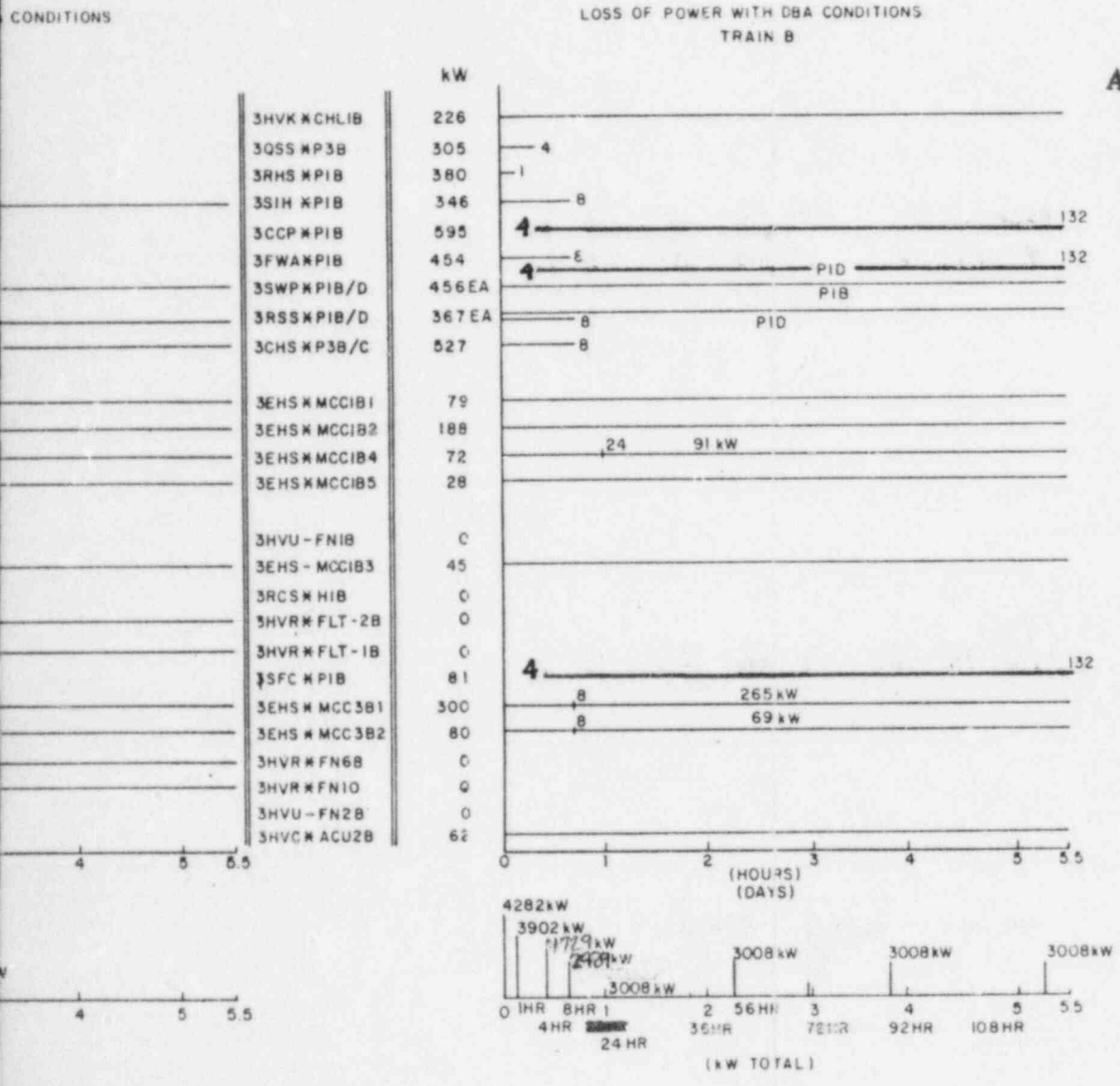
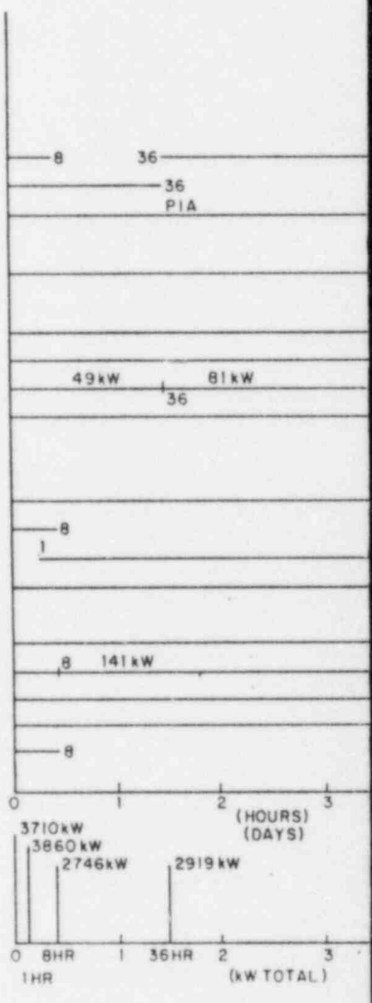


TABLE 8.3-1 (5 OF 6)
EMERGENCY GENERATOR LOADING:
EMERGENCY LOAD SHEDDING

DIESEL RATING: CONTINUOUS, 4986 kW; 2000 HR., 5335 kW;
160 HR., 5486 kW; 30 MIN., 5988 kW

LOSS OF POWER ONL
TRAIN A

		NAME PLATE	kW
CONTROL BUILDING WATER CHILLER	3HVK*CHL1A	370 HP	0
QUENCH SPRAY PUMP	3QSS*P3A	500 HP	0
RESIDUAL HEAT REMOVAL PUMP	3RHS*P1A	450 HP	0
SAFETY INJECTION PUMP	3SIH*P1A	450 HP	0
REACTOR PLANT COMPONENT COOLING WATER PUMP	3CCP*P1A	800 HP	595
STEAM GENERATOR AUXILIARY FEEDWATER PUMP	3FWA*P1A	600 HP	454
SERVICE WATER PUMP	3SWP*P1A/C	600 HP	456
CONTAINMENT RECIRCULATION PUMP	3RSS*P1A/C	500 HP	0
CVCS CHARGING PUMP	3CHS*P3A/C	600 HP	391
MOTOR CONTROL CENTER	3EHS*MCC1A1		79
MOTOR CONTROL CENTER	3EHS*MCC1A2		198
MOTOR CONTROL CENTER	3EHS*MCC1A4		81
MOTOR CONTROL CENTER	3EHS*MCC1A5		28
CONTAINMENT RECIRCULATION FAN	3HVU-FN1A	250 HP	0
MOTOR CONTROL CENTER	3EHS-MCC1A3		237
PRESSURIZER HEATER B/U GROUP A	3RCS*H1A	346 kW	346
FUEL BUILDING FILTER ASSEMBLY	3HVR*FLT-2A	3X50 kW	150
AUXILIARY BUILDING AIR FILTER UNIT	3HVR*FLT-1A	2X90 kW	180
FUEL POOL COOLING PUMP	3SFC*P1A	150 HP	0
MOTOR CONTROL CENTER	3EHS*MCC3A1		223
MOTOR CONTROL CENTER	3EHS*MCC3A2		156
AUXILIARY BUILDING EXHAUST FAN	3HVR*FN6A	75 HP	62
FUEL BUILDING EXHAUST FAN	3HVR*FN10A1&2	2X75 HP	98
CONTROL ROD DRIVE MECHANISM COOLING FAN	3HVU-FN2A	200 HP	158
CONTROL BUILDING AIR CONDITIONING UNIT	3HVC*ACU2A	75 HP	0



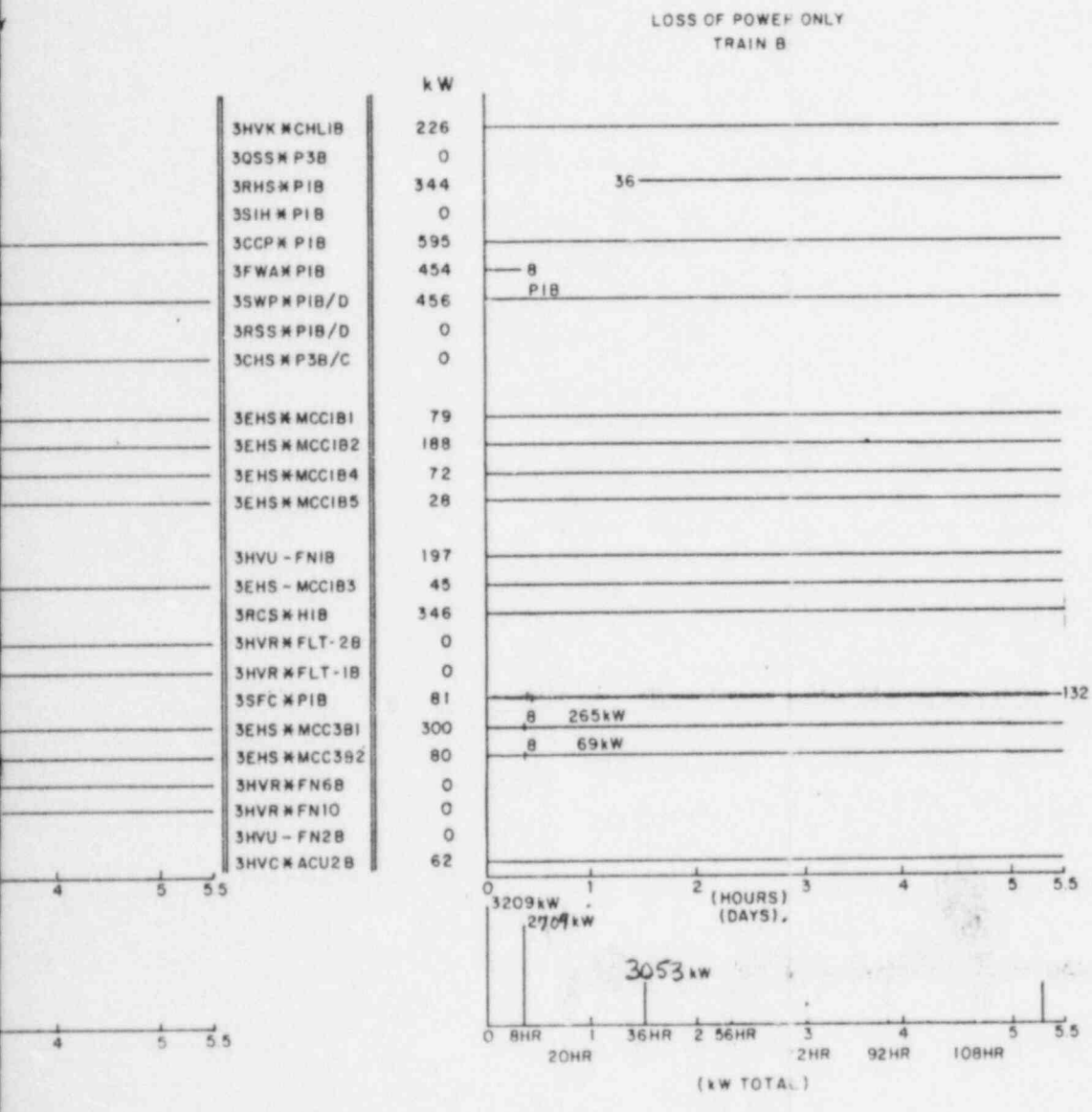


TABLE 8.3-1 (6 OF 6)
EMERGENCY GENERATOR LOADING:
EMERGENCY LOAD SHEDDING