New Hampshire
Yankee

Ted C. Feigenbaum
President and
Chief Executive Officer

NYN- 92054

April 24, 1992

United States Nuclear Regulatory Commission
Washington, D.C. 20555

Attention: Document Control Desk

References: (a) Facility Operating License No. NFF-86, Docket No. 50-443

(b) Teleconference between J. M. Peschel, NHY, and G. E. Edison and J. C. Linville, USNRC, on April 17, 1992, "Compliance with Technical Specification 3/4.8.1, A.C. Sources"

Subject: Confirmation of NHY Commitments Regarding Emergency Diesel Generator Testing

Gentlemen:

New Hampshire Yankee (NHY) has determined that the testing program for the Seabrook Station Emergency Diesel Generators (EDG) does not fully meet the intent of Regulatory Position C.2.a.(5) of Regulatory Guide 1.108, "Periodic Testing of Diesel Generator Units Used as Onsite Electrical Power Systems at Nuclear Power Plants." NHY has also determined that all of the requirements of the existing Technical Specification 3/4.8.1, "A.C. Sources" have been satisfactorily completed and the EDGs are fully operable with no concerns related to safety or to the capability of the EDGs to perform their design functions if required to do so.

With regard to the intent of Regulatory Guide 1.108, NHY has not performed a Loss-of-Offsite-Power (LOP) Test in conjunction with a Safety Injection (SI) Test [TS 4.8.1.1.2f.6)b)] while the EDGs were in a standby condition. NHY utilizes a keep warm system for the EDG jacket coolant and lube oil in the standby condition. NHY has performed the LOP/SI Test after completion of the 24-hour run test [TS 4.8.1.1.2f.7)]. This testing was performed in this sequence based on the guidance provided in Technical Specification 4.8.1.1.2f.7) that states "[w]ithin 5 minutes after completing this 24-hour test, perform Specification 4.8.1.1.2f.6)b)." NHY believes that this test sequence meets all of the Technical Specification Surveillance Requirements in addition to minimizing mechanical stress and wear on the EDGs.

NHY has reviewed the current EDG testing program and has determined that the attributes that would have been tested during a standby LOP/SI Test have been verified through other testing conducted in accordance with the Technical Specifications. The EDGs are tested every 18 months during shutdown, to ensure that they will start under various conditions including a LOP [TS 4.8.1.1.2f.4)b)], SI [TS 4.8.1.1.2f.5)], and an LOP/SI [TS 4.8.1.1.2f.6)]. In addition to these three tests, Technical Specification 4.8.1.1.2a.5) requires a monthly test where the EDGs are started from "ambient" conditions and are fully loaded within 10 minutes. This delayed loading is to minimize mechanical stress and wear. This

specification also requires that every 184 days the EDGs are started, without the benefit of the normal pre-lube operation, and are fully loaded within two minutes. This rapid loading demonstrates the capability of the diesel to accept loads similar to those that would be sequenced on the busses during the initial 120 seconds in an accident scenario.

During all of these tests the critical EDG parameters are monitored and verified to be within acceptable values. These parameters include the ability to start and come up to speed, required frequency (60 ±1.2 Hz), required voltage (4160 ±420 Volts) and to maintain the steady state values during the duration of the particular runs. Since the diesels are tested from the "ambient" condition and again from the "hot" or normal operating temperature condition, the total realm of potential conditions has been tested.

The results from these tests indicate that there are no significant differences between the testing of the EDGs with an LOP and LOP/SI condition. Enclosure 1 compares the load changes expected during the LOP and LOP/SI tests as derived from UFSAR, Tables 8.3-1 and 8.3-2. It should be noted that with the exception of the first two steps in the sequencing, that the kW loads expected from the LOP are either equal to or greater than those expected from the LOP/SI. Enclosure 2 provides a comparison of the maximum load swings for each sequencing step for the LOP and LOP/SI tests that were conducted during refueling outage number 1 in the Fall of 1991.

New Hampshire Yankee has determined that the EDGs are operable based upon the testing that has been performed and based on the fact that every element of the Technical Specifications, as written and read literally, has been performed. NHY also believes that no additional safety benefit will be realized by performing an additional LOP/SI "ambient" test of the EDGs since the plant would be required to be in a cold shutdown condition to perform such a test. Such action would put the plant though an unnecessary cycle. NHY believes that the equivalent testing performed to date and the analysis of the existing test data demonstrates the EDGs are fully operable and that the EDGs will perform their required design functions if they should be called upon to do so.

In order to ensure that the intent of Regulatory Guide 1.108 is fully met in future testing, NHY, as discussed in an April 17, 1992 teleconference [Reference (b)], will perform a test of the EDGs with an LOP/SI start from the standby condition prior to ascending to MODE 4, the next time the plant enters MODE 5. In addition, NHY will promptly propose a clarification to the existing Seabrook Station Technical Specification. NHY will provide the clarification by supplementing License Amendment Request 91-10 previously transmitted to the NRC in NHY Letter NYN-92032, dated March 20, 1992.

Should you have any questions regarding this matter please contact Mr. Terry L. Harpster, Director of Licensing Services, at (603) 474-9521, extension 2765.

Very truly yours,

Ted C. Feigenbaum

Enclosures

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ENCLOSURE 1 TO NYN-92054

KW LOAD CHANGES PER FSAR TABLES 8.3-1 & 8.3-2

	TRAIN A		TRAIN B	
TIME	LOP	LOP & SI	LOP	LOP & SI
12 Sec	1583	1627	1081	1125
17 Sec	240	638	200	598
22 Sec	295	295	295	295
27 Sec	220	0*	220	0*
32 Sec	649	649	649	649
37 Sec	0	0	0	0
42 Sec	0	0	606	606
47 Sec	107	0	107	0
52 Sec	620	620	620	620
62 Sec	317	317	308	308
72 Sec	275	275	0	0
120 Sec	754	708	462	416

* Containment spray pump load of 412 KW not included since it does not sequence on during SI test.

PE0457

ENCLOSURE 2 TO NYN-92054

TEST EX1804.001 - COMPLETED 10/04/91

DIESEL A							
		EVENT 4 AMBIENT ENGINE LOP			EVENT 5 HOT ENGINE LOP SI		
TIME	STEP	KW CHANGE (PEAK)	VOLT DROP	FREQ DROP (HZ)	KW CHANGE (PEAK)	VOLT DROP	FREQ DROP (HZ)
12 sec.	0	1960	3760 *	N/A	1960	3770 *	N/A
17 sec.	1	700	90	.1	2030 (1)	280	.2
22 sec.	2	490	120	.1	490	140	.1
27 sec.	3	945 (2)	130	.2	0	0	0
32 sec.	4	1400	250	.2	1400	260	.3
37 sec.	5	0	0	0	0	0	0
42 sec.	6	0	0	0	0	0	0
47 sec.	7	420 (3)	60	.1	0	0	0
52 sec.	8	1225	210	.1	1260	240	.4
62 sec.	9	0	0	0	0	0	0
72 sec.	10	0	0	0	0	0	0
120 sec.	11	1120	100	.1	1050	100	.2

(1) Safety injection pump start.
(2) Containment structure cooling fan start.
(3) Containment structure cooling fan start.
* Voltage at breaker closure.

TEST EX1804.015 - COMPLETED 10/02/91

DIESEL B							
		EVENT 4 AMBIENT ENGINE LOP			EVENT 5 HOT ENGINE LOP SI		
TIME	STEP	KW CHANGE (PEAK)	VOLT DROP	FREQ DROP (HZ)	KW CHANGE (PEAK)	VOLT DROP	FREQ DROP (HZ)
12 sec.	0	2100	3840 *	N/A	1890	3840 *	N/A
17 sec.	1	630	100	.2	1890 (1)	280	.2
22 sec.	2	350	120	.1	490	160	0
27 sec.	3	840 (2)	140	.2	0	0	0
32 sec.	4	1120	300	.2	1260	260	.2
37 sec.	5	0	0	0	0	0	0
42 sec.	6	1960	320	.4	1820	320	.2
47 sec.	7	350 (3)	80	.1	0	0	0
52 sec.	8	1190	280	.2	1190	240	.2
62 sec.	9	0	0	0	0	0	0
72 sec.	10	0	0	0	0	0	0
120 sec.	11	630	60	.1	630	80	.05

(1) Safety injection pump start.
(2) Containment structure cooling fan start.
(3) Containment structure cooling fan start.
* Voltage at breaker closure.