



CONNECTICUT YANKEE ATOMIC POWER COMPANY

HADDAM NECK PLANT

RR#1 • BOX 127E • EAST HAMPTON, CT 06424-9341

October 15, 1990  
Re: Technical Specification 6.9.1d  
Docket No. 50-213

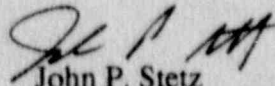
U. S. Nuclear Regulatory Commission  
Document Control Desk  
Washington, D. C. 20555

Dear Sir:

In accordance with reporting requirements of Technical Specification 6.9.1d, the Connecticut Yankee Haddam Neck Plant Monthly Operating Report 90-09, covering operations for the period September 1, 1990 to September 30, 1990 is hereby forwarded.

Attached is the revised NRC Operating Status Report for August 1990.

Very truly yours,

  
John P. Stetz  
Station Director

JPS/va

- cc: (1) Regional Administrator, Region 1  
U. S. Nuclear Regulatory Commission  
475 Allendale Road  
King of Prussia, PA 19406
- (2) John T. Shedlosky  
Sr. Resident Inspector  
Connecticut Yankee

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Connecticut Yankee Atomic Power Company

Haddam Neck Plant

Haddam, Connecticut

Monthly Operating Report No. 90-09

For The Month of

September 1990

## Plant Operations Summary - September 1990

The following is a summary of Plant Operations for September 1990.

On September 1, 1990 at 00:00 hours, the plant was in Mode 1 at 30% power for Chemistry hold. At 07:02 hours, power ascension resumed. By 22:55 hours, the plant was at 80% power and conducting flux mapping.

On September 3, 1990 at 04:57 hours, the plant was manually tripped due to a low suction pressure on the Main Feed Pumps. At 18:10 hours, a primary plant startup was commenced. By 19:11 hours, the plant was in Mode 2, Startup.

On September 8, 1990 at 22:55 hours, the plant was phased to the grid. Power was held at 9% because of a Chemistry hold.

On September 9, 1990 at 04:29 hours, a load increase was commenced. By 06:35 hours, the plant was at 30% power on another Chemistry hold. At 22:43 hours, a load increase was commenced.

On September 10, 1990 at 04:05 hours, the plant was at 80% and conducting flux mapping. At 12:30 hours, the plant reduced load due to Pressurizer level channels 1 and 2 being declared inoperable. By 14:36 hours, the load decrease was stopped at 70% power because the Pressurizer level channels had been declared operable. At 14:59 hours, a load increase was commenced. By 16:37 hours, the plant was at 80% power conducting flux mapping.

On September 14, 1990 at 00:24, the plant commenced increasing load. At 02:03 hours, the load increase was halted at 83% power due to condensate pump motor current oscillations. At 19:36 hours, a load increase was commenced. At 22:00 hours, the plant was at 90% and holding for completion of steam line break instrument calibration. By 23:02 hours, a load increase was resumed. At 23:30 hours, the plant was at 92% and power was reduced due to low discharge pressure on the "1B" condensate pump. Plant load was then stabilized at 88% power.

On September 15, 1990 at 12:30 hours, the plant commenced a load increase. At 12:50 hours, the load was stabilized at 89% power.

On September 16, 1990 at 23:03 hours, plant load was reduced due to current oscillations on the condensate pumps. Load was stabilized at 87 % power.

On September 19, 1990 at 13:10 hours, a load increase was commenced. By 14:00 hours, the plant was at 92% power and began a load reduction to 88% power due to condensate pump oscillations.

On September 20, 1990 at 00:01 hours, the plant commenced a load reduction to troubleshoot and repair the condensate pumps. At 06:28 hours, the load was at 50% power. At 07:15 hours, the Reactor was manually tripped due to low feed pump suction caused by the isolation of the "1B" condensate pump. The plant was returned to Mode 3, (Hot Standby).

On September 21, 1990 at 14:40 hours, the plant entered Mode 4 (Hot Shutdown) to permit working on pressurizer level instrumentation.

On September 24, 1990 at 11:40 hours, a plant heatup was commenced. By 12:26 hours, the plant was in Mode 3 (Hot Standby.)

On September 25, 1990 at 03:31 hours, the plant reached Mode 2 (Startup).

On September 26, 1990 at 03:22 hours, the plant was phased to the grid and in Mode 1, (Power Operation) at 5%. At 13:28 hours, a load increase was commenced. By 19:45 hours, the plant was at 30% power and holding for Chemistry. At 21:33 hours, a load increase was commenced.

On September 27, 1990 at 20:12 hours, the plant reached at 100% power.

The plant continued to operate at 100% power for the remainder of the month.

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-213

Conn. Yankee  
UNIT Haddam Neck

DATE 9/90

COMPLETED BY K. C. Emmons

TELEPHONE (203) 267-3654

MONTH: SEPTEMBER

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	232	17	497
2	431	18	501
3	74	19	499
4	0	20	106
5	0	21	0
6	0	22	0
7	0	23	0
8	96	24	0
9	409	25	0
10	432	26	56
11	435	27	504
12	438	28	574
13	468	29	571
14	495	30	568
15	498	31	na
16			

INSTRUCTIONS

On this format, list the average daily unit power level in MWe-Net for each day in the reporting month. Complete the nearest whole megawatt.

MAINTENANCE 9/90

SYSTEM OR COMPONENT	MALFUNCTION		EFFECT ON SAFE OPERATION	CORRECTIVE ACTION TAKEN TO PREVENT REPETITION	SPECIAL PRECAUTIONS TAKEN TO PROVIDE FOR REACTOR SAFETY DURING REPAIR
	CAUSE	RESULT			
Feedwater Regulating Valve	Stem Plug Failure	Loss of Feedwater Control	Caused Shutdown	All valve stem/plug assemblies in stock were inspected and x-rayed for defects. Stem/plug assemblies were welded in addition to being pinned.	Plant Shutdown
T-2-1B Aux. Feed Pump Turbine	Water in Bearing Oil	Found before failure	none	Replaced bearing and oil,	None

SYSTEM OR COMPONENT	MALFUNCTION		EFFECT ON SAFE OPERATION	CORRECTIVE ACTION TAKEN TO PREVENT REPETITION	SPECIAL PRECAUTIONS TAKEN TO PROVIDE FOR REACTOR SAFETY DURING REPAIR
	CAUSE	RESULT			
There were no reportable items for I&C for the month of September 1990	I&C	9/90			

CONNECTICUT YANKEE  
 REACTOR COOLANT DATA  
 MONTH: SEPTEMBER 1990

REACTOR COOLANT ANALYSIS	MINIMUM	AVERAGE	MAXIMUM
PH @ 25 DEGREES C	: 5.95E+00	: 6.18E+00	: 6.36E+00
CONDUCTIVITY (UMHOS/CM)	: 1.33E+01	: 1.75E+01	: 2.19E+01
CHLORIDES (PPM)	: <5.00E-02	: <5.00E-02	: <5.00E-02
DISSOLVED OXYGEN (PPB)	: <5.00E+00	: <5.00E+00	: <5.00E+00
BORON (PPM)	: 1.03E+03	: 1.30E+03	: 1.59E+03
LITHIUM (PPM)	: 1.27E+00	: 1.71E+00	: 2.09E+00
TOTAL GAMMA ACT. (UC/ML)	: 2.75E-02	: 3.69E-01	: 8.82E-01
IODINE-131 ACT. (UC/ML)	: 5.10E-05	: 4.60E-03	: 2.82E-02
I-131/I-133 RATIO	: 0.00E-01	: 8.30E+00	: 8.93E+01
CRUD (MG/LITER)	: <1.00E-02	: 1.04E-01	: 1.60E+00
TRITIUM (UC/ML)	: 4.08E-02	: 2.91E-01	: 5.16E-01
HYDROGEN (CC/KG)	: 2.45E+01	: 2.90E+01	: 3.60E+01

AERATED LIQUID WASTE PROCESSED(GALLONS): 1.25E+05  
 WASTE LIQUID PROCESSED THROUGH BORON RECOVERY(GALLONS): 4.20E+04  
 AVERAGE PRIMARY LEAK RATE(GALLONS PER MINUTE): 5.10E-01  
 PRIMARY TO SECONDARY LEAK RATE(GALLONS PER MINUTE): 1.01E-02

NRC OPERATING STATUS REPORT

Haddam Neck

1. Docket: 50-213
2. Reporting Period: 09/90      Outage + On-line Hours: 278.1 + 441.9 = 720.0
3. Utility Contact: J. Stanford (203) 267-3635
4. Licensed Thermal Power (Mwt): 1825
5. Nameplate Rating (Gross MWe):  $667 \times 0.9 = 600.3$
6. Design Electrical Rating (Net MWe): 582
7. Maximum Dependable Capacity (Gross MWe): 591.8
8. Maximum Dependable Capacity (Net MWe): 565
9. If changes occur above since last report, reasons are: NONE
10. Power level to which restricted, if any (Net MWe): N/A
11. Reasons for restriction, if any: N/A

	MONTH	YEAR-TO-DATE	CUMULATIVE
12. Report period hours:	720.0	6,551.0	199,415.0
13. Hours reactor critical:	589.5	1,055.5	159,304.7
14. Reactor reserve shutdown hours:	0.0	0.0	1,285.0
15. Hours generator on-line:	441.9	836.2	152,923.9
16. Unit reserve shutdown hours:	0.0	0.0	398.0
17. Gross thermal energy generated (MWh):	631,715.0	711,527.0	263,578,845.0 *
18. Gross electrical energy generated (MWeH):	201,159.0	212,258.0	86,305,304.0 *
19. Net electrical energy generated (MWeH):	185,327.2	166,803.8	81,989,783.8 *
20. Unit service factor:	61.4	12.8	76.7
21. Unit availability factor:	61.4	12.8	76.9
22. Unit capacity factor using MDC net:	45.6	4.5	74.8
23. Unit capacity factor using DER net:	44.2	4.4	70.7
24. Unit forced outage rate:	38.6	25.0	5.7
25. Forced outage hours:	278.1	279.4	9,255.0

26. Shutdowns scheduled over next 6 months (type,date, duration): NONE

27. If currently shutdown, estimated startup date: N/A

\* Cumulative values from the first criticality (07/24/67). (The remaining cumulative values are from the first date of commercial operation, 01/01/68).



**UNIT SHUTDOWNS AND POWER REDUCTIONS**

**DOCKET NO.** 50-213  
**UNIT NAME** Conn. Yankee  
**DATE** 9/90  
**COMPLETED BY** K. W. Emmons  
**TELEPHONE** 203-267-3654

**REPORT MONTH** SEPTEMBER

No.	Date	Type <sup>1</sup>	Duration (Hours)	Reason <sup>2</sup>	Method of Shutting Down Reactor <sup>3</sup>	LER RPT.	System <sup>4</sup> Code	Component <sup>5</sup> Code	Cause & Corrective Action to Prevent Recurrence
90-03	9/03/90	F	137.97	A	2	90-018	SJ	FCV	#1 Feedwater regulating valve plug separated from stem. Stem-plug assemblies modified with welded joint where plug attached to stem.
90-04	9/20/90	S	0	B	4	n/a	SD	PP	Reduced load to 50% power due to cavitation and low discharge pressure on the 1B condensate pump
90-05	9/20/90	F	140.12	G/A	2	90-020	SD	PP	Premature shutdown of Condensate pump as well as degradation of flexible rubber coupling on condensate pump suction piping. Replaced rubber coupling with stainless steel coupling

<sup>1</sup>  
**F** Forced  
**S** Scheduled

<sup>2</sup>  
**Reason:**  
**A**-Equipment Failure (Explain)      **H**-Other(Explain)  
**B**-Maintenance or Test  
**C**-Refueling  
**D**-Regulatory Restriction  
**E**-Operator Training & License Examination  
**F**-Administrative  
**G**-Operational Error (Explain)

<sup>3</sup>  
**Method:**  
**1**-Manual  
**2**-Manual Scram  
**3**-Automatic Scram  
**4**-Other(Explain)

<sup>4</sup>  
**Exhibit C**-Instructions for Preparation of Data Entry Sheets for Licensee Event Report (LER) File (NUREG-0161)

<sup>5</sup>  
**Exhibit I** Same Source

## Refueling Information Request

1. Name of facility

Haddam Neck

2. Scheduled date for next refueling shutdown.

October 5, 1991

3. Scheduled date for restart following refueling.

November 26, 1991

4. (a) Will refueling or resumption of operation thereafter require a technical specification change or other license amendment?

Yes

(b) If answer is yes, what, in general, will these be?

Revise Section 5 of Technical Specifications to allow use of zircaloy clad fuel. Obtain an exemption from 10CFR50 Appendix K Sections I.D.3, I.D.4 and I.D.5.

(c) If answer is no, has the reload fuel design and core configuration been reviewed by your Plant Safety Review Committee to determine whether any unreviewed safety questions are associated with the core reload?

(Ref. 10 CFR section 50.59)

n/a

(d) If no such review has taken place, when is it scheduled?

n/a

5. Scheduled date(s) for submitting proposed licensing action and supporting information.

The exemption request will be submitted to the NRC in October 1990. The request will be submitted in March 1991

6. Important licensing considerations associated with refueling, e.g., new or different fuel design or supplier, unreviewed design or performance analysis methods, significant changes in fuel design, new operating procedures.

Conversion to zircaloy cladding.

7. The number of fuel assemblies (a) in the core and (b) in the spent fuel storage pool.

(a) 157 (b) 709

8. The present licensed spent fuel pool storage capacity and the size of any increase in licensed storage capacity that has been requested or is planned, in number of fuel assemblies.

1168

9. The projected date of the last refueling that can be discharged to the spent fuel pool assuming the present licensed capacity.

1996

## NRC OPERATING STATUS REPORT

Haddam Neck

1. Docket: 50-213
2. Reporting Period: 08/90      Outage + On-line Hours: 349.7 + 394.3 = 744.0
3. Utility Contact: J. Stanford (203) 267-3635
4. Licensed Thermal Power (Mwt): 1825
5. Nameplate Rating (Gross MWe):  $667 \times 0.9 = 600.3$
6. Design Electrical Rating (Net MWe): 582
7. Maximum Dependable Capacity (Gross MWe): 591.8
8. Maximum Dependable Capacity (Net MWe): 565
9. If changes occur above since last report, reasons are: NONE
10. Power level to which restricted, if any (Net MWe): N/A
11. Reasons for restriction, if any: N/A

	MONTH	YEAR-TO-DATE	CUMULATIVE
12. Report period hours:	744.0	5,831.0	198,695.0
13. Hours reactor critical:	466.0	466.0	158,715.2
14. Reactor reserve shutdown hours:	0.0	0.0	1,285.0
15. Hours generator on-line:	394.3	394.3	152,482.0
16. Unit reserve shutdown hours:	0.0	0.0	398.0
17. Gross thermal energy generated (Mwth):	79,812.0	79,812.0	262,947,130.0 *
18. Gross electrical energy generated (MWeH):	11,099.0	11,099.0	86,104,145.0 *
19. Net electrical energy generated (MWeH):	-1,348.3	-18,523.4	81,804,456.6 *
20. Unit service factor:	53.0	6.8	76.7
21. Unit availability factor:	53.0	6.8	76.9
22. Unit capacity factor using MDC net:	0.0	0.0	74.9
23. Unit capacity factor using DER net:	0.0	0.0	70.8
24. Unit forced outage rate:	0.3	0.3	5.6
25. Forced outage hours:	1.3	1.3	8,976.9
26. Shutdowns scheduled over next 6 months (type, date, duration): NONE			
27. If currently shutdown, estimated startup date: N/A			

\* Cumulative values from the first criticality (07/24/67). (The remaining cumulative values are from the first date of commercial operation, 01/01/68).