ENTERGY

Entergy Operations, Inc.
P.O. Box 756
Port Gibson, MS 39150
Tel 601 437 2800

C. R. Hutchinson
Vice President
Operations
Grand Gulf Nuclear Station

February 28, 1994

U.S. Nuclear Regulatory Commission
Mail Station P1-137
Washington, D.C. 20555

Attention: Document Control Desk

SUBJECT: Grand Gulf Nuclear Station
Unit 1
Docket No. 50-416
License No. NPF-29
1993 Annual Operating Report

GNRO-94/00023

Gentlemen:

Entergy Operations, Inc. is transmitting the Grand Gulf Nuclear Station (GGNS) Unit 1 Annual Operating Report for 1993. This repcrt is in accordance with the reporting program described in Regulatory Guide 1.16, Revision 4, Part C.1.b as modified by the NRC letter to GGNS dated May 25, 1987 (MAEC-87/0131).

Provided as attachments are:

1. A narrative summary of operating experience during the year 1993,

2. Main Steam Line Safety Relief Valve challenges,

3. A tabulated annual report of personnel exposure greater than 100 mrem/yr, and

4. A summary of failed fuel indications/inspections.

Yours truly,

C. R. Hutchinson

CRH/TMC
attachments
cc: (See Next Page)

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cc: Mr. R. H. Bernhard (w/a)
Mr. D. C. Hintz (w/a)
Mr. R. B. McGehee (w/a)
Mr. N. S. Reynolds (w/a)
Mr. H. L. Thomas (w/o)

Mr. Stewart D. Ebneter (w/a)
Regional Administrator
U.S. Nuclear Regulatory Commission
Region II
101 Marietta St., N.W., Suite 2900
Atlanta, Georgia 30323

Mr. P. W. O'Connor, Project Manager
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Mail Stop 13H3
Washington, D.C. 20555

SUMMARY OF OPERATING EXPERIENCE 1993

The following is a summary of Grand Gulf Nuclear Station (GGNS) Unit 1 operating experience for the 1993 calendar year. During 1993, the reactor was critical for 7,140.4 hours with the generator on line for 6,846.1 hours.

On 1/14/93, power was reduced to approximately 65% for correction of steam leaks along with a MSR manway cover steam leak.

On 9/13/93, the reactor scrammed due to a high-pressure core spray system (BG) initiation which occurred due to a failed jet pump beam. [LER 93-008] This scrammed ended a Grand Gulf record run of 403 days. Outage duration time was approximately 225.6 hours.

On 9/23/93 during Startup Mode, the reactor was shutdown due to the source of high air in-leakage to main condenser had not been identified. The source was subsequently identified to be MSR "A" Relief Valve N11F034A flange leak. Outage duration time was approximately 84.2 hours.

On 9/28/93, the reactor was shutdown to begin RFO6. This was before the original scheduled date due to the inoperable #10 Jet Pump (AD). [LER 93-009]. RFO6 was extended due to unplanned work items (e.g., replacement of jet pumps) and more repair time for planned items.

On 11/27/93, the reactor was shutdown while critical due to sulfate concentration exceeding EPRI limit. Duration time for this shutdown was 40.4 hours.

On 12/1/93, the reactor was shutdown to fix a condenser air inleakage problem. Duration time was approximately 63.2 hours.

On 12/4/93, the unit was taken off line to perform planned turbine overspeed test. Duration time was approximately 2.3 hours.

RFO6 ended on December 4 at 1105 hours. Outage time was 66 days, 21 hours and 7 minutes.

MAIN STEAM SAFETY RELIEF VALVE CHALLENGES 1993

There were no main steam line safety relief valve challenges occurring in 1993.

GGNS UNIT 1 ANNUAL REPORT

MAN-REM EXPOSURE - 1993

This section contains a tabulation of the number of station, utility and other personnel receiving exposures greater than 100 mrem/year and their associated man-rem exposure according to work and job function. Also included is a tabulation of the number of personnel by exposure range.

ENTERGY OPERATIONS, INC.

SUMMARY OF PERSONNEL MONITORING REPORT
FINAL END OF THE YEAR REPORT FOR 1993

Estimated Whole Body Exposure Range	Number of Individuals in Each Range
No Measurable Exposure	1405
Less than 0.1	963
0.1 to 0.25	388
0.25 to 0.5	269
0.5 to 0.75	122
0.75 to 1.0	40
1.0 to 2.0	23
2.0 to 3.0	2
3.0 to 4.0	0
4.0 to 5.0	0
5.0 to 6.0	0
6.0 to 7.0	0
7.0 to 8.0	0
8.0 to 9.0	0
9.0 to 10.0	0
10.0 to 11.0	0
11.0 to 12.0	0
12.0 and over	0
Total number of personnel monitored	3212
True Total Dose (REM) (1)	302.594
Average REM per person (1)	0.359

Radiation Protection Manager — Date: 2-16-94

Plant Manager — Date: 2-21-94

(1) Excluding 2368 persons with less than 0.1 REM. The Total Dose on site for 1993 is 331.855 REM for all personnel monitored

ENTERGY OPERATIONS, INC.

PERSONNEL AND REM BY WORK AND DUTY FUNCTION FINAL END YEAR REPORT FOR 1993

	NUMBER OF PERSONNEL OVER 100 MREM			TOTAL REM		
	STATION EMPLOYEES	UTILITY EMPLOYEES	CONTRACT WORKERS	STATION EMPLOYEES	UTILITY EMPLOYEES	CONTRACT WORKERS
REACTOR OPS/SURVEILLANCE						
MAINTENANCE	3	0	14	0.033	0.000	0.201
OPERATIONS	63	0	5	21.880	0.000	1.490
HEALTH PHYSICS	29	1	43	6.387	0.005	4.048
SUPERVISORY	12	0	45	0.291	0.000	0.945
ENGINEERING	19	0	4	0.962	0.000	0.115
ROUTINE MAINTENANCE						
MAINTENANCE	128	0	500	51.337	0.000	150.646
OPERATIONS	31	0	4	3.955	0.000	0.315
HEALTH PHYSICS	28	1	44	8.303	0.115	12.015
SUPERVISORY	10	0	38	2.358	0.000	4.533
ENGINEERING	18	0	11	2.309	0.000	1.642
IN-SERVICE INSPECTION						
MAINTENANCE	0	0	47	0.000	0.000	2.559
OPERATIONS	7	0	0	0.443	0.000	0.000
HEALTH PHYSICS	7	0	4	0.029	0.000	0.006
SUPERVISORY	9	0	28	0.419	0.000	6.367
ENGINEERING	1	0	0	0.006	0.000	0.000
SPECIAL MAINTENANCE						
MAINTENANCE	0	0	0	0.000	0.000	0.000
OPERATIONS	0	0	0	0.000	0.000	0.000
HEALTH PHYSICS	0	0	0	0.000	0.000	0.000
SUPERVISORY	0	0	0	0.000	0.000	0.000
ENGINEERING	0	0	0	0.000	0.000	0.000
WASTE PROCESSING						
MAINTENANCE	51	0	22	0.745	0.000	1.009
OPERATIONS	0	0	1	0.000	0.000	1.095
HEALTH PHYSICS	4	0	1	1.151	0.000	0.017
SUPERVISORY	0	0	0	0.000	0.000	0.000
ENGINEERING	0	0	0	0.000	0.000	0.000
REFUELING						
MAINTENANCE	56	0	128	0.763	0.000	21.250
OPERATIONS	7	0	1	0.535	0.000	0.702
HEALTH PHYSICS	14	1	20	1.122	0.002	2.197
SUPERVISORY	7	0	6	0.121	0.000	0.869
ENGINEERING	7	0	1	0.550	0.000	0.057
TOTALS						
MAINTENANCE	238	0	711	52.878	0.000	175.665
OPERATIONS	108	0	11	26.813	0.000	3.602
HEALTH PHYSICS	82	3	112	16.992	0.122	18.283
SUPERVISORY	38	0	117	3.189	0.000	12.714
ENGINEERING	45	0	16	3.827	0.000	1.814
GRAND TOTAL	**511**	**3**	**967**	**103.699**	**0.122**	**212.078**

Approved by: _____ 2-21-94
Plant Manager, Operations — Date

Approved by: _____ 2-16-94
Radiation Protection Manager — Date

SPECIAL MAINTENANCE ACTIVITIES

There were no special maintenance activities in 1993.

FAILED FUEL INDICATIONS/INSPECTIONS - 1993

Failed fuel assessments performed during Cycle 6 including offgas and coolant activity analyses and flux tilting predicted one large failure in either XNC-703 (8x8 due for discharge) or AND-043 (9x9 twice burnt but not due for discharge). AND-043 was consequently discharged early to preclude the need for sipping during the outage. AND-043 was replaced by a bundle previously marked for discharge. A subsequent inspection and identification of the leaking assembly is scheduled for June 1994. Offgas and coolant activity analyses performed since the startup for Cycle 7 indicate that the reactor is operating failure free.