

ATTACHMENT 1

NRC DOCKET 50-321  
OPERATING LICENSE DPR-57  
EDWIN I. HATCH NUCLEAR PLANT UNIT 1  
REQUEST TO CHANGE HYDROGEN AND OXYGEN POST-ACCIDENT  
MONITORING TECHNICAL SPECIFICATIONS

The proposed changes to Technical Specifications (Appendix A to Operating License DPR-57) would be incorporated as follows:

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3.7-33	3.7-33
3.7-39	3.7-39

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TABLE 3.2-11

## INSTRUMENTATION WHICH PROVIDES SURVEILLANCE INFORMATION

Ref. No. (a)	Instrument (b)	Required Operable Instrument Channels	Type and Range	Action	Remarks
1	Reactor Water Level (GE/MAC)	1	Recorder	(c)	(d)
		2	Indicator 0 to 60"	(c)	(d)
2	Shroud Water Level	1	Recorder	(c)	(d)
		1	Indicator +200" to +500"	(c)	(d)
3	Reactor Pressure	1	Recorder	(c)	(d)
		2	Indicator 0 to 1200 psig	(c)	(d)
4	Drywell Pressure	2	Recorder -5 to +80 psig	(c)	(d)
5	Drywell Temperature	2	Recorder 0 to 500°F	(c)	(d)
6	Suppression Chamber Air Temperature	2	Recorder 0 to 500°F	(c)	(d)
7	Suppression Chamber Water Temperature	2	Recorder 0 to 250°F	(c)	(d)
8	Suppression Chamber Water Level	2	Indicator 0 to 300"	(c)	(d)
		2	Recorder 0 to 30"	(c) (e)	(d)
9	Suppression Chamber Pressure	2	Recorder -5 to +80 psig	(c)	(d)
10	Rod Position Information System (RPIS)	1	28 Volt Indicating Lights	(c)	(d)
11	Hydrogen and Oxygen Analyzer	1	Recorder 0 to 5%	(g)	(d)
12	Post LOCA Radiation Monitoring System	1	Recorder	(c)	(d)
			Indicator 1 to 10 <sup>6</sup> R/hr	(c)	(d)
13	Drywell/Suppression Chamber Differential Pressure	2	Recorder -0.5 to + 2.5 psid	(c) (e)	(d)
14	a) Safety/Relief Valve Position Primary Indicator	1	Pressure Switch 4-100 psig	(f)	
	b) Safety/Relief Valve Position Secondary Indicator	1	Temperature element 0-600°F	(f)	

NOTES FOR TABLE 3.2-11

- a. The column entitled "Ref. No." is only for convenience so that a one-to-one relationship can be established between items in Table 3.2-11 and Items in Table 4.2-11.
- b. Limiting Conditions for Operation for the Neutron Monitoring System are listed in Table 3.2-7.
- c. From and after the date that one of these parameters is reduced to one indication, continued operation is permissible during the succeeding thirty days unless such instrumentation is sooner made operable.

Continued operation is permissible for seven days from and after the date that one of these parameters is not indicated in the control room. Surveillance of local panels will be substituted for indication in the control room during the seven days.

- d. Drywell and Suppression Chamber Pressure are each recorded on the same recorders. Each output channel has its own recorder.

Drywell and Suppression Chamber air temperature and suppression chamber water temperature are all recorded on the same recorders. Each output channel has its own recorder. Each recorder takes input from several temperature elements.

Hydrogen and Oxygen are indicated on one recorder. The recorder has two pens, one pen for each parameter.

Each channel of the post LOCA radiation monitoring system includes two detectors; one located in the drywell and the other in the suppression chamber. Each detector feeds a signal to a separate log count rate meter. The meter output goes to a two pen recorder. One high radiation level alarm is provided per channel and annunciation of alarm is provided in the control room.

- e. In the event that all indications of this parameter is disabled and such indication cannot be restored in six (6) hours, an orderly shutdown shall be initiated and the reactor shall be in a Hot Shutdown condition in six (6) hours and a Cold Shutdown condition in the following eighteen (18) hours.
- f. If either the primary or secondary indication is inoperable, the torus temperature will be monitored at least once per shift to observe any unexplained temperature increase which might be indicative of an open SRV. With both the primary and secondary monitoring channels of two or more SRVs inoperable either restore sufficient inoperable channels such that no more than one SRV has both primary and secondary channels inoperable within 7 days or be in at least hot shutdown within the next 12 hours.
- g. Instrumentation shall be operable with continuous sampling capability within 30 minutes of an ECCS actuation during a LOCA. See Section 3.7.A.6.c for the LIMITING CONDITION FOR OPERATION.

Table 4.2-11

Check and Calibration Minimum Frequency for Instrumentation  
Which Provides Surveillance Information

Ref. No. (a)	Instrument	Instrument Check Minimum Frequency (b)	Instrument Calibration Minimum Frequency (c)
1	Reactor Water Level (GE/MAC)	Each shift	Every 6 months
2	Shroud Water Level	Each shift	Every 6 months
3	Reactor Pressure	Each shift	Every 6 months
4	Drywell Pressure	Each shift	Every 6 months
5	Drywell Temperature	Each shift	Every 6 months
6	Suppression Chamber Air Temperature	Each shift	Every 6 months
7	Suppression Chamber Water Temperature	Each shift	Every 6 months
8	Suppression Chamber Water Level	Each shift	Every 6 months
9	Suppression Chamber Pressure	Each shift	Every 6 months
10	Rod Position Information System (RPIS)	Each shift	N/A
11	Hydrogen and Oxygen Analyzer	Monthly	Every 3 months
12	Post LOCA Radiation	Each shift	Every 6 months
13	Drywell/Suppression Chamber Differential Pressure	Each shift	Every 6 months

3.7.A.5 Oxygen Concentration (Continued)

The occurrence of primary system leakage following a major refueling outage or other scheduled shutdown is much more probable than the occurrence of the loss-of-coolant accident upon which the specified oxygen concentration limit is based. Permitting access to the drywell for leak inspections during a startup is judged prudent in terms of the added plant safety offered without significantly reducing the margin of safety. Thus, to preclude the possibility of starting the reactor and operating for extended periods of time with significant leaks in the primary system, leak inspections are scheduled during startup periods, when the primary system is at or near rated operating temperature and pressure. The 24-hour period to provide inerting is judged to be sufficient to perform the leak inspection and establish the required oxygen concentration.

The primary containment is normally slightly pressurized during periods of reactor operation. Nitrogen used for inerting could leak out of the containment but air could not leak in to increase oxygen concentration.

6. Containment Atmosphere Dilution (CAD)

In order to ensure that the containment atmosphere remains inerted, i.e., the oxygen-hydrogen mixture is maintained below the flammable limit, the capability to inject nitrogen into the containment after a LOCA is provided. The post-LOCA Containment Atmosphere Dilution system design basis and description are presented in Section 5.2.4.9 of the FSAR.

By maintaining at least a 7-day supply of nitrogen onsite, there will be sufficient time after the occurrence of a LOCA for obtaining additional nitrogen from local commercial sources.

The H<sub>2</sub> and O<sub>2</sub> analyzer system is a redundant system consisting of two H<sub>2</sub> analyzers and two O<sub>2</sub> analyzers with a sampling system which provides for four sampling points. Two sample lines are connected to the drywell and two are connected to the torus. One H<sub>2</sub> analyzer and one O<sub>2</sub> analyzer sample the drywell while the other H<sub>2</sub> and O<sub>2</sub> analyzers sample the torus. Using a system of automatic valves, the sample lines are switched to provide sampling from different areas of the drywell and the torus. This system provides periodic but continuous post-LOCA sampling alternately from the two drywell sample points and the two torus sample points. The period of sampling from each point is adjustable.

Due to the nitrogen addition, the pressure in the containment after a LOCA will increase with time. Under the worst expected conditions, the containment pressure will reach 30 psig in approximately 20 days. If and when that pressure is reached, venting from the primary containment shall be manually initiated. The venting path will include the standby gas treatment system and the main stack in order to minimize the offsite dose.



4.7.A.6. Containment Atmosphere Dilution (CAD)

As discussed in the Bases for Specification 3.7.A.6, the H<sub>2</sub> O<sub>2</sub> analyzer system is redundant and flexible by design. If either an H<sub>2</sub> or O<sub>2</sub> analyzer fails, the periodic sampling remains unchanged, since the second H<sub>2</sub> and O<sub>2</sub> analyzer is still in service. For normal operation, a monthly calibration check using known samples will be adequate to determine the operability and calibration of each analyzer and to ensure the system's reliability.

- B. Standby Gas Treatment System and
- C. Secondary Containment

Pressure drop across the combined HEPA filters and charcoal adsorbers of less than 6 inches of water at the system design flow rate will indicate that the filters and adsorbers are not clogged by excessive amounts of foreign matter. A test frequency of once per operating cycle established system performance capability.

The frequency of tests and sample analysis are necessary to show that the HEPA filters and charcoal adsorbers can perform as evaluated. Replacement adsorbent should be qualified according to the guidelines of Regulatory Guide 1.52. The charcoal adsorber efficiency test procedures should allow for the removal of one adsorber tray, emptying of one bed from the tray, mixing the adsorbent thoroughly and obtaining at least two samples. Each sample should be at least two inches in diameter and a length equal to the thickness of the bed. If the iodine removal efficiency test results are unacceptable, all adsorbent in the system should be replaced. Any HEPA filters found defective should be replaced with filters qualified pursuant to Regulatory Position C.3.d of Regulatory Guide 1.52.

Operation of the system every month will demonstrate operability of the filters and adsorber system. Operation for 10 hours is used to reduce the moisture build up on the adsorbent.

If painting, fire, or chemical release occurs such that the HEPA filter or charcoal adsorber could become contaminated from the fumes, chemicals or foreign materials, the same tests and sample analysis should be performed as required for operational use.

Demonstration of the automatic initiation capability is necessary to assure system performance capability.

ATTACHMENT 2

NRC DOCKET 50-366

OPERATING LICENSE NPF-5

EDWIN I. HATCH NUCLEAR PLANT UNIT 2

REQUEST TO CHANGE HYDROGEN AND OXYGEN POST-ACCIDENT  
MONITORING TECHNICAL SPECIFICATIONS

The proposed changes to Technical Specifications (Appendix A to Operating License NPF-5) would be incorporated as follows:

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TABLE 3.3.6.4-1

POST-ACCIDENT MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>	<u>MINIMUM CHANNELS OPERABLE</u>
1. Reactor Vessel Pressure (2C32-R605 A, B, C)	2
2. Reactor Vessel Water Level (2B21-R610, 2B21-R615)	2
3. Suppression Chamber Water Level (2T48-R622 A, B)	2
4. Suppression Chamber Water Temperature (2T47-R626, 2T47-R627)	2
5. Suppression Chamber Pressure (2T48-R608, 2T48-R609)	2
6. Drywell Pressure (2T48-R608, 2T48-R609)	2
7. Drywell Temperature (2T47-R626, 2T47-R627)	2
8. Post-LOCA Gamma Radiation (2D11-K622 A, B, C, D)	2
9. Drywell H <sub>2</sub> -O <sub>2</sub> Analyzer (2P33-R601 A, B)	2 **
10. a) Safety/Relief Valve Position Primary Indicator (2B21-N301 A-H and K-M)	*
b) Safety/Relief Valve Position Secondary Indicator (2B21-N004 A-H and K-M)	*

\*If either the primary or secondary indication is inoperable, the torus temperature will be monitored at least once per shift to observe any unexplained temperature increases which might be indicative of an open SRV. With both the primary and secondary monitoring channels of two or more SRVs inoperable either restore sufficient inoperable channels such that no more than one SRV has both primary and secondary channels inoperable within 7 days or be in at least hot shutdown within the next 12 hours.

\*\* The Drywell H<sub>2</sub>/O<sub>2</sub> Analyzers shall be operable with continuous sampling capability within 30 minutes of an ECCS actuation during a LOCA.



ATTACHMENT 3

NRC DOCKETS 50-321, 50-366  
OPERATING LICENSES DPR-57, NPF-5  
EDWIN I. HATCH NUCLEAR PLANT UNITS 1 AND 2  
REQUEST TO CHANGE HYDROGEN AND OXYGEN POST-ACCIDENT  
MONITORING TECHNICAL SPECIFICATIONS

Pursuant to 10 CFR 170.12 (c), Georgia Power Company has evaluated the attached proposed amendment to Operating Licenses DPR-57 and NPF-5 and has determined that:

- a) The proposed amendments do not require the evaluation of a new Safety Analysis Report or rewrite of the facility license;
- b) The proposed amendments do not contain several complex issues, does not involve ACRS review, and does not require an environmental impact statement;
- c) The proposed amendments do not involve a complex issue or more than one environmental or safety issue.
- d) The proposed amendments do involve a single safety issue, namely that the operability and surveillance requirements for the drywell H<sub>2</sub> and O<sub>2</sub> analysers be changed.
- e. The proposed amendments are therefore one Class III amendment and one Class I amendment.

ATTACHMENT 4  
NRC DOCKET 50-321  
OPERATING LICENSE DPR-57  
EDWIN I. HATCH NUCLEAR PLANT UNIT 1  
REQUEST TO CHANGE HYDROGEN AND OXYGEN POST-ACCIDENT  
MONITORING TECHNICAL SPECIFICATIONS

1. Change Range from "0 to 52" to "0 to 5%":

BASIS:

This change is purely administrative in that it corrects a typographical error inserted into the Technical Specifications by Amendment No. 79. This change would have no effect on existing accident probabilities or consequences, would not create any new type of accident scenario, and would not decrease the margin of safety. Therefore, this change is consistent with Item (i) of the "Examples of Amendments that are Considered Not Likely to Involve Significant Hazards Considerations" listed on page 14,870 of the April 6, 1983, issue of the Federal Register.

2. Change Action from "(c)" to "(g)", and add to the Technical Specifications:

"g. Instrumentation shall be operable with continuous sampling capability within 30 minutes of an ECCS actuation during a LOCA. See Section 3.7.A.6.c for the LIMITING CONDITION FOR OPERATION.":

BASIS:

This change is to make the license conform to changes in the regulations. The probability of a potential accident is not changed. The effects of a postulated accident are not changed since the H<sub>2</sub> and O<sub>2</sub> analyzer operability requirements are maintained by Section 3.7.A.6.c. The Technical Specification changes do not create any new accidents, or decrease the margin of safety. Therefore, the results of this change are clearly within acceptance criteria, and this change is consistent with Item (vii) of the "Examples of Amendments that are Considered Not Likely to Involve Significant Hazards Considerations" listed on page 14,870 of the April 6, 1983, issue of the Federal Register.

3. Change Instrument Check Minimum Frequency from "Each Shift" to "Monthly":

BASIS:

This change would decrease the frequency of Instrument Checks. However, operating experience has shown that frequent operation of the H<sub>2</sub> and O<sub>2</sub> analyzers tends to lower the reliability of that equipment. Furthermore, the vendor for these analyzers has recommended the monthly instrument check frequency as being optimal for maintaining maximum equipment operability. Therefore, the results of this change are clearly within acceptance criteria, and this change is consistent with Item (vi) of the "Examples of Amendments that are Considered Not Likely to Involve Significant Hazards Considerations" listed on page 14,870 of the April 6, 1983, issue of the Federal Register.

ATTACHMENT 4 (Continued)

4. Change Instrument Calibration Minimum Frequency from "Every 6 Months" to "Every 3 Months":

BASIS:

This change constitutes a more restrictive operational limitation. The new calibration interval is consistent with the vendor's recommendations for these analysers. The probability of a postulated accident occurring and the effects resulting from any such accident are unchanged. The Technical Specification changes create no new accident scenario, and increase the margin of safety. Therefore, this change is consistent with Item (ii) of the "Examples of Amendments that are Considered Not Likely to Involve Significant Hazards Considerations" listed on page 14,870 of the April 6, 1983, issue of the Federal Register.

5. Changes to the bases which reflect the above mentioned changes:

BASIS:

These changes overall constitute a more restrictive operational limitation. These changes have no significant effect on the probability or consequences of postulated accidents, create no new accident scenarios, and have insignificant effect on present margins of safety. Therefore, the results of these changes are clearly within acceptance criteria, and these changes are consistent with Items (i),(ii),(vi), and (vii) of the "Examples of Amendments that are Considered Not Likely to Involve Significant Hazards Considerations" listed on page 14,870 of the April 6, 1983, issue of the Federal Register.

ATTACHMENT 5  
NRC DOCKET 50-366  
OPERATING LICENSE NPF-5  
EDWIN I. HATCH NUCLEAR PLANT UNIT 2  
REQUEST TO CHANGE HYDROGEN AND OXYGEN POST-ACCIDENT  
MONITORING TECHNICAL SPECIFICATIONS

1. Add to the Technical Specifications:

"\*\*The Drywell H<sub>2</sub>/O<sub>2</sub> Analyzers shall be operable with continuous sampling capability within 30 minutes of an ECCS actuation during a LOCA":

BASIS:

This change constitutes a more restrictive operational limitation. The probability of a postulated accident occurring and the effects resulting from any such accident are unchanged. The Technical Specification changes create no new accident and increase the margin of safety. Therefore, the results of this change are clearly within acceptance criteria, and this change is consistent with Item (ii) of the "Examples of Amendments that are Considered Not Likely to Involve Significant Hazards Considerations" listed on page 14,870 of the April 6, 1983, issue of the Federal Register.