



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

November 19, 1985

Docket No. 50-219  
LS05-85-11-027

Mr. P. B. Fiedler  
Vice President and Director  
Oyster Creek Nuclear Generating Station  
Post Office Box 388  
Forked River, New Jersey 08731

Dear Mr. Fiedler:

SUBJECT: LOW-LOW REACTOR WATER LEVEL INSTRUMENTATION MODIFICATION

Re: Oyster Creek Nuclear Generating Station

The Commission has issued the enclosed Amendment No. 91 to Provisional Operating License No. DPR-16 for the Oyster Creek Nuclear Generating Station. This amendment is in response to your application dated October 11, 1985, as revised by letter dated October 18, 1985, and supplemented by letter dated October 22, 1985. The amendment was authorized by telephone on October 18, 1985.

This amendment authorizes a change to Item J.4 of Table 3.1.1, Protective Instrumentation Requirements, for Section 3.1, Protective Instrumentation, of the Appendix A Technical Specifications (TS) for Oyster Creek. Specifically, the change allows the low-low reactor water level protective instrumentation to be inoperable in the shutdown reactor mode and, under certain conditions, the Reactor Building is not required to be isolated and the Standby Gas Treatment System (SGTS) is not required to be operating. As you requested, this is a one-time-only change to remain effective only for the Cycle 10M outage.

A Notice of Issuance of Amendment to License and Final No Significant Hazards Consideration Determination and Opportunity for Hearing related to the requested action will be published in the Commission's biweekly publication notice in the Federal Register. A copy of our related Safety Evaluation is also enclosed.

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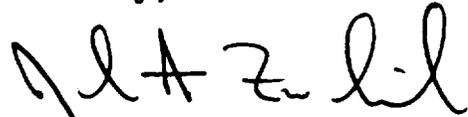
Mr. P. B. Fiedler

- 2 -

November 19, 1985

In your application of October 11, 1985, you proposed another change. This change was to Item B.1 of Table 3.1.1 to qualify when the low-low reactor water level instrumentation had to be operable in shutdown for reactor isolation. This proposed change is not part of this amendment and will be the subject of a separate licensing action. This requested action would not cause derating or shutdown of this facility and, therefore, does not constitute a valid emergency situation under 10 CFR 50.91(a)(5).

Sincerely,



John A. Zwolinski, Chief  
Operating Reactors Branch #5  
Division of Licensing

Enclosures:

1. Amendment No. 91 to  
License No. DPR-16
2. Safety Evaluation

cc w/enclosures:  
See next page

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ELJordan  
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GHolahan  
10/25/85

In your application of October 11, 1985, you proposed another change. This change was to Item B.1 of Table 3.1.1 to qualify when the low-low reactor water level instrumentation had to be operable in shutdown for reactor isolation. This proposed change is not part of this amendment and will be the subject of a separate licensing action. This requested action would not cause derating or shutdown of this facility and, therefore, does not constitute a valid emergency situation under 10 CFR 50.91(a)(5).

Sincerely,

~~Original signed by~~  
John A. Zwolinski, Chief  
Operating Reactors Branch #5  
Division of Licensing

Enclosures:	<u>DISTRIBUTION</u>			
1. Amendment No. 9]to License No. DPR-16	<u>Docket File</u>	OELD	NRC PDR	ELJordan
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cc w/enclosures:	ORB #5 Reading	TBarnhart (4)	JDonohew	WJones
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10/28/85

DL:ORAB\*  
GHolahan  
10/25/85

*SFO/EX(51)*  
*11*

The licensee stated that the modifications will take 24 days and that isolating the Reactor Building and operating the SGTS will delay the completion of the outage and the scheduled restart of Oyster Creek. The licensee also stated that the need for this request first became apparent only within the last 11 days prior to October 11, 1985.

The staff has reviewed the circumstances associated with the licensee's request and has discussed this with the NRC Resident Inspectors at Oyster Creek. The staff and the NRC Resident Inspectors agree with the licensee that the conditions in an isolated Reactor Building with operating the SGTS would be adverse working conditions and could delay the completion of the outage and, therefore, delay the restart of Oyster Creek. The staff concludes that this would, therefore, cause a derating of this facility by it failing to restart on schedule. The staff has also concluded that the licensee has provided a sufficient basis for finding that the emergency situation could not have been avoided by prior application. Therefore, in accordance with 10 CFR 50.91(a)(5), a valid emergency exists.

The amendment was authorized by a telephone call from the acting Assistant Director for Safety Assessment, Division of Licensing, on October 18, 1985.

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In <sup>your</sup> ~~its~~ application of October 11, 1985, ~~the licensee~~ <sup>you</sup> proposed another change. This change was to Item B.1 of Table 3.1.1 to qualify when the low-low reactor water level instrumentation had to be operable in shutdown for reactor isolation. This proposed change is not part of this amendment and will be the subject of a separate licensing action. This requested action would not cause derating or shutdown of this facility and, therefore, does not constitute a valid emergency situation under 10 CFR 50.91(a)(5).

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10/29/85

DL: ORAB  
GHolahan  
10/25/85



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Vice President and Director  
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SUBJECT: LOW-LOW REACTOR WATER LEVEL INSTRUMENTATION MODIFICATION

Re: Oyster Creek Nuclear Generating Station

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This amendment authorizes a change to Item J.4 of Table 3.1.1, Protective Instrumentation Requirements, for Section 3.1, Protective Instrumentation, of the Appendix A Technical Specifications (TS) for Oyster Creek. Specifically, the change allows the low-low reactor water level protective instrumentation to be inoperable in the shutdown reactor mode and, under certain conditions, the Reactor Building is not required to be isolated and the Standby Gas Treatment System (SGTS) is not required to be operating. *As the licensee has requested,* ✓ this is a one-time-only change to remain effective only for the Cycle 10M outage.

The licensee started shutting down Oyster Creek on October 18, 1985, to begin the Cycle 10M outage. This outage is scheduled to last approximately 30 days to complete the remaining environmental qualification modifications. These modifications are required to be completed by November 30, 1985, or the station, should it be in an operating mode, would be in noncompliance with 10 CFR 50.49 and the staff's letter of March 30, 1985.

One modification to be completed in this outage under cold shutdown conditions is to replace the low-low reactor water level protective instrumentation. This instrumentation will be inoperable during 24 days of the outage and the TS require the Reactor Building to be isolated and the SGTS to be operating.

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Not  
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Mr. P. B. Fiedler

- 2 -

The licensee stated that the modifications will take 24 days and that isolating the Reactor Building and operating the SGTs will delay the completion of the outage and the scheduled restart of Oyster Creek. The licensee also stated that the need for this request first became apparent only within the last 11 days prior to October 11, 1985.

The staff has reviewed the circumstances associated with the licensee's request and has discussed this with the NRC Resident Inspectors at Oyster Creek. The staff and the NRC Resident Inspectors agree with the licensee that the conditions in an isolated Reactor Building with operating the SGTs would be adverse working conditions and could delay the completion of the outage and, therefore, delay the restart of Oyster Creek. The staff concludes that this would, therefore, cause a derating of this facility by it failing to restart on schedule. The staff has also concluded that the licensee has provided a sufficient basis for finding that the emergency situation could not have been avoided by prior application. Therefore, in accordance with 10 CFR 50.91(a)(5), a valid emergency exists.

The amendment was authorized by a telephone call from the acting Assistant Director for Safety Assessment, Division of Licensing, on October 18, 1985.

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Sincerely,

John A. Zwolinski, Chief  
Operating Reactors Branch #5  
Division of Licensing

Enclosures:

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2. Safety Evaluation

cc w/enclosures:  
See next page

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Mr. P. B. Fiedler  
Oyster Creek Nuclear Generating Station

Oyster Creek Nuclear  
Generating Station

cc:

G. F. Trowbridge, Esquire  
Shaw, Pittman, Potts and Trowbridge  
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Washington, D.C. 20036

Resident Inspector  
c/o U.S. NRC  
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Forked River, New Jersey 08731

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Bishop, Liberman, Cook, et al.  
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Deputy Attorney General  
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Department of Law and Public Safety  
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Mayor  
Lacey Township  
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D. G. Holland  
Licensing Manager  
Oyster Creek Nuclear Generating Station  
Post Office Box 388  
Forked River, New Jersey 08731



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

GPU NUCLEAR CORPORATION  
AND  
JERSEY CENTRAL POWER & LIGHT COMPANY  
OYSTER CREEK NUCLEAR GENERATING STATION  
AMENDMENT TO PROVISIONAL OPERATING LICENSE

Amendment No. 91  
License No. DPR-16

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by GPU Nuclear Corporation and Jersey Central Power and Light Company (the licensees) dated October 11, 1985, as revised October 18, 1985 and supplemented October 22, 1985, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public;  
and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

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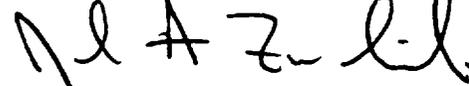
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and Paragraph 2.C.(2) of Provisional Operating License No. DPR-16 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 91, are hereby incorporated in the license. GPU Nuclear Corporation shall operate the facility in accordance with the Technical Specifications.

3. This license amendment became effective October 18, 1985.

FOR THE NUCLEAR REGULATORY COMMISSION



John A. Zwolinski, Chief  
Operating Reactors Branch #5  
Division of Licensing

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: November 19, 1985

ATTACHMENT TO LICENSE AMENDMENT NO. 91  
PROVISIONAL OPERATING LICENSE NO. DPR-16  
DOCKET NO. 50-219

Revise Appendix A Technical Specifications by removing the pages identified below and inserting the enclosed pages. The revised pages are identified by the captioned amendment number and contain vertical lines indicating the area of change.

REMOVE

3.1-10  
3.1-14

INSERT

3.1-10  
3.1-14

TABLE 3.1.1 PROTECTIVE INSTRUMENTATION REQUIREMENTS (Continued)

Function	Trip Setting	Reactor Modes in which Function Must be Operable				Min. No. of Operable or Operating (Tripped) Trip Systems	Min. No. of Operable Instrument Channels per Operable Trip Systems	Action Required*
		Shutdown	Refuel	Startup	Run			
2. Low-Low- Low Reactor Water Level	≥4'8" above top of active fuel	X(v)	X(v)	X(v)	X	2	2	See note h
3. AC Voltage	NA			X(v)	X	2	2	Prevent auto depressuri- zation on loss of AC power. See note i
<b>H. Isolation Condenser Isolation</b>								
1. High Flow Steam Line	≤20 psig P	X(s)	X(s)	X	X	2	2	Isolate Affected Isolation con- densor, comply with Spec. 3.8
2. High Flow Condensate Line	≤27" P H <sub>2</sub> O	X(s)	X(s)	X	X	2	2	See note dd
<b>I. Offgas System Isolation</b>								
1. High Radiation In Offgas Line (e)	≤10 x Stack Release limit (See 3.6-A.1)	X(s)	X(s)	X	X	1	2	Isolate reactor or trip the Inoperable instrument channel
<b>J. Reactor Building Isolation and Standby Gas Treatment System Initiation</b>								
1. High Radiation Reactor Building Operation Floor	≤100 Mr/Hr	X(w)	X(w)		X	1	1	Isolate Reactor Bldg. & Initiate Standby Gas Treatment System or Manual Surveillance for not more than 24 hours (total for all instru- ments under J) In any 30-day period
2. Reactor Bldg. Ventilation Exhaust	≤17 Mr/Hr	X(w)	X(w)	X	X	1	1	
3. High Drywell Pressure	≤2.4 psig	X(u)	X(u)	X	X	1(k)	2(k)	
4. Low Low Reactor Water Level	≥7'2" above top of active fuel	X(qg)	X	X	X	1	2	

TABLE 3.1.1 (Cont'd)

- v. These functions not required to be operable when the ADS is not required to be operable.
- w. These functions must be operable only when irradiated fuel is in the fuel pool or reactor vessel and secondary containment integrity is required per specification 3.5.B.
- y. The number of operable channels may be reduced to 2 per Specification 3.9-E and F.
- z. The bypass function to permit scram reset in the shutdown or refuel mode with control rod block must be operable in this mode.
- aa. Pump circuit breakers will be tripped in 10 seconds  $\pm$  15% during a LOCA by relays SK7A and SK8A.
- bb. Pump circuit breakers will trip instantaneously during a LOCA.
- cc. Only applicable during startup mode while operating in IRM range 10.
- dd. If an isolation condenser inlet (steam side) isolation valve becomes or is made inoperable in the open position during the run mode comply with Specification 3.8.E. If an AC motor-operated outlet (condensate return) isolation valve becomes or is made inoperable in the open position during the run mode comply with Specification 3.8.F.
- ee. With the number of operable channels one less than the Min. No. of Operable Instrument Channels per Operable Trip Systems, operation may proceed until performance of the next required Channel Functional Test provided the inoperable channel is placed in the tripped condition within 1 hour.
- ff. This function is not required to be operable when the associated safety bus is not required to be energized or fully operable as per applicable sections of these technical specifications.
- \*99. These functions are not required to be operable when secondary containment is not required to be maintained or when the conditions of Sections 3.5.b.1.a, b, c, and d are met, and reactor water level is closely monitored and logged hourly. The Standby Gas Treatment System will be manually initiated if reactor water level drops to the low level trip set point.
- \* This note is applicable only during the Cycle 10M outage.



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
SUPPORTING AMENDMENT NO. 91 TO PROVISIONAL OPERATING LICENSE NO. DPR-16

GPU NUCLEAR CORPORATION AND  
JERSEY CENTRAL POWER & LIGHT COMPANY  
OYSTER CREEK NUCLEAR GENERATING STATION

DOCKET NO. 50-219

1.0 INTRODUCTION

By letter dated October 11, 1985, as revised by its letter dated October 18, 1985, and supplemented by its letter dated October 22, 1985, GPU Nuclear (the licensee) requested an emergency amendment to Provisional Operating License No. DPR-16 for the Oyster Creek Nuclear Generating Station (OCNGS). This amendment would authorize a change to Item J.4 of Table 3.1.1, Protective Instrumentation Requirements, for Section 3.1, Protective Instrumentation, of the Appendix A Technical Specification (TSs). The proposed change qualifies when the low-low reactor water level instrumentation has to be operable in the shutdown reactor mode condition for Reactor Building isolation. Specifically, the change would allow this instrumentation to be inoperable in shutdown and, under certain conditions, the Reactor Building is not required to be isolated and the Standby Gas Treatment System (SGTS) is not required to be operating. As the licensee has requested, this would be a one-time-only change effective only for the Cycle 10M outage which began October 18, 1985.

A Notice of Issuance of Amendment to License and Final No Significant Hazards Consideration Determination and Opportunity for Hearing related to the requested action will be published in the Commission's biweekly publication notice in the Federal Register.

In its application of October 11, 1985, the licensee proposed another change. This change was to Item B.1 of Table 3.1.1 to qualify when the low-low reactor water level instrumentation had to be operable in shutdown for reactor isolation. This proposed change is not part of this amendment and will be the subject of a separate licensing action. This requested action would not cause derating or shutdown of this facility and, therefore, does not under 10 CFR 50.91(a)(5) constitute a valid emergency amendment situation. The action required by the TSs for reactor isolation when this instrumentation is inoperable can be taken without affecting the restart of Oyster Creek.

2.0 DISCUSSION

The licensee is planning a special maintenance outage for the plant in order to complete, among other items, equipment changes required to comply with the Environmental Qualification rule (10 CFR 50.49) which requires compliance by November 30, 1985. Among these changes is the replacement of several reactor water level instrument transmitters.

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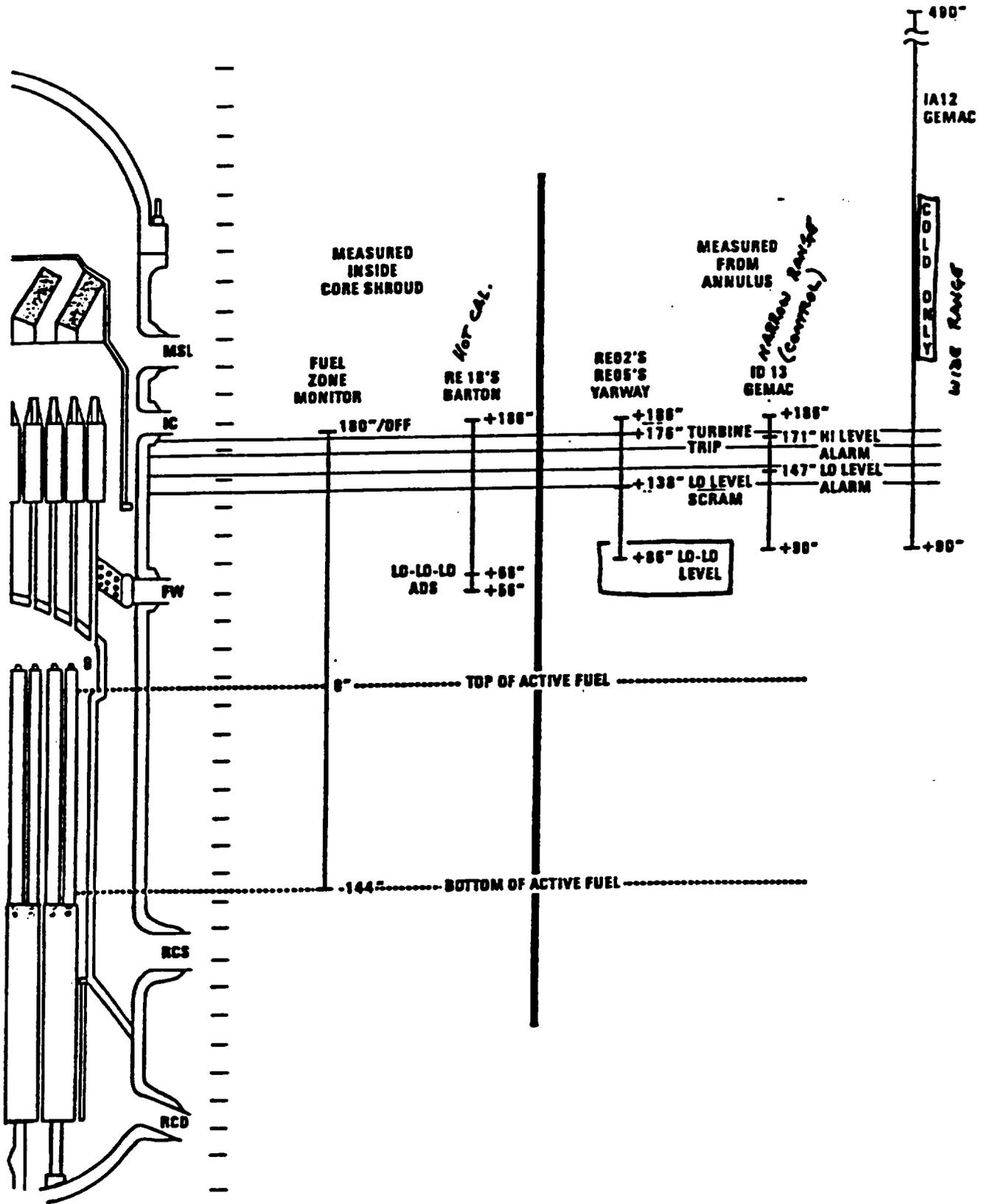
The water level instrumentation system at Oyster Creek consists of five types of level channels, each of which includes redundant channels as shown in the following figure.

The first type is the "fuel zone" set of monitors which cover the range of +180 inches to -144 inches (where "zero" for all channels is the top of the active fuel). This type channel provides indication in the control room but does not provide any automatic actions. The second type is the RE-18 set of Barton instruments which cover the range of +185 inches to +55 inches (above the top of the active fuel). This type has no indication in the control room but provides automatic safety actions at the "low-low-low" setpoint (+55 inches). The third type includes the RE-02 set of Yarway instruments which cover the range of +185 inches to +86 inches (above the top of the active fuel). This type has local indication and provides automatic safety actions at the "low-low" setpoint (+86 inches). This type also includes the RE-05/19 set of Yarway instruments which covers the same range, has control room and local indication, and provides automatic safety actions at the "hi" level setpoint (+176 inches) and at the "low" level setpoint (+138 inches). The fourth type is the ID-13 narrow range GE/MAC instruments which are "hot calibrated" to cover the range of +185 inches to +90 inches (above the top of the active fuel). This type has control room indication, has automatic control function, and is used primarily during normal power operation. This type also includes an alarm at a high level value of +176 inches and at a low level value of +147 inches, where the nominal operating level is +165 inches. The fifth type is the ID-12 wide range GE/MAC instruments which are "cold calibrated" to cover the range of +490 inches to +90 inches (above the top of the active fuel).

The licensee's planned equipment changes are to be conducted with the plant in cold shutdown and include replacing the transmitters and rerouting of the hydraulic sensing lines within the instrument racks for all the channels in the first and third types presented above. The issues of safety concern include the adequacy of the control room indication of the remaining channels and the automatic safety actions that would have been provided by the channels that will be out of service during the replacements.

### 3.0 EVALUATION

The nature of the modifications is such that the root valves for each set of sensing lines will have to be closed. In our review, the staff raised questions regarding the feasibility of isolating only one side of the reactor vessel level instruments at a time (i.e., channels A and B, and then channels C and D). This approach would have the benefit of leaving one side operable and capable of providing indication and automatic safety action throughout the modification process. The licensee stated that to replace all of the sets of instruments simultaneously has been estimated to require 24 days and that to replace only one side at a time would require an additional outage time of at least 20 days. The licensee has stated further that this aspect of the outage is the critical path item and that the work time estimates have been carefully scrutinized and are believed to be realistic. Accordingly, if the TS change is approved, the licensee plans to replace all the affected instruments simultaneously on a two, 10-hour shift basis.



GPU NUCLEAR CORPORATION OYSTER CREEK NUCLEAR GENERATING STATION UPDATED FINAL SAFETY ANALYSIS REPORT	REACTOR WATER LEVEL INSTRUMENTATION	
	REV. 0, 12/84	FIGURE 7.6-3

The staff requested the NRC Resident Inspectors review the licensee's work orders for this modification. The NRC Resident Inspectors stated that they believed the licensee's work time estimates were reasonable.

The affected reactor vessel level instrumentation includes these channels that provide automatic safety action at hi-level, low-level, and low-low-level. These actuation and/or control functions are in FSAR Table 7.6-1. These include initiation of core spray, containment spray, containment isolation, and the SGTS. The licensee has reviewed each of these actions and has determined that the TS allow each to be disabled when the plant is in cold shutdown, with the exception of SGTS initiation and Reactor Building isolation. We agree with this determination. The licensee requested a TS change to not require, under certain conditions, automatic actuation of SGTS and Reactor Building isolation upon "lo-lo" water level.

The change would add footnote "gg" to item J.4. of Table 3.1.1. This footnote would require that during shutdown the water level be monitored by the operator and SGTS be initiated manually if any of the remaining operable level instruments indicate a level corresponding to the "low" level setpoint or less. During these modifications, the plant will either be maintained such that secondary containment is not required, as defined in TS 3.5.B.1, or the conditions of TSs 3.5.b.1.a,b,c and d are met.

The staff raised the question of whether the SGTS could re-establish an adequate negative pressure in the Reactor Building if the normal ventilation system were to become disabled. The licensee agreed to manually initiate SGTS in the event the normal Reactor Building ventilation system is lost and cannot be restarted immediately. The licensee stated that this action will be implemented by a special written directive to the reactor operators. This directive was included in the licensee's letter dated October 22, 1985.

We have determined that the manual actions proposed by the licensee are an acceptable set of compensatory measures to offset the lack of automatic initiation of SGTS for a limited period of time.

Recent operating events at other BWRs have involved the inadvertent lowering of the water level in the reactor vessel during plant shutdown, typically due to valve misalignments during operations or testing that have led to a drainage path from the reactor vessel to the suppression pool. These events suggest that care should be taken during such operations to monitor vessel water level and preparations should be made to provide appropriate isolation and to initiate injection of water to makeup for any drainage.

To address this concern the staff questioned the licensee regarding the remaining operable water level instruments, installed alarm features, and water injection systems. Two types of instruments that have indications in the control room will be operable. These are the fourth and fifth types described earlier, the narrow range and wide range GE/MAC channels. Either narrow range channel can be selected to provide the water level input to the flow/level recorder, which provides an alarm if the water level falls to +146 inches. By written instruction, the "A" channel has been selected. The "B" narrow range channel has been temporarily fitted with a separate alarm, also

set at +146 inches. Thus redundant alarms are being provided. The licensee has agreed to test these low-level alarms prior to the modification and to direct the reactor operators to initiate manually most of the systems that would have been initiated automatically at "low-low" level if any of the remaining operable level instruments indicate at or below the low level setpoint value. This action was implemented by a special written directive to the reactor operators and is included in the licensee's letter of October 22, 1985. This manual initiation includes:

1. Core spray
2. Reactor isolation
3. Primary and secondary containment isolation
4. Recirculation pumps trip
5. SGTS initiation
6. RCWI isolation
7. Shutdown cooling isolation
8. RBCCW to drywell isolation
9. Air/N<sub>2</sub> to drywell isolation
10. Emergency diesel generator start

Further, the licensee has committed to maintain the two trains of core spray and the fire protection system operable and to demonstrate these systems operable on a weekly basis. This will provide additional sources for water to the core than is required by the TSs. We have reviewed these systems and found them to be appropriate and sufficient.

The staff raised a question regarding the accuracy of the "hot-calibrated" narrow range GE/MAC channels when being operated under cold conditions. The licensee responded that engineering calculations indicate that during cold operations the hot-calibrated narrow range instruments would be in error by only 0.6 of 1 inch. In discussing this question with people experienced at other BWRs, the staff got reports that the error to be expected may be 6 to 10 inches and that the Yarway instruments could deviate from the hot-calibrated GE/MAC instruments by as much as 27 to 40 inches. In subsequent discussions, the licensee indicated that, with the plant at hot full power conditions, the cold-calibrated wide range GE/MAC channels currently indicated 126 inches while the hot-calibrated narrow-range GE/MAC channels indicate 160 inches, a difference of 34 inches. The licensee stated also that its experienced reactor operators report that during cold operations, the hot-calibrated narrow range GE/MAC channels will typically agree with the cold-calibrated wide-range GE/MAC within 10 inches. The narrow range and wide range GE/MAC channels were calibrated by the licensee in the last week before shutdown.

The licensee has agreed to take data and plot the responses of the level instruments during the plant cooldown to verify the indications corresponding to the actual values of +138 and +86 inches, the "low" and "low-low" setpoints. The operator will be alerted by the alarm at +146 inches and will act if any of the GE/MAC channels (narrow or wide range) reach the value corresponding to the "low" setpoint. The span of 52 inches between the "low" and "low-low" setpoints is adequate to accommodate errors in instrument indications between "hot" and "cold" conditions. Therefore, this question is resolved to an acceptable degree.

Based upon considerations of the indications and alarms available to the operator and the licensee's commitment to initiate certain systems (listed above) at the "low" setpoint of ECCS, we find that the concern regarding inadvertent lowering of the water level has been adequately addressed.

On a one-time basis for a limited period not to exceed the Cycle 10M outage, we conclude that the licensee's proposed manual actions described above are sufficient compensatory measures to offset the lack of automatic actuation from the reactor water level instrumentation. Further, the actions the licensee has committed to, described above, including the increased availability of the core spray and the fire protection system are adequate to address the possibility of an inadvertent lowering of water level in the vessel during this period. Our overall conclusion is therefore that the TS change is acceptable and that the planned modifications can be performed with no undue hazard to the public health and safety during the Cycle 10M outage.

### 3.1 Findings of Emergency Warranting An Amendment Without Notice

The licensee shut down Oyster Creek on October 18, 1985, to begin the Cycle 10M outage. This outage is scheduled to last a month to complete the remaining environmental qualification modifications of electrical equipment important for safety. These modifications are required to be completed by November 30, 1985, per 10 CFR 50.49(g) and the staff's letter of March 30, 1985.

One modification to be completed in this outage under cold shutdown conditions is to replace the low-low reactor water level protective instrumentation. The instrumentation will be inoperable during the modification to complete the work within the scheduled outage. The work on this modification is expected to take 24 days or about 80% of the outage. The existing TS require this instrumentation to be operable in the shutdown condition. If the instrumentation is inoperable, the TS require the Reactor Building to be isolated and the SGTS to be operating.

The licensee stated that isolating the Reactor Building and operating the SGTS will result in undesirable working conditions because of higher building air temperature, poor building air quality and higher building air contamination. It stated that working under these environmental conditions for this length of time will delay the completion of the outage and the scheduled restart of Oyster Creek because the building conditions will prevent the work in the Reactor Building to be completed as scheduled. This includes other work being done in the outage in addition to that on this instrumentation. The licensee stated also that the need for this request first became apparent within the last few weeks during the process of planning for the work to replace the instrumentation. This statement was clarified by the licensee in a phone call on October 14, 1985, to mean the 11 days prior to October 11, 1985.

The staff has reviewed the circumstances associated with the licensee's request and has discussed this with the NRC Resident Inspectors at Oyster Creek. The staff and the NRC Resident Inspectors agree with the licensee that the conditions in an isolated Reactor Building with operating the SGTS would be adverse working conditions and could delay the completion of the outage and, therefore, delay the restart of Oyster Creek. The

requested amendment which is the subject of this safety evaluation is needed to avoid a delay in the scheduled restart of Oyster Creek and thus is an emergency amendment. The NRC Resident Inspectors provided the NRC Oyster Creek Project Manager with copies of two memoranda written by the site licensing manager in August and September 1985. These were on interpretations of the TS relative to the Cycle 10M outage for the low-low reactor water level instrumentation. The Oyster Creek Project Manager concluded that these memoranda did not deal with the issue in the licensee's application. The NRC Resident Inspectors did not disagree with this conclusion. The staff has concluded that the licensee has provided a sufficient basis for finding that the emergency situation could not have been avoided by prior application. Therefore, in accordance with 10 CFR 50.91(a)(5), a valid emergency exists.

### 3.2 Final No Significant Hazards Consideration Determination

The five types of reactor water level instrumentation are described in Section 2.0 of this evaluation. The proposed action will leave only the fourth and fifth types operable during the modification: These are the narrow range and wide range GE/MAC channels. The narrow range channels include two alarms at an indicated level of +146 inches. These will be tested prior to the modification. The Yarway channels which are being disabled would have provided automatic actuation at the the low-low level setpoint of +86 inches. The control room operators are to initiate manually at low reactor level most of the systems that would have been initiated automatically at low-low level by the Yarway channels. The systems to be operated manually are listed to Section 3.0. The staff has reviewed these systems and concludes that these systems are the only ones that need to be initiated because the station will be in the shutdown condition.

One of these systems is core spray which will add water to the reactor vessel. The licensee will have both trains of core spray operable during the modification. In addition the fire protection system will be available and operable and these systems will be demonstrated to be operable on a weekly basis.

On the question of accuracy of the narrow range and wide range GE/MAC channels in Section 3.0, the licensee has agreed to take data and plot water level indicated by the Yarway and GE/MAC channels during cooldown to verify the channel indications corresponding to the actual water level values of +138 and +86 inches, the low and low-low level setpoints. The operator will be alerted by the alarms at +146 inches and will manually initiate the systems if any of the GE/MAC channels reach the level value corresponding to the low level setpoint. The span of 52 inches between the low and low-low level setpoints is adequate to accommodate for errors in the instruments and the time for manual action for the operators to act.

On the question on whether the SGTS could re-establish an adequate negative pressure in the Reactor Building if the normal building ventilation system were to become disabled, the licensee committed to manually initiate the SGTS in the event the normal building ventilation failed and cannot be restarted immediately.

In sum, the staff has reviewed the use of the narrow range and wide range GE/MAC channels as an indication and as a means for taking corrective action in the case of loss of water from the vessel and has concluded these channels with verification of the channel indication corresponding to the lo and lo-lo level setpoints should provide level indication and system initiation essentially equivalent to that provided by the Yarway channels for the licensee to do the modification as planned. Because the licensee's ability to detect and to respond to lo water level is not substantially affected, therefore, authorizing this proposed change to TS Table 3.1.1 (1) does not involve a significant increase in the probability or consequences of a previously evaluated accident, (2) does not create the possibility of a new or different kind of accident from any accident previously evaluated and (3) does not involve a significant reduction in a margin of safety. Based on this, the staff concludes that the requested action does not involve a significant hazards consideration.

### 3.3 State Consultation

In accordance with the Commission's regulations, consultations were held with the State of New Jersey, Bureau of Radiation Protection, by telephone on October 15 and 18, 1985. The State of New Jersey stated that the staff had addressed its concerns and, therefore, it was in agreement with the licensee's proposed amendment. No other comments were solicited or received. A notice of the proposed amendment was not published in the Federal Register due to the lack of sufficient time for public comment prior to the Friday, October 18, 1985, date on which the licensee requested the amendment to be authorized.

## 4.0 ENVIRONMENTAL CONSIDERATION

This amendment involves a change to a requirement with respect to the installation or use of facility components located within the restricted area as defined in 10 CFR Part 20. The staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has made a final finding that this amendment involves no significant hazards consideration. Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this amendment.

## 5.0 CONCLUSION

On a one-time basis only for the Cycle 10M outage, the staff concludes that the licensee's proposed manual actions described above are sufficient compensatory measures to offset the lack of automatic actuation of SGTS. Further, the actions the licensee has committed to, described above, including the increased availability of the core spray and the fire protection system are adequate to address the possibility of an inadvertent lowering of water level in the vessel during this period.

The staff has therefore concluded, based on the considerations discussed above, that: (1) the amendment does not (a) significantly increase the probability or consequences of an accident previously evaluated, (b) create the possibility of a new or different kind of accident from any previously evaluated or (c) significantly reduce a safety margin and, therefore, the amendment does not involve significant hazards considerations; (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner; and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

#### 6.0 ACKNOWLEDGEMENT

This evaluation was prepared by J.T. Beard and J. Donohew.

Dated: November 19, 1985