Docket file

July 29, 1994

Docket No. 50-219

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Mr. John J. Barton
Vice President and Director
GPU Nuclear Corporation
Oyster Creek Nuclear Generating Station
Post Office Box 388
Forked River, New Jersey 08731

Dear Mr. Barton:

SUBJECT: ISSUANCE OF AMENDMENT (TAC NO. M89198)

The Commission has issued the enclosed Amendment No. 169 to Facility Operating License No. DPR-16 for the Oyster Creek Nuclear Generating Station, in response to your application dated April 6, 1994, as supplemented June 21, 1994.

The amendment eliminates the scram and main steam line isolation valve (MSIV) closure requirements associated with the main steam line radiation monitors (MSLRM). The amendment also eliminates the following related automatic isolation pfunctions that are associated with the MSLRM scram and MSIV isolation: a) Main Steam Line Condenser Drain Valves, b) Emergency Condenser Drain Valves, c) Reactor Recirculation Loop Sample Valve, d) Instrumental Air Valves, and e) Condenser Pump Isolation.

A copy of the related Safety Evaluation is also enclosed. The notice of issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

Original signed by:

Alexander W. Dromerick, Senior Project Manager
Project Directorate I-4
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosures:
1. Amendment No. 169 to DPR-16
2. Safety Evaluation

cc w/enclosures:
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NAME	SNorris	ADromerick:bp	TCollins	JWermiel	JStolz	STurk
DATE	7/29/94	7/29/94	7/20/94	7/22/94	7/29/94	7/26/94

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

July 29, 1994

Docket No. 50-219

Mr. John J. Barton
Vice President and Director
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See next page

Mr. John J. Barton
GPU Nuclear Corporation

Oyster Creek Nuclear
Generating Station

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

GPU NUCLEAR CORPORATION

AND

JERSEY CENTRAL POWER & LIGHT COMPANY

DOCKET NO. 50-219

OYSTER CREEK NUCLEAR GENERATING STATION

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 169
License No. DPR-16

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by GPU Nuclear Corporation, et al. (the licensee), dated April 6, 1994, as supplemented June 21, 1994, 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.

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 Facility 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. 169, are hereby incorporated in the license. GPU Nuclear Corporation shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of issuance, to be implemented at the restart from refueling outage 15R.

FOR THE NUCLEAR REGULATORY COMMISSION

John F. Stolz, Director
Project Directorate I-4
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: July 29, 1994

ATTACHMENT TO LICENSE AMENDMENT NO. 169

FACILITY OPERATING LICENSE NO. DPR-16

DOCKET NO. 50-219

Replace the following pages of the Appendix A Technical Specifications with the enclosed pages as indicated. The revised pages are identified by amendment number and contain vertical lines indicating the areas of change.

Remove	Insert
3.1-5	3.1-5
3.1-8	3.1-8
3.1-10	3.1-10
3.1-14	3.1-14
4.1-6	4.1-6

transient. The low condenser vacuum trip provides a reliable backup to the turbine trip. Thus, if there is a failure of the turbine trip on low vacuum, the reactor would automatically scram at 20 inches Hg. The condenser is capable of receiving bypass steam until 7 inches Hg vacuum thereby mitigating the transient and providing a margin.

The settings to isolate the isolation condenser in the event of a break in the steam or condensate lines are based on the predicted maximum flows that these systems would experience during operation, thus permitting operation while affording protection in the event of a break. The settings correspond to a flow rate of less than three times the normal flow rate of $3.2X10^5$ lb/hr. Upon initiation of the alternate shutdown panel, this function is bypassed to prevent spurious isolation due to fire induced circuit faults.

The setting of ten times the stack release limit for isolation of the air-ejector offgas line is to permit the operator to perform normal, immediate remedial action if the stack limit is exceeded. The time necessary for this action would be extremely short when considering the annual averaging which is allowed under 10CFR 20.106, and, therefore, would produce insignificant effects on doses to the public.

Four radiation monitors are provided which initiate isolation of the reactor building and operation of the standby gas treatment system. Two monitors are located in the ventilation ducts, one is located in the area of the refueling pool and one is located in the reactor vessel head storage area. The trip logic is basically a 1 out of 4 system. Any upscale trip will cause the desired action. Trip settings of 17 mr/hr in the duct and 100 mr/hr on the refueling floor are based upon initiating standby gas treatment system so as not to exceed allowed dose rates of 10 CFR 20 at the nearest site boundary.

The SRM upscale of $5X10^5$ CPS initiates a rod block so that the chamber can be relocated to a lower flux area to maintain SRM capability as power is increased to the IRM range. Full scale reading is 1×10^6 CPS. This rod block is bypassed in IRM Ranges 8 and higher since a level of 5×10^5 CPS is reached and the SRM chamber is at its fully withdrawn position.

The SRM downscale rod block of 100 CPS prevents the instrument chamber from being withdrawn too far from the core during the period that it is required to monitor the neutron flux. This downscale rod block is also bypassed in IRM.

TABLE 3.1.1 PROTECTIVE INSTRUMENTATION REQUIREMENTS (CONT'D)

Function	Trip Setting	Reactor Modes in which Function Must Be Operable: Shutdown	Refuel	Startup	Run	Min. No. of Operable or Operating [tripped] Trip Systems	Min. No. of Instrument Channels Per Operable Trip Systems	Action Required*
A. Scram								
1. Manual Scram		X	X	X	X	2	1	Insert control rods
2. High Reactor Pressure	**		X(s)	X(11)	X	2	2	
3. High Drywell Pressure	≤ 3.5 psig		X(u)	X(u)	X	2	2	
4. Low Reactor Water Level	**		X	X	X	2	2	
5. a. High Water Level in Scram Discharge Volume North Side	≤ 29 gal.		X(a)	X(z)	X(z)	2	2	
b. High Water Level in Scram Discharge Volume South Side	≤ 29 gal.		X(a)	X(z)	X(z)	2	2	
6. Low Condenser Vacuum	≥ 20 inches hg.			X(b)	X	1	3(mm)	
7. DELETED								

TABLE 3.1.1 PROTECTIVE INSTRUMENTATION REQUIREMENTS (CONT'D)

Function	Trip Setting	Reactor Modes in which Function Must Be Operable: Shutdown	Refuel	Startup	Run	Min. No. of Operable or Operating [tripped] Trip Systems	Min. No. of Instrument Channels Per Operable Trip Systems	Action Required*
4. High Temperature in Main Steamline Tunnel	≤ Ambient at Power + 50°F	X(s)	X(s)	X	X	2	2	
5. Low Pressure in Main Steamline	**			X(cc)	X	2	2	
6. DELETED								
C. Isolation condenser								
1. High Reactor Pressure	**	X(s)	X(s)	X(11)	X	2	2	Place plant in cold shutdown condition
2. Low-Low Reactor Water	≥7'2" above top of active fuel	X(s)	X(s)	X	X	2	2	

TABLE 3.1.1 PROTECTIVE INSTRUMENTATION REQUIREMENTS (CONT'D)

Function	Trip Setting	Reactor Modes in which Function Must Be Operable: Shutdown	Refuel	Startup	Run	Min. No. of Operable or Operating [tripped] Trip Systems	Min. No. of Instrument Channels Per Operable Trip Systems	Action Required*
6. IRM Upscale	≤ 108/125 fullscale		X	X		2	3	
7. a) water level high scram discharge volume North	≤ 14 gallons		X(z)	X(z)	X(z)	1	1 per inst. vol.	
b) water level high scram discharge volume South	≤ 14 gallons		X(z)	X(z)	X(z)	1	1 per inst. vol.	
L. Condenser Vacuum Pump Isolation								
DELETED								
M. Diesel Generator load Sequence Timers	Time delay after energization of relay							
1. CRD pump	60 sec ± 15%	X	X	X	X	2(m)	1(n)	Consider the pump inoperable and comply with Spec. 3.4.D (see Note q)

TABLE 4.1.1
(cont'd)

Instrument Channel	Check	Calibrate	Test	Remarks (Applies to Test and Calibration)
11. APRM Level	N/A	1/3d	N/A	Output adjustment using operational type heat balance during power operation
APRM Scram Trips	Note 2	1/wk.	1/wk.	Using built-in calibration equipment during power operation
12. APRM Rod Blocks	Note 2	1/3 mo.	1/mo.	Upscale and downscale
13. DELETED				
14. High Radiation in Reactor Building				
Operating Floor	1/s	1/3 mo.	1/wk	Using gamma source for calibration
Ventilation Exhaust	1/s	1/3 mo.	1/wk.	Using gamma source for calibration
15. High Radiation on Air Ejector		1/3 mo.	1/wk.	Using built-in calibration equipment
Ejector Off-Gas	1/s 1 mo.			Channel check Source check
		1/24 mo.		Calibration according to established station calibration procedures
			1/24 mo.	Note a
16. IRM Level	N/A	Each startup	N/A	
IRM Scram	*	*	*	Using built-in calibration equipment

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 169

TO FACILITY 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 April 6, 1994, as supplemented June 21, 1994, the GPU Nuclear Corporation (the licensee/GPUN) submitted a Technical Specification Change Request to amend the Oyster Creek Nuclear Generating Station (OCNGS) Technical Specifications (TS). The licensee proposed to eliminate the scram and main steam line isolation valve (MSIV) closure requirements associated with the main steam line radiation monitors (MSLRM). This request was submitted as the plant specific portion which, in conjunction with the General Electric Licensing Topical Report NEDO-31400A and the NRC's May 15, 1991, Safety Evaluation (SE), formed the basis for the package to be evaluated. The licensee also requested that the following related automatic isolation functions that are associated with the MSLRM scram and MSIV isolation be eliminated: a) Main Steam Line Condenser Drain Valves (MSLCDV), b) Emergency Condenser Drain Valves (ECDV), c) Reactor Recirculation Loop Sample Valve (RRLSV), d) Instrumental Air Valves, and e) Condenser Pump Isolation.

The June 21, 1994, letter provided clarifying information which did not change the initial proposed no significant hazards consideration determination.

2.0 EVALUATION

In the staff's May 15, 1991, SE which accepted the referencing of Topical Report NEDO-31400A for the elimination of the MSIV closure function and scram function of the MSLRM, it was stated that the following three conditions had to be met:

1. The licensee needed to demonstrate that the assumptions with regard to input values, including power per assembly, χ/Q, and decay times, that were made in the generic analysis, bound those for the plant.

2. The licensee must include sufficient evidence, implemented or proposed operating procedures, or equivalent commitments, to provide reasonable assurance that increased significant levels of radioactive materials in the main steam lines will be controlled expeditiously to limit both occupational doses and effluent releases.

3. The licensee shall standardize the MSLRM and offgas radiation monitor alarm setpoint to 1.5 times the nominal N-16 background dose rate at the monitor locations and commit to promptly sample the reactor coolant to determine possible contamination levels in the reactor coolant and the need for additional corrective action, if the MSLRM or offgas radiation monitors or both exceed their alarm setpoints.

The licensee, in response to Condition 1 above, stated in its request and subsequent letter dated June 21, 1994, that the assumptions made in the generic analysis bound those for the OCNGS. The staff has reviewed the licensee's assumptions and data tables for values such as χ/Q and power level per assembly and has concluded that the generic analysis assumptions bound those presented in the OCNGS analysis. The licensee's commitments are acceptable and responsive to Condition 1 of the Topical Report NEDO-31400A.

In the response to Condition 2, the licensee committed to the following:

a) A control room MSLRM high alarm is provided to alarm at 1.5 times the 100% full power background N-16 level, at this alarm operators are directed per abnormal operating procedures to:

   1. Notify chemistry to take samples of the reactor coolant system (RCS),
   2. Monitor the offgas stack and steam jet air ejector (SJAE) monitors,
   3. Reduce hydrogen injection, and if after 10 minutes if the alarm has not cleared, continue investigations into the problem.

b) A high SJAE radiation alarm is provided at approximately 2/3 of the high-high alarm level, to alert operators to elevated condenser offgas activity

c) A high-high SJAE radiation alarm and a timer with a maximum duration of 15 minutes are activated. If the radiation level has not been reduced and still exceeds the setpoint at the end of the timed interval, the condenser offgas system is isolated and the discharge to the delay line is also isolated. The isolation of the offgas system will then result in a reactor trip due to loss of condenser vacuum.

The licensee evaluated these potential release paths in relation to the size of the pipes compared to the main steam lines and determined that the total additional leakage from all the drain and sample valves, if they were open during normal power operations, would increase the leakage by a factor of 1.75%. The MSLCDVs and the ECDVs drain back to the main condenser which the

licensee stated has an undefined leak rate (assumed to be zero). However, the licensee conservatively assumed the leakage to be 100% in its ground release calculations. The χ/Q values for the OCNGS are small enough to result in a smaller off-site dose than the NEDO-31400A model, even with this additional leakage. The condenser vacuum pump is normally secured during normal power operations, as soon as there is enough steam to operate the SJAEs (approximately 10% power). All of these potential release paths will still receive isolation signals on other plant trip signals (e.g., reactor water level Lo Lo and main steam line low pressure) resulting from other design basis accidents. The licensee's assumptions and reasoning are acceptable to the staff.

The licensee's commitments are acceptable and responsive to Condition 2 of the Topical Report NEDO-31400A.

In response to Condition 3, the licensee stated that the OCNGS MSLRM High setpoint of 500 mR/hour satisfies the commitment to set the MSLRM High Alarm setpoint at 1.5 times the 100% full power background N-16 levels. This setpoint takes into account the use of hydrogen water chemistry, the effects of condenser backwashing and changes in the number of recirculation pumps in use.

The licensee's commitments are acceptable and responsive to Condition 3 of the Topical Report NEDO-31400A.

The proposed request would also eliminate the following related automatic isolation functions that are associated with the MSLRM scram and MSIV isolation:

a) Main Steam Line Condensate Drain Valves
b) Emergency Condenser Drain Valves
c) Reactor Recirculation Loop Sample Valves
d) Instrument Air Valves
e) Condenser Vacuum Pump Isolation

The licensee has adequately addressed the conditions contained in Topical Report NEDO-31400A, including the OCNGS site specific conditions, and the offsite dose acceptance criteria in SRP 15.4.9. Based on the above, the changes proposed by the licensee are acceptable.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the New Jersey State official was notified of the proposed issuance of the amendment. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC 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 previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (59 FR 22008). Accordingly, the 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 the amendment.

5.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: D. Carter

Date: July 29, 1994