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November 29, 1982

Mr. Dennis M. Crutchfield, Chief
Operating Reactors Branch #5
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Mr. Crutchfield:

SUBJECT: Oyster Creek Nuclear Generating Station
Docket No. 50-219
SEP Integrated Assessment

Our recent letter dated November 16, 1982, provided our schedules for equipment modifications and additions resulting from SEP integrated assessment. The letter also provided GPU Nuclear Corporation (GPUNC) positions concerning resolutions of some of the SEP topics proposed by the NRC staff with which we disagreed.

Subsequently, the NRC staff requested a meeting for further discussion of the schedules and topic resolutions in order to reach agreement between GPUNC and the NRC staff. That meeting was held on November 18, 1982 and we were able to reach agreement on all items.

ATTACHMENT I to this letter lists schedule and resolution agreed at our meeting for each of the topics.

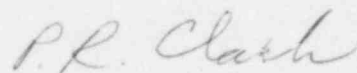
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Mr. D. M. Crutchfield
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We are also transmitting the revised integrated assessment summary table (Table 4.1 of draft NUREG 0822) as ATTACHMENT II. The revised table reflects the agreements reached during our November 18, 1982, meeting with the NRC staff. The revised portions of the table are indicated by double asterisks (**).

Very truly yours,



P. R. Clark
Executive Vice President

blf

Attachments

cc: Ronald C. Haynes, Administrator
Region 1
U. S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, NJ 19406

NRC Resident Inspector
Oyster Creek Nuclear Generating Station
Forked River, NJ 08731

ATTACHMENT I

SEP TOPIC SCHEDULES AND RESOLUTIONS AGREED ON NOVEMBER 18, 1982
BETWEEN GPUNC AND THE NRC STAFF

TOPIC NO. III-5E Pipe Break Outside Containment

As stated in our November 16, 1982 letter, GPUNC will prepare and transmit a report to the NRC by February 28, 1983, which predicts crack growth rate in the Oyster Creek isolation condenser lines. Based on our findings GPUNC will propose an appropriate leakage detection method with adequate sensitivity. Our preliminary evaluation indicates the extremely slow growth rate will allow the use of a crack with sufficiently large leak rate for visual and audio detection

TOPIC NO. V-5 Reactor Coolant Pressure Boundary Leakage Detection

GPUNC will perform a "leak before break" analysis for the most limiting piping to justify the sensitivity of the current leak detection systems available in the containment sump. Results of the analysis will be transmitted to the NRC by June 30, 1983. GPUNC will also propose Technical Specification change before Cycle 10 startup to include operability requirement of the leakage detection systems inside containment. GPUNC will prepare action statements in Technical Specifications.

TOPIC NO. VIII-3B DC Power System Bus Voltage Monitoring and Annunciation

Our November 16, 1982 letter stated that the battery status alarms will be installed during Cycle 11 refueling outage due to the number of modifications already planned in the control room during the forthcoming (Cycle 10) outage. However, the NRC staff requested an intermediate resolution of this issue since PRA performed by the NRC consultant rated this issue of high risk importance. GPUNC will provide an intermediate resolution which consists of periodic inspections of the safety related battery systems such as verification of battery breaker position, battery current, charger current, etc. Plant inspection procedure will be revised to include the periodic inspection of the battery systems before Cycle 10 startup. The intermediate resolution will be in effect until the installation of the battery status alarms during Cycle 11 outage.

TOPIC NO. V-12A Water Purity of BWR Primary Coolant

Our November 16 1982 letter to the NRC stated that GPUNC will revise Oyster Creek Technical Specifications after examining our Cycle 10 experience. However, during our meeting on November 18, 1982, the NRC staff requested GPUNC to revise Technical Specifications before Cycle 10 startup. GPUNC agreed to revise Technical Specifications prior to Cycle

10 startup incorporating Reg. Guide 1.56 limits for conductivity and chloride concentration. Action statements will be proposed by GPUNC. The NRC staff concluded in the meeting that an issuance of a special report rather than an LER by GPUNC would be acceptable following a violation of the Reg. Guide limit for conductivity. The existing limit for conductivity will still remain as an upper bound for the plant operation.

TOPIC NO. XV-16, XV-18 Radiological Consequences of Failure of Small Lines Carrying Primary Coolant and Main Steam Lines Outside Containment

GPUNC will revise Oyster Creek Technical Specification adopting General Electric Standard Technical Specifications for iodine limits before Cycle 10 startup. GPUNC will propose action statements.

TOPIC NO. III-4A Tornado Missiles

GPUNC will provide a portable pump and hoses for shutdown heat removal during a postulated tornado missile incident. The pump and hoses will be housed in the area of Reactor Building which is protected from the tornado missiles and flooding (the pump will also be used as a redundant pump to the existing condensate transfer pump during a postulated maximum hurricane flood -See SEP Topic II-3B in ATTACHMENT II). Since placing of the pump and hoses is not outage related, GPUNC will complete the project by the end of 1984. The project also include revising the plant emergency procedure for tornado incidents.

TOPIC NO. VI-7.A.3 Emergency Core Cooling System Actuation System

TOPIC NO. VI-10A Testing of Reactor Trip System and ESF, Including Response Time Testing

Before Cycle 10 startup GPUNC will revise Technical Specifications to include the emergency condenser logic testing and the reactor trip system testing in accordance with the instruction provided in our current surveillance procedures for both systems.

Table 4.1 Integrated assessment summary

SEP Topic No.	Section No.	Title	Tech. Spec. modifications required from SEP review	Backfit requirements	Licensee agrees	Completion date	PRA rating
II-3.B, II-3.B.1,	4.1(1)	Condensate Transfer Pump Power	No	See SEP Topic No. III-4A** Section No. 4.6.4	yes*	12/84**	-
II-3.C	4.1(2)	Flooding Level Procedures	No	None	-	-	-
	4.1(3)	Canal Water Level Instrumentation	No	Install automatic water level instrumentation in the intake canal.	Yes	Cycle XI	-
	4.1(4)	Isolation Condenser Flooding	No	Demonstrate minimum quantity of water maintained in condensate storage tank sufficient for long-term cooling and include minimum inventory in plant procedures.	Yes	Cycle X	-
	4.1(5)	Low Water Level Shutdown	No	None	-	-	-
	4.1(6)	Hurricane Flooding of Pumps	No	Revise emergency procedures to identify alternate water sources and flow paths should low elevation pumps be flooded.	Yes	Cycle X	-
	4.1(7)	Flooding Elevation	No	Evaluate consequences of offgas building flooding and confirm all other entrance levels above 23.5 ft.	Yes	2/83**	-

See footnotes at end of table.

Table 4.1 (Continued)

SEP Topic No.	Section No.	Title	Tech. Spec. modifications required from SEP review	Backfit requirements	Licensee agrees	Completion date	PRA rating
II-3.C	4.1(8)	Groundwater Elevation	No	See Item 4.4(2).	-	-	-
	4.1(9)	Roof Drains	No	Install scuppers in the reactor building and turbine building parapets.	Yes	Cycle X +6 mo.	-
III-1	4.2	Classification of Structures, Components, and Systems	No	Evaluate design of specified components on a sampling basis, upgrade if necessary, and document classification in FSAR update.	Yes	10 CFR 50.71 (e)(3)(ii)	-
III-2	4.3.1	Reactor Building Steel Structure Above the Operating Floor	No	Analyze and identify any needed upgrading of reactor building upper steel structure for wind loads.	Yes	12/82**	-
	4.3.2	Ventilation Stack	No	Analyze and identify any needed upgrading of ventilation stack for wind loads.	Yes	12/82**	-
	4.3.3	Effects of Failure of Nonseismic Category I Structures	No	Analyze turbine building capacity for wind loads, evaluate consequences of failure and identify any needed upgrading.	Yes	6/83	-
	4.3.4	Components Not Enclosed in Qualified Structures	No	None	-	-	-
	4.3.5	Exterior Masonry Walls	No	None	-	-	-

See footnotes at end of table.

Table 4.1 (Continued)

SEP Topic No.	Section No.	Title	Tech. Spec. modifications required from SEP review	Backfit requirements	Licensee agrees	Completion date	PRA rating	
III-2	4.3.6	Roof Decks	No	Provide analysis of reactor building roof.	Yes	12/82**	-	
				Analyze capacity of turbine building roof to withstand wind loads.	Yes	6/83	-	
	4.3.7	Intake Structure, Oil Tanks, and Diesel Generator Building	No	Analyze capacity to withstand wind and tornado loads and upgrade, if necessary.	Yes	12/82**	-	
	4.3.8	Load Combinations	No	Submit analyses demonstrating wind loads were properly combined with other specified loads.	yes *	6/83**	-	
	4.3.9	Soil and Foundation Capacities	No	None	-	-	-	
	III-3.A	4.4(1)	Hydrostatic Loads (Combination)	No	None	-	-	-
		4.4(2)	Hydrostatic Loads (Short-Duration)	No	Evaluate short-duration hydrostatic loads on and floatation potential of structures essential to safe shutdown in conjunction with flooding emergency procedures (Item 4.1(6)).	Yes	4/83	-
		4.4(3)	Below-Grade Penetration Flooding	No	None	-	-	-

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Table 4.1 (Continued)

Oyster Creek SEP

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SEP Topic No.	Section No.	Title	Tech. Spec. modifications required from SEP review	Backfit requirements	Licensee agrees	Completion date	PRA rating
III-3.C	4.5.1	Intake and Discharge Canals	No	None	-	-	-
	4.5.2	Intake Structure Trash Racks and Intake Screens	No	Formalize existing inspection practice as part of shift turnover or inservice inspection (ISI) procedures until water level modification is complete (Item 4.1(3)).	Yes*	Cycle X**	-
	4.5.3	Roof Drains	No	See Item 4.1(2)	-	-	-
	4.5.4	Inspection Program	No	Develop and implement a formal inspection program for water control structures.	Yes	Cycle X	-
III-4.A	4.6.1	Emergency Diesel Generators and Fuel Oil Day Tank	No	Analyze potential for and consequences of tornado-missile damage of the diesel generator building.	Yes	3/83	-
	4.6.2	Mechanical Equipment Access Area	No	Evaluate the potential for and consequences of tornado-missile impact in the reactor building access door region and identify any necessary corrective actions.	Yes	1/83	-
	4.6.3	Control Room, Reactor Building, and Turbine Building Heating, Ventilating, and Air Conditioning (HVAC) Systems	No	None	-	-	-

See footnotes at end of table.

Table 4.1 (Continued)

SEP Topic No.	Section No.	Title	Tech. Spec. modifications required from SEP review	Backfit requirements	Licensee agrees	Completion date	PRA rating
III-4.A	4.6.4	Condensate Storage Tank, Torus Water Storage Tank, and Service Water and Emergency Service Water Pumps	No	Provide protection for sufficient systems and components to ensure a safe shutdown in the event of damage from tornado missiles. & flooding	Yes**	12/84**	-
III-4.B	4.7	Turbine Missiles	No	Inspect turbine and propose inspection frequency based on results.	Yes	12/84	-
				Justify monitoring program for main steam and reheat control valves.	Yes	2/83*	-
III-4.D	4.8.1	Truck Explosion	No	None	-	-	-
	4.8.2	Aircraft Hazards	No	Evaluate potential for or consequences of aircraft impact.	Yes	3/83	-
III-5.A	4.9(1)	Cascading Pipe Breaks	No	See Item 4.16.	-	-	-
	4.9(2)	Jet Impingement Effects	No	None	-	-	-
	4.9(3)	Drywell Penetration	No	None	-	-	-

See footnotes at end of table.

ATTACHMENT II

Table 4.1 (Continued)

SEP Topic No.	Section No.	Title	Tech. Spec. modifications required from SEP review	Backfit requirements	Licensee agrees	Completion date	PRA rating	
III-5.B	4.10(1)	LOCA Outside Containment	No	Evaluate and identify any needed upgrading of the main steam and reactor water cleanup (RWCU) piping outside containment to preclude an unisolatable break outside containment.	Yes	3/83	-	
	4.10(2)	Emergency Condenser Isolation	No	Evaluate and identify modification to provide leakage detection to ensure flaws would be detected before pipe break occurs.	Yes	Cycle X	-	
	III-6	4.11(1)	Piping Systems	No	Analyze on a sampling basis and verify adequacy of support designs for the seismic resistance of specified piping systems.	Yes	Cycle X	-
		4.11(2)	Mechanical Equipment	No	Demonstrate that the control rod drive system and vessel internals have sufficient capacity to resist a safe shutdown earthquake or take corrective action.	Yes	12/82*	-
	4.11(3)	Electrical Equipment	No	Reevaluate 4160-V switchgear panel anchorage and demonstrate, on a sampling basis, adequacy of electrical panel supports.	Yes	Cycle X start 13 mo.	-	

See footnotes at end of table.

Table 4.1 (Continued)

SEP Topic No.	Section No.	Title	tech. Spec. modifications required from SEP review	Backfit requirements	Licensee agrees	Completion date	PRA rating
III-6	4.11(4)	Ability of Safety-Related Electrical Equipment to Function	No	None	-	-	-
	4.11(5)	Qualification of Cable Trays	No	Provide plan to implement results of SLP Owners Group Program on a plant-specific basis.	Yes	Cycle X	-
III-7.B	4.12	Design Codes, Design Criteria, Load Combinations and Reactor Cavity Design Criteria	No	Evaluate adequacy of original design criteria on a sampling basis for specified structural elements.	Yes	6/83	-
III-8.A	4.13	Loose-Parts Monitoring and Core Barrel Vibration Monitoring	No	None	-	-	Low
III-10.A	4.14(1)	Thermal Overload Bypass	No	Evaluate thermal-overload bypasses for engineered safety features (ESF) valves.	Yes	12/82**	Medium
	4.14(2)	Magnetic Trip Breakers	No	None	-	-	-
IV-2	4.15	Reactivity Control Systems, Including Functional Design and Protection Against Single Failures	No	None	-	-	Low

See footnotes at end of table.

Table 4.1 (Continued)

SEP Topic No.	Section No.	Title	Tech. Spec. modifications required from SEP review	Backfit requirements	Licensee agrees	Completion date	PRA rating
V-5	4.16.1	Airborne Particulate and Gaseous Radioactivity Monitoring	No	Make these monitors operational	Yes*	Cycle X**	Low
				Topic III-5.A analysis.			
	4.16.2	Operability Requirements	Yes	Include leakage detection system limiting conditions for operation in technical Specifications.	Yes**	12/82	-
	4.16.3	Intersystem Leakage	No	None	-	-	-
	4.16.4	Reactor Coolant Inventory Balances	No	None	-	-	-
V-6	4.17	Reactor Vessel Integrity	No	Submit a plan for the material surveillance capsules.	Yes	12/82**	
V-10.B	4.18	Residual Heat Removal System Reliability	No	Review and upgrade, if necessary, shutdown procedures to specify alternate sources of water for primary and secondary makeup, with particular attention to external events.	Yes	Before* Cycle 10 Startup	Low
V-II.A	4.19	Requirements for Isolation of High- and Low-Pressure Systems	No	Demonstrate relief capacity and acceptable consequences, or identify corrective action to protect R-11 system.	Yes	1/83	Low*

See footnotes at end of table.

ATTACHMENT II

Table 4.1 (Continued)

SEP Topic No.	Section No.	Title	Tech. Spec. modifications required from SEP review	Backfit requirements	Licensee agrees	Completion date	PRA rating
V-12.A	4.20	Water Purity of BWR Primary Coolant	Yes	Implement proposed procedure and modify Technical Specifications to be consistent.	Yes*	Cycle X**	-
VI-1	4.21.1	Organic Materials	No	Inspect and repair, if necessary, drywell coatings and recoat the torus.	Yes	Cycle X +6 mo.	-
	4.21.2	Postaccident Chemistry	No	None	-	-	-
VI-4	4.22.1	Locked-Closed Valves	No	Provide schedule to implement physical locking devices to ensure valves are not inadvertently opened.	Yes	11/82	Low
	4.22.2	Remote Manual Valves	No	Provide leakage detection and, if necessary, relocate the operating station for isolation valves in the containment spray and core spray systems.	Yes*	Cycle X**	-
	4.22.3	Valve location	No	None	-	-	-
	4.22.4	Instrument Lines	No	None	-	-	-
	4.22.5	Valve Location and Type	No	None	-	-	-
	4.22.6	Remote Manual Valves	No	None	-	-	-
VI-7.A.3	4.23	Emergency Core Cooling System Actuation System	Yes	Include emergency condenser logic testing in the Technical Specifications.	Yes**	Cycle X**	-

See footnotes at end of table.

ATTACHMENT II
Table 4.1 (Continued)

Oyster Creek SEP

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SEP Topic No.	Section No.	Title	Tech. Spec. modifications required from SEP review	Backfit requirements	Licensee agrees	Completion date	PRA rating
VI-7.A.4	4.24	Core Spray Nozzle Effectiveness	No	None	-	-	-
VI-7.C.1	4.25(1)	AC Automatic Bus Transfers	No	Evaluate the existing automatic bus transfers and identify corrective actions to ensure faulted loads would not be transferred.	Yes*	12/82	Medium
	4.25(2)	DC Automatic Bus Transfers	No	None	-	-	-
VI-10.A	4.26.1	Response-Time Testing	No	None	-	-	Low
	4.26.2	Instrumentation for Reactor Trip System (RTS) Testing	No	Verify all safety logic channels tied to the reactor mode switch are tested by procedure.	Yes	12/82	-
			Yes	Include logic channel testing in technical Specifications.	Yes**	Cycle X**	-
	4.26.3	Dual-Channel Testing	No	None	-	-	-
VII-1.A	4.27(1)	Flux Monitoring Isolation	No	Perform failure mode and effect analysis to determine whether isolation devices are required and identify any needed upgrading.	Yes	12/82	Low
	4.27(2)	Reactor Protection System (RPS) Protective Trip	No	Install Class II protection at the Bus power supply and RPS interface	Yes	Cycle XI	-

See footnotes at end of table.

Table 4.1 (Continued)

SEP Topic No.	Section No.	Title	Tech. Spec. modifications required from SEP review	Backfit requirements	licensee agrees	Completion date	PRA rating
VII-1.B	4.28	Trip Uncertainty and Setpoint Analysis Review of Operating Data Base	No	Install analog trip system.	Yes	Cycle XI	Low
VII-2	4.29	Engineered Safety Features System Control Logic and Design	-	See Item 4.14(1).	-	-	Low
VII-3	4.30	Systems Required for Safe Shutdown	No	Provide minimum inventory for condensate storage tank as a water source for flooding events (Item 4.1(4)) and identify non-ISF equipment in cooldown procedures (Item 4.18).	-	-	Low
VIII-2	4.31	Onsite Emergency Power Systems (Diesel Generator)	No	Modify annunciators to conform to IEEE Std. 279-1971 and bypass two trips (voltage-ampere reactive and reverse power) during accident conditions.	Yes	Cycle XI	Low
VIII-3.B	4.32	DC Power System Bus Voltage Monitoring and Annunciation	No	Schedule installation of specified battery status alarms.	Yes	12/82**	High
VIII-4	4.33	Electrical Penetrations of Reactor Containment	No	None	-	-	-

See footnotes at end of table.

ATTACHMENT II

Table 4.1 (Continued)

SEP Topic No.	Section No.	Title	Tech. Spec. modifications required from SEP review	Backfit requirements	Licensee agrees	Completion date	PRA rating
IX-5	4.34(1)	Restoration of Ventilation	No	Evaluate and revise, if necessary, the loss-of-offsite-power procedures to ensure that restoration of ventilation systems will not overload the diesels.	Yes	3/83	-
	4.34(2)	Reactor Building Ventilation	No	None	-	-	-
	4.34(3)	Core Spray and Containment Spray Pump Ventilation	No	Demonstrate subject pumps can operate with a loss of ventilation, or identify corrective action, as necessary.	Yes	3/83	-
	4.34(4)	Battery, Motor-Generator, and Switchgear Ventilation	No	Evaluate effects of loss of ventilation to the subject rooms and identify any needed upgrading.	Yes	12/83	-
XV-1	4.35	Decrease in Feedwater Temperature, Increase in Feedwater Flow, and Increase in Steam Flow and Inadvertent Opening of a Steam Generator Relief or Safety Valve	No	None	-	-	-
XV-16	4.36	Radiological Consequences of Failure of Small Lines Carrying Primary Coolant Outside Containment	Yes	Implement BWR Standard Technical Specification limit for primary coolant activity.	Yes**	Cycle X**	-

Oyster Creek SEP

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Table 4.1 (Continued)

SEP Topic No.	Section No.	Title	Tech. Spec. modifications required from SEP review	Backfit requirements	Licensee agrees	Completion date	PRA rating
XV-18	4.37	Radiological Consequences of a Main Steam Line Failure Outside Containment	-	See Item 4.36.	-	-	-
XV-19	4.38	Loss-of-Coolant Accidents Resulting From Spectrum of Postulated Pipe Breaks Within the Reactor Coolant Pressure Boundary	No	Develop and implement a preventive maintenance program for the main steam isolation valves, or justify existing maintenance based on operating experience.	Yes	Cycle XI	-
				Submit results of evaluation including testing experience.	Before* Cycle 10 Startup	Cycle X	-

*High for other reasons as explained in the referenced section.

NOTES:

Later - the licensee has not yet responded.

Cycle - refers to the end of a specific refueling outage by core cycle.