

GPU Nuclear Corporation
Post Office Box 388
Route 9 South
Forked River, New Jersey 08731-0388
609 971-4000
Writer's Direct Dial Number:

December 7, 1990

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

Gentlemen:

Subject: Oyster Creek Nuclear Generating Station
Docket No. 50-219
Technical Specification Change Request No. 192

Pursuant to 10 CFR 50.90, GPU Nuclear Corporation, operator of the Oyster Creek Nuclear Generating Station (OCNGS), Provisional Operating License No. DPR-16, requests a change to Appendix A of that license. The attached technical specification change request proposes to allow draining of the 15,000 gallon Emergency Diesel Generator (EDG) fuel oil storage tank for the purpose of internal inspection and, if required, replacement during the upcoming (13R) outage. Inspection of the tank internals cannot be accomplished while it is filled, and draining of the tank will cause the EDG's to become inoperable, which is in conflict with Technical Specification 3.7.

Based on the above, GPUN proposes that the Technical Specifications be revised as indicated in the attachment, to allow the temporary installation of tank trucks with a capacity of not less than 14,000 gallons of fuel oil, connected via the EDG fuel oil fill station. This revision will permit periodic inspection and/or repair as required during periods of cold shutdown.

We request that the NRC staff place an appropriate priority for a timely review of these proposed Technical Specification changes, such that the tank inspection/replacement can be scheduled and completed during the upcoming 13R outage, to begin in 2/91.

This change request has been reviewed in accordance with Section 6.5 of the OCNGS Technical Specification, and utilizing the standard in 10 CFR 50.92, we have concluded that these proposed changes do not constitute a significant hazards consideration.

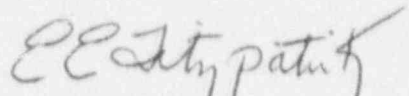
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Pursuant to 10 CFR 50.91(b)(1), a copy of the change request has been sent to the State of New Jersey, Department of Environmental Protection.

Very truly yours,


E. E. Fitzpatrick
Vice President & Director
Oyster Creek

EEF/BMP/plp
(TSCR192)

cc: Administrator
Region I
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

NRC Resident Inspector
Oyster Creek Nuclear Generating Station
Forked River, N.J. 08731

Project Manager
U.S. Nuclear Regulatory Commission
Washington, DC 20555

GPU NUCLEAR CORPORATION
OYSTER CREEK NUCLEAR GENERATING STATION

Provisional Operating
License No. DPR-16

Technical Specification
Change Request No. 192
Docket No. 50-219

Applicant submits, by this Technical Specification Change Request No. 192 to the Oyster Creek Nuclear Generating Station Technical Specifications, a change to pages 3.7-2, 3.7-3, and 3.7-4.

By

E. E. Fitzpatrick

E. E. Fitzpatrick
Vice President and Director
Oyster Creek

Sworn and Subscribe to before me this

7th

day of *December*, 1990.

Judith M. Crowe
A Notary Public of NJ

JUDITH M. CROWE
Notary Public of New Jersey
My Commission Expires 1-25-95

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of)
)
GPU Nuclear Corporation)

Docket No. 50-219

CERTIFICATE OF SERVICE

This is to certify that a copy of Technical Specification Change Request No. 192 for Oyster Creek Nuclear Generating Station Technical Specifications, filed with the U.S. Nuclear Regulatory Commission on December 7, 1990 has this day of December 7, 1990, been served on the Mayor of Lacey Township, Ocean County, New Jersey by deposit in the United States mail, addressed as follows:

The Honorable Debra Madensky
Mayor of Lacey Township
818 West Lacey Road
Forked River, NJ 08731

By *E. E. Fitzpatrick*
E. E. Fitzpatrick
Vice President and Director
Oyster Creek



GPU Nuclear Corporation
Post Office Box 388
Route 9 South
Forked River, New Jersey 08731-0388
609 971-4000
Writer's Direct Dial Number:

December 7, 1990

The Honorable Debra Madensky
Mayor of Lacey Township
818 West Lacey Road
Forked River, New Jersey 08731

Dear Mayor Madensky:

Enclosed herewith is one copy of Technical Specification Change Request No. 192 for the Oyster Creek Nuclear Generation Station Operating License.

This document was filed with the United States Nuclear Regulatory Commission on December 7, 1990.

Very truly yours,

A handwritten signature in cursive script that reads 'E. E. Fitzpatrick'.

E. E. Fitzpatrick
Vice President and Director
Oyster Creek

EEF/BMP/plp
Attachment



GPU Nuclear Corporation
Post Office Box 388
Route 9 South
Forked River, New Jersey 08731-0388
609 971-4000
Writer's Direct Dial Number:

December 7, 1990

Mr. Kent Tosch, Director
Bureau of Nuclear Engineering
Department of Environmental Protection
CN415
Trenton, New Jersey 08625

Dear Mr. Tosch:

Subject: Oyster Creek Nuclear Generating Station
Provisional Operating License No. DPR-16
Technical Specification Change Request No. 192

Pursuant to 10CFR50.91(b)(1), please find enclosed a copy of the subject document which was filed with the United States Nuclear Regulatory Commission on December 7, 1990.

Very truly yours,

A handwritten signature in cursive script, appearing to read 'E. E. Fitzpatrick'.

E. E. Fitzpatrick
Vice President and Director
Oyster Creek

EEF/BMP/plp
Attachment

OYSTER CREEK NUCLEAR GENERATING STATION
PROVISIONAL OPERATING LICENSE NO. DPR-16
DOCKET NO. 50-219
TECHNICAL SPECIFICATION CHANGE REQUEST NO. 192

Applicant hereby requests the Commission to change Appendix A to the above captioned license as discussed below, and pursuant to 10CFR50.91, an analysis concerning the determination of no significant hazards consideration is also presented:

1.0 SECTIONS TO BE CHANGED

Section 3.7

2.0 EXTENT OF CHANGE

Revise the requirement that the Emergency Diesel Generators (EDG's) be declared inoperable with less than 14,000 gallons in the EDG fuel storage tank. Section 3.7 is revised to allow the EDG fuel storage tank to be drained for required inspection and/or repair provided that an alternate source of fuel oil is provided. This would apply only during periods of cold shutdown/refueling with the reactor cavity flooded and the spent fuel pool gates removed, or all fuel in the spent fuel pool, with the spent fuel pool gates installed. The bases for Section 3.7 are revised to incorporate the allowance for temporary tank trucks to replace the EDG fuel storage tank to allow for repair and/or replacement of the tank.

3.0 CHANGES REQUESTED

The requested changes are shown on attached Technical Specification Pages 3.7-2, 3.7-3, 3.7-4.

4.0 DISCUSSION

System Description and Safety Function

The function of the EDGs is to provide an onsite independent standby power source for essential bus sections 1C and 1D. These essential buses provide power to plant equipment necessary to reach or maintain safe shutdown.

The design of the essential buses is such that a single failure will not disable both buses. At least one EDG will be capable of supplying power to its designated essential bus considering a Loss-of-Coolant Accident, loss of offsite power, and a single failure.

Technical Specification 3.7 requires that at least one (1) active and one (1) standby source of power shall be available to maintain safe shutdown conditions. Normally there are six (6) independent sources of power available (the two 230 KV lines, the two 34.5 KV lines and the two EDGs). However, during a shutdown, the 230 KV lines which are connected to the generator cannot be readily used as a source of power. Therefore, during a shutdown, only the 34.5 KV lines (supplied to the startup transformers) and the EDGs are available to meet Technical Specification 3.7.

Power can be supplied from the 230 KV lines via the Main Transformer to the Auxiliary Transformer by "back-feeding". However, this is not a preferred method of operation and is considered an emergency measure only.

Technical Specification 3.7.C.4 states that for the EDGs to be considered operable there shall be a minimum of 14,000 gallons of diesel fuel in the EDG fuel storage tank. Per Technical Specification 3.7.C.4 basis, the required 14,000 gallons is based on a 3-day EDG operational requirement for a loss of offsite power event, or a loss of coolant accident coincident with a loss of offsite power event.

The Fuel Oil System to each generator includes an engine mounted pump which takes suction from an auxiliary fuel day tank located in the unit. The pump provides 4 GPM of fuel to the diesel. The day tank has a capacity of 130 gallons and acts as a reservoir.

The 15,000 gallon EDG fuel storage tank and fuel supply to each EDG meet Seismic I Criteria and are Missile Protected.

The 75,000 gallon fuel oil tank supplies fuel oil to the 15,000 gallon EDG fuel storage tank via a fuel transfer pump and the fuel transfer line. A Technical Specification required minimum level corresponding to 14,000 gallons is maintained in the 15,000 gallon EDG fuel storage tank by use of this line.

In addition, a tanker truck manifold is available outside the EDG compartment allowing direct fueling of the EDGs.

An alternate fuel oil supply path is provided via a connection off of the fuel oil transfer line from the 75,000 gallon fuel oil tank (referred to as the alternate fuel supply line). This alternate fuel supply line was installed to meet Appendix "R" concerns. This separate flow path permits fuel to be supplied from the 75,000 gallon fuel oil tank directly to each EDG. The purpose of this connection is to provide a source of fuel in case of a fire in the 15,000 gallon diesel fuel oil compartment and a loss of offsite power. This alternate path does not require a pump since fuel can be supplied to the EDGs by gravity feed. A level of 8' in the 75,000 gallon fuel oil tank is capable of supplying one (1) EDG for a 24-hour period. At the end of the 24-hour period, the 75,000 gallon tank level would be down to approximately 6'3".

Alternate Temporary Fuel Supply Configuration

This Technical Specification change would allow use of tanker trucks capable of containing at least 14,000 gallons of fuel, as the source of fuel during plant shutdown or refueling. The tanker(s) would be connected with temporary flexible hosing to a tee and to the EDG filling station. Valve alignment would allow a direct flow path from the tanker(s) to each set of EDG transfer pumps.

The tanker trucks fuel alignment up to and including the EDG filling station would not be seismically qualified nor missile protected.

This alternate temporary fuel supply configuration is applicable only during cold shutdown or refueling when the reactor cavity is flooded above elevation 117 feet with the spent fuel pool gates removed, or with all fuel in the spent fuel pool and the spent fuel pool gates installed. These requirements are necessary to ensure that either: communication exists between the reactor cavity and the spent fuel pool with the reactor cavity flooded; or all fuel is in the spent fuel pool (thus allowing decay heat and spent fuel pool cooling). These two (2) conditions are bounded by the analysis in the FSAR which concludes that on loss of spent fuel pool cooling and an initial pool water temperature of 90°F, it would take 14.5 hours for the pool water temperature to reach boiling temperature.

In addition, the plant will be required to be placed in a configuration in which core spray system operability is not required.

Shutdown/Refuel Requirements

A review of the Oyster Creek Technical Specification shows the following systems or components require an active and standby source of power during plant shutdown or refueling:

- Two (2) separate and independent Standby Gas Treatment Systems to maintain secondary containment (Technical Specification 3.5.B.2).
- The Core Spray System shall be available (Technical Specification 3.4.A).
- The Containment Spray System shall be available (Technical Specification 3.4.C) except when primary containment is not required.
- Emergency Service Water System shall be available (Technical Specification 3.4.C).

Offsite Power Loss Due to Weather or Seismic Event

During a loss of offsite power event while the plant is shutdown or refueling the primary concern would be spent fuel pool heatup and decay heatup. On loss of offsite power the EDGs would start and supply power to essential bus sections 1C and 1D. The essential bus sections 1C and 1D would supply power to the spent fuel pool cooling and RBCCW Systems to maintain spent fuel pool and decay heat removal. Offsite power must be regained or an EDG fuel oil resupply must be established within the 3 days in order to provide continued power to the essential buses and prevent spent fuel and decay heatup.

A tornado may cause a loss of offsite power event by damaging the startup transformers. In addition, the same tornado may damage the temporary tankers, the hosing connection or the EDG fill station. Under these conditions both offsite and onsite power may be temporarily lost.

This would result in a loss of the spent fuel pool cooling system and loss of RBCCW. This would also result in a loss of availability of the Core Spray System, Containment Spray System, and the Emergency Service Water System. In addition, secondary containment will have been accidentally lost because of the unavailability of the standby gas treatment system.

Upon accidental loss of secondary containment, the plant will take action per Technical Specification 3.5.B.1.1 and place the plant in configuration in which environmental releases cannot occur. Therefore, under these conditions, the primary concern in terms of offsite and onsite power would be spent fuel heatup and decay heatup.

A seismic event may cause a loss of offsite power event by damaging the startup transformers. The same seismic event may damage the temporary tankers, the hosing connectors or the EDG fill station. Under these conditions, both offsite and onsite power may be temporarily lost.

This would result in a loss of spent fuel pool cooling and loss of RBCCW. This would also result in a loss of availability of the Core Spray System, Containment Spray System, and the Emergency Service Water System.

In addition, secondary containment will have been accidentally lost because of the unavailability of the standby gas treatment system.

Upon accidental loss of secondary containment, the plant will take action per Technical Specification 3.5.B.1.1 and place the plant in configuration in which environmental releases cannot occur. Therefore, under these conditions, the primary concern in terms of offsite and onsite power would be spent fuel heatup and decay heatup.

Fuel Pool Heatup

Per FSAR chapter 9.1.3.3 if all fuel pool cooling is lost with the maximum abnormal heat load in the pool and an initial pool water temperature of 90°F, it would take 14.5 hours for the pool water temperature to reach boiling temperature. It would take an additional 83.5 hours before the top of the storage racks would begin to be uncovered.

Mitigating Measures

Power restoration via a 34.5 KV transmission line from JCP&L's Yard Creek Pump Storage Station or Atlantic Electric's Combustion Turbine can be restored within 2 hours. This is based on JCP&L's periodic Emergency Restoration Drills.

This time period is much less than the amount of time it would take (based on design basis heat loads) to heatup the spent fuel pool to boiling temperature (14.5 hours).

In addition, it is reasonable to assume that the oil truck manifold could be repaired and a fuel oil tanker truck obtained within 6 to 12 hours. The tanker truck could then directly feed the EDGs and power restored to essential loads.

In addition, if the alternate fuel supply from the 75,000 gallon fuel storage tank is undamaged and available, then this fuel supply would be capable of supplying one diesel for 24 hours.

In addition, if the 230 KV lines and main transformers are undamaged, the main transformers can be aligned to the auxiliary transformers and power would be "back-fed" to the essential buses.

Also, the fire system (if undamaged) may be available (powered by its own independent diesel) to provide a source of cooling water.

When power is restored to the essential buses, spent fuel pool cooling and decay heat cooling can be provided by the above systems.

A tornado may cause a loss of offsite power and temporary loss of onsite power event. This may result in loss of power to the new refueling bridge and the fuel hoist while a fuel bundle is in transit.

The fuel hoist is designed with a safety brake. The safety brake consists of a solenoid and pawl roller ratchet which on loss of power locks the fuel grapple in place. Therefore, the bundle cannot drop into the core or spent fuel pool.

In addition, the design of the new fuel bridge is such that the bridge and fuel hoist can be moved manually without power. Therefore, following lost power a bundle in transit could be placed back into the spent fuel pool. Therefore, a tornado is not expected to cause a refueling accident.

5.0 DETERMINATION

This proposed Technical Specification change will not affect nuclear safety nor safe plant operation. All required essential equipment will be aligned with an active and standby source of power. Safe shutdown conditions will be maintained as defined and described in the FSAR and Technical Specification basis. Therefore, the proposed amendment will not:

- A. Involve a significant increase in the probability or consequences of an accident previously evaluated.

The probability of occurrence of an accident previously evaluated is not affected.

The design basis events for which the 15,000 gallon tank was designed are loss of offsite power, a LOCA coincident with loss of offsite power, and a refueling accident. The probability of these events are independent of the changes allowed by this Technical Specification change.

The consequences of an accident previously evaluated remain unchanged.

Evaluation of the applicable Design Basis accidents result in no change in consequence to the public.

B. Create the possibility of a new or different kind of accident from any accident previously evaluated.

The possibility of a new or different kind of accident from any previously evaluated is not created.

The 15,000 gallon fuel oil tank and transfer system are designed to meet seismic I criteria and are tornado missile protected. With the Technical Specification change in place, the temporary fuel truck configuration would not meet seismic criteria and would not be missile protected.

The loss of off-site power, initiated by either a meteorological or seismic event, which also causes loss of the temporary tanks, would result in a loss of the spent fuel pool cooling system. The spent fuel pool has adequate volume to serve as a heat sink for the resulting spent fuel heatup. With a start point of 90°F it would take approximately 14.5 hours for the pool to reach boiling temperature, assuming the maximum abnormal heat load. It would take an additional 83.5 hours for the top of the spent fuel storage racks to become uncovered.

This time frame is more than adequate to mitigate the event by restoring fuel oil supply by the repair of the manifold and/or by bringing another tanker truck on site, as required.

An additional source of water, provided by the fire protection system, (if undamaged) is available to the spent fuel pool. Water flow is provided by a diesel engine, which is independent of off-site power.

C. Involve a significant reduction in a margin of safety.

The margin of safety as defined in the Technical Specifications remains unaffected.

The basis for the Technical Specification 3.7.C.4 which ensures that 14,000 gallons of fuel is available for the EDGs is documented on page 3.7-3 of the Technical Specifications as follows:

- The load requirements for a loss of offsite power coincident with loss of coolant (LOCA) event would require 12,840 gallons of fuel oil for a 3 day supply.
- The load requirement for a loss of offsite power event would require 12,410 gallons for a 3 day supply.
- The load requirement for a loss of offsite power event with one essential bus inoperable would require 9,790 gallons for a 3 day supply.

The 14,000 gallon requirement ensures margin to the above design basis events. With the Technical Specification change approved and if temporary tankers are utilized during plant shutdown or refueling, the 14,000 gallons would still be required.

This proposed Technical Specification change will not violate other Technical Specification requirements nor their bases.

6.0 IMPLEMENTATION

It is requested that the amendment authorizing this change become effective for operating Cycle 13 (i.e. by February 15, 1991).