Exelon Generation®

10 CFR 50.90
10 CFR 50.91(a)(5)

JAFP-21-0052
June 13, 2021

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

James A. FitzPatrick Nuclear Power Plant
Renewed Facility Operating License No. DRP-59
NRC Docket No. 50-333

SUBJECT: Emergency License Amendment Request - One Time Extension to TS 3.5.1 Condition A, TS 3.6.1.9 Condition A, and TS 3.6.4.1 Condition A Completion Time to Support Residual Heat Removal (RHR) Pump Motor Replacement

REFERENCES:

1. Letter from D. Gudger (Exelon Generation Company, LLC) to U.S. Nuclear Regulatory Commission, "Emergency License Amendment Request - One Time Extension to TS 3.5.1 Condition A, TS 3.6.1.9 Condition A, and TS 3.6.4.1 Condition A Completion Time to Support Residual Heat Removal (RHR) Pump Motor Replacement," dated June 12, 2021.

2. Letter from D. Gudger (Exelon Generation Company, LLC) to U.S. Nuclear Regulatory Commission, "Emergency License Amendment Request - One Time Extension to TS 3.5.1 Condition A, TS 3.6.1.9 Condition A, and TS 3.6.4.1 Condition A Completion Time to Support Residual Heat Removal (RHR) Pump Motor Replacement," dated June 13, 2021.

In the Reference 1 letter, pursuant to 10 CFR 50.90, "Application for amendment of license, construction permit, or early site permit," Exelon Generation Company, LLC (Exelon) requested approval for proposed changes to the Technical Specifications (TS), Appendix A of Renewed Facility Operating License No. DPR-59 for James A. FitzPatrick Nuclear Power Plant. The proposed changes are being requested on an emergency basis pursuant to 10 CFR 50.91(a)(5). The proposed amendment would revise Technical Specifications (TS) 3.5.1, ECCS – Operating Condition A and TS 3.6.4.1, Secondary Containment, Condition A, and TS 3.6.1.9 RHR Containment Spray System. Reference 2 provided supplemental information discussed with the Nuclear Regulatory Commission (NRC) on June 12, 2021.

This letter provides additional supplemental information discussed with the NRC on June 13, 2021. The supplemental information is identified with revision bars.

Exelon has reviewed the information supporting a finding of no significant hazards consideration, and the environmental consideration, that were previously provided to the NRC in the Reference 1 letter. The supplemental information provided in this response does not affect the bases for concluding that the proposed license amendment does not involve a significant hazards consideration under the standards set forth in 10 CFR 50.92. In addition, Exelon has concluded that the information provided in this supplemental response does not affect the bases for concluding that neither an environmental impact statement nor an environmental assessment needs to be prepared in connection with the proposed amendment.

In accordance with 10 CFR 50.91, "Notice for public comment; State consultation," paragraph (b), Exelon is notifying the State of New York of this emergency application for license amendment by transmitting a copy of this letter and its attachments to the designated State Official.

There are no regulatory commitments contained in this submittal.

If you have any questions or require additional information, please contact Enrique Villar 610-368-5135.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 13th day of June 2021.

Respectfully,

David T. Gudger

David Gudger
Sr. Manager, Licensing
Exelon Generation Company, LLC

Attachments: 1. Evaluation of Proposed Change
2. Proposed Technical Specifications Markup Pages

ATTACHMENT 1

Emergency License Amendment Request

James A. FitzPatrick Nuclear Power Plant
Renewed Facility Operating License No. DPR-59
Docket No. 50-333

EVALUATION OF PROPOSED CHANGES

Subject: **Emergency License Amendment Request - One Time Extension to TS 3.5.1 Condition A, TS 3.6.1.9 Condition A, and TS 3.6.4.1 Condition A Completion Time to Support Residual Heat Removal (RHR) Pump Motor Replacement**

1.0 SUMMARY DESCRIPTION

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1.0 SUMMARY DESCRIPTION

Pursuant to 10 CFR 50.90, "Application for amendment of license, construction permit, or early site permit," Exelon Generation Company, LLC (Exelon) is requesting approval for proposed changes to the Technical Specifications (TS), Appendix A of Renewed Facility Operating License No. DPR-59 for James A. FitzPatrick Nuclear Power Plant. The proposed changes are being requested on an emergency basis pursuant to 10 CFR 50.91(a)(5).

On June 10, 2021, at approximately 0330 EDT, JAF Residual Heat Removal Pump Motor 10P-3A tripped immediately (<1s) on start during surveillance testing, bringing in annunciator 09-3-1-5 RHR PMP 10P-3A TRIP OR CNTRL PWR LOSS. Annunciator 09-8-1-5 (“DTR Operation”) alarmed concurrently. The motor tripped on relay 10-86-1RHRA01 “RHR PUMP 10 P-3A MOTOR OVERCURRENT LOCKOUT RELAY”.

The comprehensive troubleshooting and preparations for repair has been time-consuming; however, JAF has demonstrated due diligence by safely performing troubleshooting/testing and maintenance activities around the clock. JAF expects that repair and testing will extend past the current 7-day Completion Time stated in TS; therefore, Exelon requests an extension of the Completion Time for TS 3.5.1 ECCS - Operating, from 7 days to 30 days. The additional time is necessary to make careful, prudent repairs and operability testing with appropriate compensatory measures in place to return the JAF “A” RHR pump to Operable status. In support of returning the “A” RHR pump to an operable status, Exelon is also requesting a one-time revision to the following Technical Specification Action Statement Completion Times:

TS 3.6.1.9 RHR Containment Spray System, Condition A, from 7 days to 23 days
TS 3.6.4.1 Secondary Containment, Condition A, from 4 hours to 30 hours.

Additionally, Exelon is requesting certain Surveillances Requirements not to be required to be performed during the extended A RHR motor replacement period. Further explanation is within Section 3.5.

The requested extension TS 3.6.1.9 is in support of the travel path selected while rigging the “A” RHR pump. The site has walked down the required travel path of the motor and identified items which will interfere with the ability to safely transport the motor to and from its current location. 10FT-137A RHR ‘A’ Torus Spray Flow Transmitter and a portion of the associated tubing will have to be removed. Per TS 3.6.1.9 bases, the instrumentation associated with validating Torus Spray Flow is required to maintain the associated Torus Spray system OPERABLE. At the completion of this evolution, the one-time extension to TS 3.6.1.9 will expire.

The requested extension for TS 3.6.4.1 is in support of the replacement of the “A” RHR pump motor. The “A” RHR pump is located inside the secondary containment. Because of limited space in the secondary containment and to minimize the loss of secondary containment integrity, Exelon will utilize the extension to remove the failed motor from secondary containment and move the new motor into the area. At the completion of this activity, i.e. the failed motor is removed from secondary containment, the new motor is moved inside secondary containment, and the floor plug is installed and tested, the one-time extension to TS 3.6.4.1 will expire.

Note that the RHR System functions in several modes of operation, as discussed further below in Section 2.5.

2.0 DETAILED DESCRIPTION

2.1 Emergency Circumstances

Why the Condition Occurred:

On June 7, 2021, at 20:00 EDT, JAF entered a planned maintenance window that involved offline motor testing and internal motor termination box inspection of the “A” RHR Pump Motor. On June 10, 2021, at 0330 EDT, during attempted start of “A” RHR Pump during return to service test, ST-2AL, RHR Loop A Quarterly Operability Test (IST), the “A” RHR pump tripped due to an overcurrent condition. JAF immediately commenced testing and troubleshooting activities to determine the cause of failure of the “A” RHR pump.

The most probable cause of the 10P-3A(M) Residual Heat Removal (RHR) Pump “A” Motor trip is a fault in the motor windings. Troubleshooting found that the Digital Transient Recorder was triggered on 71-T4 Y winding neutral overcurrent. Unsatisfactory insulation resistance readings on 10P-3A(M) RHR Pump “A” Motor further support a ground fault causing a breaker trip. Field connections to the “A” RHR motor were inspected and found satisfactory which further supports that the fault is internal to the motor. Following the pump trip, offline motor testing was performed to support troubleshooting on the “A” RHR pump motor with unsatisfactory results.

The troubleshooting results indicated that a replacement of the pump motor was required. JAF initiated prompt actions to obtain a replacement motor since one was not available at the site nor within any of the Exelon fleet sites. A replacement motor was found from vendor Pool Inventory Management (PIM) in Tennessee. The RHR motor was shipped to JAF on June 10, 2021 and expected to arrive at JAF on Sunday June 13, 2021.

Troubleshooting identified additional potential causes of the RHR Pump “A” Motor trip which can only be evaluated based on results of the internal inspection of the motor. The additional causes are associated with the motor and troubleshooting results indicate these are unlikely, however motor disassembly and inspection results will confirm or refute them.

The required Completion Time for Condition A for TS 3.5.1 of seven days is currently applicable and will expire on June 14, 2021 at 20:00 EDT. JAF cannot finish replacement of the “A” RHR pump motor by that time, and neither a routine nor an exigent amendment can be processed prior to the current expiration date.

2.2 Extent of Condition:

JAF has begun the causal analysis process as driven by the corrective action program. The causal analysis team is engaging fleet and industry subject matter experts to aid in driving to cause and actions to address the potential Extent of Condition (EOC).

As a preliminary EOC review, the team chose large safety related motors such as the other RHR pump motors, and Core Spray pump motors due to similar size, ratings, and duty cycle.

With regards to the RHR pump motors, an initial review of maintenance history of all RHR pumps was performed to look for adverse trends or other indicators of failure that were

missed in previous analyses. None were noted. Offline Motor Testing was last performed as follows:

10P-3A – January 2014	10P-3B – March 2021
10P-3C – November 2016	10P-3D – March 2021

All motors had satisfactory test results.

The team then reviewed the operational history of the JAF RHR system. No adverse trends were noted pump or motor performance. Of note, the review determined that the “A” RHR pump has run 257% more than the average of the three (3) remaining RHR pumps. All RHR pump motors are original plant equipment.

A review of maintenance history for the Core Spray pump motors was performed. The Core Spray Pump run times amount to less than 200 hours over the life of the plant. Similar failure of the Core Spray pumps is not a likely occurrence.

Offline motor testing was last performed on the “A” core spray pump motor in November 2016 and the “B” core spray pump motor in September 2016 with both motors having satisfactory test results. Therefore, the “A” and “B” core spray pump motors currently show no indications of degradation.

2.3 Why this Situation Could Not be Avoided:

JAF followed the prescribed maintenance strategy, required surveillance testing per site procedures and requirements.

A review of the surveillance data for the “A” RHR Pump/Motor was performed to evaluate for indicators of potential degradation. All data reviewed was within Exelon standards, and non-compliances or adverse trends entered into the corrective action process.

A review of maintenance history of the "A" RHR Pump/Motor was performed. The data collected as part of the prescribed preventative and predictive maintenance performed from 2014 until present showed no indication of degradation. The last offline motor test was performed was in 2014 with satisfactory results.

From 2015 to 2020 the "A" RHR Pump has had over 1000 hours of run time with no indication of a degraded motor condition.

Preventive maintenance of motor lead junction box inspection and non-intrusive motor inspection were also performed satisfactory within the required PM dates.

ST-2AL, RHR Loop A Quarterly Operability Test (IST), demonstrates operability of the “A” RHR Pump and Motor was last performed on 3/19/21 with satisfactory results. Predictive maintenance including vibration measurements and thermography readings have shown no adverse trends.

No degraded conditions or parameters outside acceptable values have been observed. In addition, on 02/28/2020 motor oil sample was analyzed, and the results were satisfactory.

2.4 Summary of Emergency Circumstances:

In summary, the emergency circumstances resulted from the unforeseen failure of the JAF "A" RHR pump during its return to operability during the scheduled maintenance window. The required Completion Time for Condition A for TS 3.5.1 of seven days is currently applicable and will expire on June 14, 2021 at 20:00 EDT. JAF cannot complete the required repair and TS required testing by that time, and neither a routine nor an exigent amendment can be processed prior to June 14, 2021 at 20:00 EDT.

As described above JAF has performed due diligence by safely performing testing and maintenance activities around the clock. The repair plan included many provisions to ensure timely execution of the work including the use of experienced personnel, pre-assembled components, and pre-staging of equipment. Therefore, efforts were made to minimize the likelihood for delays due to job planning or preparation. Contingencies were developed and carried out for the existing problems.

JAF requests an expedited review of the proposed license amendment in accordance with the provisions of 10 CFR 50.91(a)(5) based on avoiding the need to shut down the JAF Unit without an approved amendment. If the proposed license amendment is not approved, JAF will be required to enter TS 3.5.1 Condition B and commence a shutdown on June 14, 2021 at 20:00 EDT.

On the basis of the discussion herein, JAF has determined that emergency circumstances exist, has used its best efforts to make a timely application, and did not knowingly cause the emergent situation.

2.5 System Design and Operation

Residual Heat Removal System (RHR)

The major equipment of the RHR System consists of two heat exchangers with steam condensing capability and four main system pumps. The major equipment of the RHR system consists of two heat exchangers and four RHR pumps. The RHR Service Water system provides cooling water to the heat exchangers.

The RHR pumps are sized on the basis of the required flow during the Low-Pressure Core Injection (LPCI) mode of operation. The heat exchangers are sized on the basis of the required heat load during the shutdown cooling mode.

One loop consisting of one heat exchanger, two RHR pumps in parallel, and associated piping is physically separated from the second loop to minimize the possibility of a single physical event causing the loss of the entire system. Provisions exist to cross connect the two loops of the RHR System by a single header making it possible to supply either loop from the pumps in the other loop.

In general, the RHR system is designed to eight modes of operation to satisfy all the objectives and bases. The modes are summarized on the following table.

Function	Action	Description
Low Pressure Coolant Injection (LPCI)	Accident safety	Restore and maintain reactor Coolant Injection* vessel water level after a LOCA.
Containment Spray	Post-accident safety	Limit temperature and pressure in the torus and dry well after a LOCA
Unlimited make-up	Long-term accident Maintain reactor water level recovery	Maintain reactor water level after a LOCA by providing a pathway for the transfer of service water, from the intake structure to the reactor.
Suppression Cooling	Planned operation	Remove heat from the suppression pool inventory
Fuel Pool Cooling	Planned operation	Remove heat from the spent fuel pool
Shutdown cooling	Planned operation	Remove decay and residual heat from the reactor core to achieve and maintain a cold shutdown condition
Minimum flow	Equipment Protection	Prevent pump damage when operating against closed discharge valve.
Test	System test	Test RHR System during plant operation.

A more detailed description of these modes of operations can be found in the JAF FSAR Section 4.8.

Emergency Core Cooling System (ECCS)

The ECCS safety design Bases is as follows:

1. The Emergency Core Cooling Systems (ECCS) are designed with diversity, reliability, and redundancy to provide adequate cooling of the reactor core under abnormal and accident conditions.
2. In the event of a LOCA, the ECCS are designed to remove residual heat, including stored heat and heat generated due to radioactive decay, such that excessive fuel clad temperature is prevented.

3. The ECCS provide for continuity of core cooling over the complete range of postulated break sizes in the Reactor Coolant Pressure Boundary piping.
4. The ECCS are initiated automatically by conditions which indicate the potential inadequacy of core coolant coverage.
5. Operation of the ECCS is not dependent upon the availability of offsite power supplies or the main generating system of the plant.
6. Action taken to effect primary containment integrity does not negate the ability to achieve core cooling.
7. To ensure that the ECCS operate effectively, each component required to operate in a LOCA is testable during normal plant operation.
8. The components of the ECCS within the reactor vessel are designed to withstand the transient mechanical loadings during a LOCA without adversely affecting the required emergency cooling flow.
9. The physical effects of the design basis LOCA do not prevent the ECCS from effectively cooling the core. These effects are missiles, fluid jets, high temperature, pressure, humidity and radiation, hydrodynamic loads in the suppression chamber, and debris generation and transport to the suppression pool.
10. The ECCS are capable of withstanding design bases seismic and transient mechanical forces concurrently without impairment of function.
11. Reliable sources of water for the ECCS are provided. An initial source of water, from the two condensate storage tanks, is available for high pressure injection by the RCIC and HPCI following a small break LOCA. An additional source of water is the suppression pool, which is also a closed cooling water path established during ECCS operation following a LOCA. An ultimate source of water is also provided to pump in Lake Ontario water if all the other water inventory is unavailable.

The ECCS is designed, in conjunction with the primary and secondary containment, to limit the release of radioactive materials to the environment following a loss of coolant accident (LOCA). The ECCS uses two independent methods (flooding and spraying) to cool the core during a LOCA. The ECCS network consists of the High-Pressure Coolant Injection (HPCI) System, the Core Spray (CS) System, the low-pressure coolant injection (LPCI) mode of the Residual Heat Removal (RHR) System, and the Automatic Depressurization System (ADS). The suppression pool provides the required source of water for the ECCS. Although no credit is taken in the safety analyses for the condensate storage tanks (CSTs), they are capable of providing a source of water for the HPCI and CS systems.

On receipt of an initiation signal, ECCS pumps automatically start; simultaneously, the system aligns and the pumps inject water, taken either from the CSTs or suppression pool, into the Reactor Coolant System (RCS) as RCS pressure is overcome by the discharge pressure of the ECCS pumps. Although the system is initiated, ADS action is delayed, allowing the operator to interrupt the timed sequence if the system is not needed. The HPCI pump discharge pressure almost immediately exceeds that of the RCS, and the pump injects coolant into the vessel to cool the core. If the break is small, the HPCI System will maintain coolant inventory as well as vessel level while the RCS is still pressurized. If HPCI fails, it is backed up by ADS in combination with LPCI and CS. In this

event, if the ADS timed sequence is allowed to time out, the selected safety/relief valves (S/RVs) would open, depressurizing the RCS, thus allowing the LPCI and CS to overcome RCS pressure and inject coolant into the vessel. If the break is large, RCS pressure initially drops rapidly and the LPCI and CS cool the core.

Water from the break returns to the suppression pool where it is used again and again. Water in the suppression pool is circulated through a heat exchanger cooled by the RHR Service Water System. Depending on the location and size of the break, portions of the ECCS may be ineffective; however, the overall design is effective in (continued) cooling the core regardless of the size or location of the piping break. All low pressure ECCS subsystems are designed to ensure that no single active component failure will prevent automatic initiation and successful operation of the minimum required ECCS equipment.

The CS System is composed of two independent subsystems. Each subsystem consists of a motor driven pump, a spray sparger above the core, and piping and valves to transfer water from the suppression pool to the sparger. The CS System is designed to provide cooling to the reactor core when reactor pressure is low. Upon receipt of an initiation signal if preferred power is available, the CS pumps in both subsystems will automatically start after a time delay of approximately 11 seconds. If a CS initiation signal is received when preferred power is not available, the CS pumps start approximately 11 seconds after the associated bus is energized by the emergency diesel generators (EDGs). When the RPV pressure drops sufficiently, CS System flow to the RPV begins. A full flow test line is provided to route water to the suppression pool to allow testing of the CS System without spraying water in the RPV.

LPCI is an independent operating mode of the RHR System. There are two LPCI subsystems, each consisting of two motor driven pumps and piping and valves to transfer water from the suppression pool to the RPV via the corresponding recirculation loop. The two LPCI subsystems can be interconnected via the RHR System cross tie line; however, this line is maintained closed to prevent loss of both LPCI subsystems during a LOCA. The line is isolated by chain-locking the 10MOV-20 valve in the closed position with electric power disconnected from its motor operator, and maintaining the manually operated gate valve (10RHR-09) locked in the closed position. The LPCI subsystems are designed to provide core cooling at low RPV pressure. Upon receipt of an initiation signal if preferred power is available, LPCI pumps A and D start in approximately one second. LPCI pumps B and C are started in approximately 6 seconds to limit the loading of the preferred power sources. With a loss of preferred power LPCI pumps A and D start in approximately one second after the associated bus is energized by the EDGs, and LPCI pumps B and C start approximately 6 seconds after the associated bus is energized by the EDGs to limit the loading of the EDGs. If one EDG should fail to force parallel, an associated LPCI pump will not start (LPCI pump B or C) to ensure the other EDG in the same EDG subsystem is not overloaded. RHR System valves in the LPCI flow path are automatically positioned to ensure the proper flow path for water from the suppression pool to inject into the recirculation loops. When the RPV pressure drops sufficiently, the LPCI flow to the RPV, via the corresponding recirculation loop, begins. The water then enters the reactor through the jet pumps. A full flow test line is provided for each LPCI subsystem to route water from the suppression pool, to allow testing of the LPCI pumps without injecting water into the RPV. These test lines also provide suppression pool cooling capability, as described in LCO 3.6.2.3, "RHR Suppression Pool Cooling."

The HPCI System consists of a steam driven turbine pump unit, piping, and valves to provide steam to the turbine, as well as piping and valves to transfer water from the suction source to the core via the feedwater system line, where the coolant is distributed within the RPV through the feedwater sparger. Suction piping for the system is provided from both CSTs and the suppression pool. Pump suction for HPCI is normally aligned to both CSTs to minimize injection of suppression pool water into the RPV. However, if the water supply is low in both CSTs, or if the suppression pool level is high, an automatic transfer to the suppression pool water source ensures a water supply for continuous operation of the HPCI System and ensures the containment loads do not exceed design values. The steam supply to the HPCI turbine is piped from the "C" main steam line upstream of the inboard main steam isolation valve.

The HPCI System is designed to provide core cooling for a wide range of reactor pressures (150 psig to 1195 psig). Upon receipt of an initiation signal, the HPCI turbine stop valve and turbine control valve open simultaneously and the turbine accelerates to a specified speed. As the HPCI flow increases, the turbine governor valve is automatically adjusted to maintain design flow. Exhaust steam from the HPCI turbine is discharged to the suppression pool. A full flow test line is provided to route water to the CSTs to allow testing of the HPCI System during normal operation without injecting water into the RPV.

The ECCS pumps are provided with minimum flow bypass lines, which discharge to the suppression pool. The valve in the HPCI line automatically opens to prevent pump damage due to overheating when other discharge line valves are closed. The minimum flow bypass valves for the LPCI and CS pumps are normally open for the same purpose. To ensure rapid delivery of water to the RPV and to minimize water hammer effects, all ECCS pump discharge lines are filled with water. The LPCI and CS System discharge lines are kept full of water using a "keep full" system (jockey pump system). The HPCI System is normally aligned to the CSTs. The height of water in the CSTs is sufficient to maintain the piping full of water up to the first isolation valve. The relative height of the feedwater line connection for HPCI is such that the water in the feedwater lines keeps the remaining portion of the HPCI discharge line full of water. Therefore, HPCI does not require a "keep full" system.

The ADS consists of 7 of the 11 S/RVs. It is designed to provide depressurization of the RCS during a small break LOCA if HPCI fails or is unable to maintain required water level in the RPV. ADS operation reduces the RPV pressure to within the operating pressure range of the low pressure ECCS subsystems (CS and LPCI), so that these subsystems can provide coolant inventory makeup. Each of the S/RVs used for automatic depressurization is equipped with one air accumulator and associated inlet check valves. The accumulator provides the pneumatic power to actuate the valves. One of the ADS valves shares an accumulator with a non-ADS valve.

Secondary Containment

The secondary containment functions as described in the Technical Specifications are:

1. The function of the secondary containment is to contain, dilute, and hold up fission products that may leak from primary containment following a Design Basis Accident (DBA).
2. Designed to reduce the activity level of the fission products prior to release to the environment and to isolate and contain fission products that are released during

certain operations that take place inside primary containment in conjunction with operation of the Standby Gas Treatment (SGT) system and certain valves whose lines penetrate secondary containment.

3. Surrounds the primary containment and is designed to provide secondary containment for postulated loss-of-coolant accidents inside the primary containment.

4. Surrounds the primary containment and is designed to provide primary containment for the postulated refueling accident.

Containment Spray

The Containment Spray functions as described in the Technical Specifications Bases are:

1. Mitigate the effects of bypass leakage and to prevent the drywell temperature from exceeding its design value of 309 F for a significant period of time and to ensure the safety equipment can perform its associated function during a design basis event.

2. Each subsystem consists of a suction line from the suppression pool, two RHR pumps, a heat exchanger, and its associated spray header embedded in and protected by the primary shield wall located in the drywell and to a common spray header suspended in the suppression chamber above the minimum water level.

Of note, the Containment Spray system will remain available to perform its design function. As a result of not having a separate instrumentation specification in the Technical Specifications, the system will be declared INOPERABLE as a result of the inability to measure flow to the Torus Spray header as described in the TS Bases for LCO 3.6.1.9.

2.6 Current Technical Specification Requirements

Condition A of TS 3.5.1 requires restoration of an inoperable RHR pump to operable status within 7 days.

Condition A of TS 3.6.1.9 requires restoration of an inoperable Containment Spray system to operable status within 7 days.

Condition A of TS 3.6.4.1 requires restoration of secondary containment integrity within 4 hours.

2.7 Reason for the Proposed Changes

Section 1 above describes the reason for the request as well as the length of the extension relative to TS 3.6.4.1 Condition A, and TS 3.6.1.9 Condition A.

With respect to TS 3.5.1, despite diligent and prudent efforts, JAF has been unable to return the JAF “A” RHR pump to operable service and now expects it will be unable to do so by expiration of the Completion Time for TS 3.5.1, Condition A (i.e., 20:00 EDT, June 14, 2021). The table below summarizes the maintenance tasks to be performed for “A” RHR pump and the duration of each task associated with the assumed LCO windows. Please note that the durations below include contingencies; thus, JAF has confidence that the “A” RHR pump will be restored within this timeframe.

	TS LCO Entries**	Start Time/ End Time	Duration Hours
1*	A RHR TS 3.5.1 LCO	6/7/21 20:00 7/5/21 01:30	654 (27.25d)
2	Containment Spray TS 3.6.1.9 LCO	6/14/21 07:00 6/28/21 07:30	337 (14.04d)
3	Secondary Containment TS 3.6.4.1 LCO (Inoperable to lift old pump motor out and place new pump motor into secondary containment)	6/25/21 21:30 6/26/21 18:30	21 (0.875d)

*Currently in TS LCO.

**Start and End Times are subject to minor float but will not surpass the requested extensions.

Major Work Milestones		TS LCO Entered		
Time	Action	3.5.1	3.6.1.9	3.6.1.4
6/12 1800	Determ existing motor and Uncouple existing motor	X		
6/15 1800	Motor EC Complete	X		
6/16 0900	Rigging Plan Complete	X		
6/23 2100	Structural Changes	X	X	
6/26 0130	Removal of Existing Motor	X	X	X
6/28 0130	Install of New Motor	X	X	X
6/29 1330	PMT of New Motor	X	X	
7/4 2330	Reinstall Interferences and Structures	X	X	
7/5 0730	Operability Test and Exit of TS LCO 3.5.1.A	X		

Approval of the proposed change would allow JAF to continue activities to restore the “A” RHR pump to Operable without undue risk as demonstrated in Section 3.3.

2.8 Description of the Proposed Change

The following changes are proposed to the JAF TS:

The following revision is proposed to TS 3.5.1.

The Completion Time of 7 days will be asterisked (*) with the following note added to the bottom of the TS page:

* The Completion Time to return the "A" RHR pump to OPERABLE is extended to 30 days, contingent on implementation of Compensatory Actions stated in Section 3.4 of letter JAFP-21-0052, dated June 13, 2021, as a one-time only change ending upon restoration the “A” RHR pump to OPERABLE, or on July 7, 2021 at 20:00 hours.

The following revision is proposed to TS 3.6.1.9.

The Completion Time of 7 days will be asterisked (*) with the following note added to the bottom of the TS page:

*The Completion Time is extended to 23 days, in support of the “A” RHR pump repairs, contingent on implementation of Compensatory Actions stated in Section 3.4 of letter JAFP-21-0052, dated June 13, 2021, as a one-time only change ending upon restoration of the “A” RHR pump to OPERABLE, or on July 7, 2021 at 20:00 hours.

The following revision is proposed to TS 3.6.4.1

The Completion Time of 4 hours will be asterisked (*) with the following note added to the bottom of the TS page:

*The Completion Time is extended to 30 hours, in support of the “A” RHR pump repairs, contingent on implementation of Compensatory Actions stated in Section 3.4 of letter JAFP-21-0052, dated June 13, 2021, as a one-time only change ending upon restoration of the “A” RHR pump to OPERABLE, or on July 7, 2021 at 20:00 hours. Multiple entries may be necessary to implement compensatory actions, or to address unforeseen circumstances related to the “A” RHR pump motor replacement.

Attachment 2 contains the mark-up TS pages and Attachment 3 contains the clean TS pages.

3.0 TECHNICAL EVALUATION

3.1 Defense-in-Depth/Deterministic Evaluation

With regards to the ECCS systems, should an event occur requiring the ECCS the response is described in the TS Bases as follows: *If any one low pressure ECCS injection/spray subsystem is inoperable or if one LPCI pump in both LPCI subsystems is inoperable, the inoperable subsystem(s) must be restored to OPERABLE status within 7 days. In this Condition, the remaining OPERABLE subsystems provide adequate core cooling during a LOCA. However, overall ECCS reliability is reduced, because a single active component failure in one of the remaining OPERABLE subsystems, concurrent with a LOCA, may result in the ECCS not being able to perform its intended safety function.*

The status of the JAF RHR subsystem is that three RHR pumps remain available and capable of injecting to the vessel if a LOCA were to occur. In addition, both Core Spray pumps are OPERABLE, as well as HPCI and ADS.

Availability of the C RHR pump was validated via a partial performance of "ST-2AL, RHR Loop A Quarterly Operability Test (IST)". This test demonstrated that the "C" RHR pump is capable of meeting the Technical Specification pressures and flows.

Exelon is requesting relief with three of the four RHR pumps capable of performing their safety function for the required mission time.

JAF will place the compensatory measures, as described in Section 3.4 to gain additional margin for ECCS and power system availability.

With regards to Secondary Containment, repair of the A RHR pump requires removal of the floor hatch above the West Crescent room. When assessing the impact to the plant, the relevant event of concern is internal flooding flood propagation from RB-272' to the West Crescent. RHR A, RHR C, RCIC, and Core Spray A are the key systems in the West Crescent. In terms of internal flooding potential, a stair tower with a normally closed fire door on RB-272' impedes flow between RB-272' and the West Crescent. This stair tower and un-isolated breaks on RB-272' can eventually impact equipment in the West Crescent. The open hatch additionally provides an expanded flow area that could reduce the time between Reactor Building 272' and above pipe ruptures and accumulation of water in the West Crescent.

Due to rigging evolutions in progress, personnel will be in the area making manipulations and repairs while the hatch is open. The hatch will be temporarily flood protected while open, and the impact on the timing and reliability for flood isolation from external flooding to West Crescent flood impacts is judged managed via compensatory measures. With regards to internal flooding, the Rigging Plan meets NUREG-0612 requirements for double redundant rigging, mitigating the risk of a flooding incident imposed by the evolution.

Secondary Containment Breach

Repair of the A RHR pump requires a secondary containment breach for a period of time to support transit of equipment. The secondary containment is not designed to retain severe accident source terms and is reliant on the Standby Gas Treatment System (SGTS) to maintain a negative pressure in the Reactor Building. The SGTS system is designed to control release rates for the fuel handling accident and contain the release from a significant nuclear accident. In addition, panels installed on the Reactor Building are likely to detach and relieve pressure (0.5 psid) during severe accidents leading to a ground level release. Finally, hydrogen burns/deflagration are a significant challenge to reactor building isolation during severe accidents. Scrubbing of releases by Fire Protection Spray and/or steam released from primary containment could potentially provide a benefit in severe accidents, but such phenomena have little impact on noble gases and haven't been proven effective for other fission products. No irradiated fuel moves, nor any Dry-Cask evolutions will be performed during the requested extension.

With these factors under consideration, the accident analysis essentially takes no credit for Reactor Building integrity when determining release rates. The impact of a short duration secondary containment breach has a negligible impact releases to the public. With regard to crescent area ventilation, TRM 3.7.C bases states that the function of the system is to maintain area temperatures below 110 degrees F using lake water as the cooling medium up to a lake temperature of 85 degrees F. Upon reviewing the historical meteorological data for the Oswego, NY area, the highest recorded temperature in the month of July is 95 degrees F. Current lake temperature is 58.6 degrees F, with an outside air temperature of

66 degrees F. Considering this data, sufficient margin exists regarding safety margins for installed ventilations systems.

3.2 Safety Margin Evaluation

The proposed TS change is consistent with the principle that sufficient safety margins are maintained based on the following:

Codes and standards (e.g., American Society of Mechanical Engineers (ASME), Institute of Electrical and Electronic Engineers (IEEE) or alternatives approved for use by the NRC) are met. The proposed change is not in conflict with approved codes and standards relevant to the RHR System.

The ECCS system has sufficient capacity to function for design basis events while in Condition A. Assuming no additional failures, the UFSAR acceptance criteria for the design events will be met should such an event occur during the time that the “A” RHR pump is out of service. In addition, the deterministic evaluation described above has been considered in the Safety Margin evaluation.

3.3 Risk Assessment

A risk analysis was performed that demonstrated with reasonable assurance that the proposed TS changes are within the current risk acceptance guidelines in RG 1.177 for one-time changes with substantial margin. This ensures that the TS change meets the intent of the incremental conditional core damage probability (ICCDP) and incremental conditional large early release probability (ICLERP) acceptance guidelines of 1.0E-05 (actual: 3.95E-6 w/31 day CT) and 1.0E-06 (actual: 1.51E-7 w/31 day CT) established for compatibility with the ICCDP and ICLERP limits of RG 1.177, which is applicable for configuration changes that require normal work controls. This acceptance guideline requires compensatory measures be implemented during the extended CT, which are discussed in below. The risk analysis was based on the ICCDP and ICLERPs for the unavailability of the 10P-3A motor and 10MOV-16A min flow valve, which is a conservative representation of the plant configuration during the repair and/or replacement of the RHR pump motor. The 10MOV-16A min flow valve will not be unavailable for the full duration of the pump motor repair/replacement but was conservatively assumed to be unavailable for the entire CT window. No numerical credit in the quantitative risk portions was taken for additional proposed risk management actions (RMAs) in the risk analysis.

The identification of the RMAs was derived from a detailed review of the results of the risk assessment. None of the RMAs were credited in the base risk analysis; the identified compensatory actions would further lessen the overall risk incurred during the extended periods. The additional compensatory actions that are outlined in Section 3.4 provide additional assurance that the risk during the extended allowed outage time of the surveillance extension will be minimized.

3.4 Compensatory Measures

The following compensatory action will be in effect for the duration of the one-time extension to the TS 3.5.1 Condition A, TS 3.6.4.1 Condition A, and TS 3.6.1.9 Condition A Completion Times.

Compensatory Measures For The Duration of the TS 3.5.1 Extension

- Prior to entering the LCO extension, Operations will validate that there is no degraded FLEX equipment. Any degradation to FLEX equipment will be assessed for impact for the duration of the LCO extension.
- Operator rounds will be credited for documenting FLEX equipment availability.
- Equipment is protected as required by OP-AA-108-117 and the pre-determined protected equipment maps for JAFNPP for the 'A' RHR pump out-of-service and breached secondary containment.
    - *"B Loop of RHR will be protected to ensure continued LPCI capability."*
- *"Any emergent work will be assessed and managed in accordance with 10CFR50.65(a)(4) and the applicable technical specifications.*
- *Perform shiftly briefs on the performance of local containment venting.*
- Operators shall brief include in their per-shift brief the required actions to ensure safe shutdown of the plant per OP-AA-201-012-1001 Operations On-Line Fire Risk Management for the A RHR subsystem being INOPERABLE for greater than 60 hours.
    - *"Brief fire brigade and Ops on Fire Zones impacted by SSD equipment outage. Identify: risk mitigation equipment OOS, current success path for SSD, and fire fighting strategies for East Crescent area."*
    - *"Minimize combustible(s) in the East Crescent Area – walk down to confirm"*
    - *"Prohibit Hot Work in East Crescent area – notify all Hot Work Supervisors."*
    - *"All fire risk management actions (RMAs) will be implemented for each configuration per procedural guidance in OP-AA-201-012-1001 [8] and WC-AA-101-1006 [9].*
- JAB has verified and will continue to verify grid/offsite power status with the transmission system operator during the extension period.
- JAF has verified and will continue to verify that the forecasted weather conditions during the extension period are favorable. However, Operations will be briefed on actions and response in the event of a loss of offsite power during the duration of the extension.
    - *"In the event of severe weather, including tornado/high wind events, all work associated with the equipment impacted by the changes proposed in the LAR will be suspended and the WC-AA-101, Attachment 6 for High Risk Evolutions for severe weather will be used to control work processes. Focus will also be placed upon weather forecasts as they pertain to the motor repair/replacement work to ensure that the removed floor plug opening is sealed prior to any potential rain."*
- No elective maintenance will be performed on:
    - Equipment related to the ECCS or RCIC Systems.
    - The Station Batteries
    - The Emergency Diesel Generators (EDGs)
    - The Reserve Station Transformers (RSSTs).
    - Fire Protection Equipment in the East Crescent
    - *"Reschedule surveillances/PM that could affect FP equipment in the East Crescent."*
- Torus water level will be established between 13.90' and 14.00'. If Torus makeup is required, the "slow rate method" will be utilized IAW OP-13B G.3.2/4.2.
- Alternate indication for A Torus Spray available to the operations crew.

Compensatory Measures For The Duration of the TS 3.6.4.1 Extension

- No fuel cask movement OR irradiated fuel handling operations are being performed in the Secondary Containment.
- No handling of loads over irradiated fuel.
- Chemistry to establish a Low Volume sampler at the access hatch for continuous sampling and ensure sample results are collected every 12 hrs and analyzed within 24 hours of collection
- Communications established, as required, with MMD to ensure a prompt restoration of the hatch is performed if requested by Operations
    - *"Operator rounds will be established to ensure there are no leaks present within or waterflow that could propagate to the crescents that could jeopardize the operability housed equipment. Spill barriers will surround the perimeter of the opened floor plug to further address water seepage into the west crescent."*
- Water intrusion mitigation devices are staged near the equipment hatch in the CST Area to allow for additional berm re-enforcement if a flooding condition were to arise (i.e. AOP-13, Severe Weather entered)
- Ensure all heavy moving equipment remains clear of AOP-13, Severe Weather, Attachment 2 1400ft Separation Path to comply with FLEX requirements
- JAF has verified that the forecasted weather conditions during the extension period are favorable. However, Operations will be briefed on actions and response in the event of a loss of offsite power during the duration of the extension.
    - *"In the event of severe weather, including tornado/high wind events, all work associated with the equipment impacted by the changes proposed in the LAR will be suspended and the WC-AA-101, Attachment 7 for High Risk Evolutions for severe weather will be used to control work processes. Focus will also be placed upon weather forecasts as they pertain to the motor repair/replacement work to ensure that the removed floor plug opening is sealed prior to any potential rain."*

JAF has three Adverse Condition Monitoring Plans (ACMPs) have been implemented at the site. They include the following:

- HPCI Turbine Steam Inlet Isolation Valve (23MOV-14) Seat Leakage
- EHC Intercept Valve Position Feedback
- 6A Feedwater Heater (33E-6A) High Level Switch

These ACMPs are monitored on a prescribed frequency and have remained stable without complication. It is acceptable to continue the monitoring plans without adverse effect on the request.

- JAF has verified the one Technical Requirements Manual (TRM) action statement is in affect which supports the Control Room AC (CRV) System Instrumentation (TRM 3.3.K). Compensatory Actions are in place to allow manual control of CRV due to a temperature transmitter failure. These compensatory measures will not impact any of the recommended compensatory actions as described nor is there a detrimental cumulative impact.

3.5 Summary of SRs being extended.

The basis for this request is to address the TS requirements. JAF TS SR 3.0.1, states in part "Failure to perform the SR within the specified Frequency shall be failure to meet the LCO except as provided in SR 3.0.3."

Additionally, in order to maintain safe and stable plant operations as a result of the extended operation with the "A" RHR pump inoperable, JAF is protecting other safety related equipment. SRs in protected systems or important to safety systems will come due, during

"A" RHR motor replacement extended Completion Time, and if not performed the associated system must be declare inoperable.

Accordingly, Exelon is requesting that these surveillances not be required to be performed during the extended period. Attachment 2 contains a markup of the TS SR Pages, annotated with a note stating when the past due Surveillances will be completed.

Requested Surveillance Requirement allowances are as follows:

ST/ISP	Surveillance Requirement	Late Date	Rescheduled Date
ISP-150B RCIC Auto Isolation Instrument Check	SR 3.3.6.1.2 Table 3.3.6.1-1, Functions 4.a, 4.b, 4.d, 4.e, **AND** 4.f. SR 3.3.6.1.4 Table 3.3.6.1-1, 4.a, 4.b, 4.d, 4.e, **AND** 4.f. SR 3.3.6.1.5 Table 3.3.6.1-1, Functions 4.a, 4.b, 4.d, 4.e, **AND** 4.f.	06/16/21	7/12/21
ST-8Q ESW Quarterly	SR 3.7.2.4, SR 3.7.4.1, TRS 3.7.C.1, TRS 3.7.C.2	07/04/21	7/19/21
ST-9BA Quarterly EDG run	SR 3.8.1.2, SR 3.8.1.3, SR 3.8.1.6, SR 3.8.3.4, SR 3.7.2.4 TRS 3.3.L.1	06/17/21	7/12/21
ST-9AA Quarterly EDG Fuel Oil Check	SR 3.8.1.4, SR 3.8.1.5, SR 3.8.3.1 for EDG Fuel Oil Storage Volume, SR 3.8.3.2 TRS 3.7.P.1	06/17/21	7/12/21
ST-43I Remote Shutdown Instrument Check	SR 3.3.3.2.1 TRM Appendices D, Table D-1, Functions 57, 58, 61, 65, 69,70,92, 93, 94	07/01/21	7/12/21
ST-9AB Quarterly EDG Fuel Oil Check	SR 3.8.1.4, SR 3.8.1.5, SR 3.8.3.1 for EDG Fuel Oil Storage Volume SR 3.8.3.2 TRS 3.7.P.1	07/01/21	7/12/21
ST-9BB Quarterly EDG run	SR 3.8.1.2, SR 3.8.1.3, SR 3.8.1.6 , SR 3.8.3.4, SR 3.7.2.4 TRS 3.3.L.1	07/01/21	7/19/21
ST-4B HPCI Operability Check	SR 3.5.1.1 SR 3.5.1.2	07/02/21	7/19/21

Exelon is requesting relief from performing the listed surveillances to minimize the likelihood of a human error or unforeseen circumstance arising from the operation of equipment that degrades other ECCS equipment or their associated power supplies.

Review of each surveillance and the work orders open against the equipment associated indicate favorable history. System performance on each surveillance has shown to be reliable with repeatable results.

3.6 Maintenance Rule Control

The RHR pumps are included under the JAF Maintenance Rule Program and function as described in Section 2.2. The RHR pumps are monitored for unavailability as part of the Maintenance Rule performance monitoring. As part of compliance with

10 CFR 50.65, performance is monitored against licensee-established goals. If the performance of the RHR System does not meet the established goals,

10 CFR 50.65(a)(1) requires appropriate corrective action to be taken to restore the system's performance to an acceptable level.

The pumps' reliability is tracked by quarterly in-service testing (IST). If, during testing, pump parameters are outside of the established criteria of the IST program, the IST program requires action to address the situation.

4.0 REGULATORY EVALUATION

4.1 Applicable Regulatory Requirements/Criteria

The following regulatory requirements have been considered: 10 CFR 50.36:

10 CFR, Section 50.36, "Technical specifications," in which the Commission established its regulatory requirements related to the contents of the TS. Specifically, 10 CFR 50.36(c)(2) states, in part, "Limiting conditions for operation are the lowest functional capability or performance levels of equipment required for safe operation of the facility." The proposed changes do not affect compliance with these regulations.

10 CFR 50.46:

10 CFR 50.46, "Acceptance criteria for emergency core cooling systems for light-water nuclear power reactors" in which the Commission established its regulatory requirements related to core cooling: The proposed changes maintain the acceptance criteria of this section.

10 CFR 50 Appendix A:

The applicable 10 CFR Part 50, Appendix A, "General Design Criteria for Nuclear Power Plants," was considered as follows:

Criterion 35—Emergency core cooling. A system to provide abundant emergency core cooling shall be provided. The system safety function shall be to transfer heat from the reactor core following any loss of reactor coolant at a rate such that (1) fuel and clad damage that could interfere with continued effective core cooling is prevented and (2) clad metal-water reaction is limited to negligible amounts.

Suitable redundancy in components and features, and suitable interconnections, leak detection, isolation, and containment capabilities shall be provided to assure that for onsite electric power system operation (assuming offsite power is not available) and for offsite electric power system operation (assuming onsite power is not available) the system safety function can be accomplished, assuming a single failure.

Criterion 36—Inspection of emergency core cooling system. The emergency core cooling system shall be designed to permit appropriate periodic inspection of important components, such as spray rings in the reactor pressure vessel, water injection nozzles, and piping, to assure the integrity and capability of the system.

Criterion 37—Testing of emergency core cooling system. The emergency core cooling system shall be designed to permit appropriate periodic pressure and functional testing to assure (1) the structural and leak tight integrity of its components, (2) the operability and performance of the active components of the system, and (3) the operability of the system as a whole and, under conditions as close to design as practical, the performance of the

full operational sequence that brings the system into operation, including operation of applicable portions of the protection system, the transfer between normal and emergency power sources, and the operation of the associated cooling water system.

4.2 Precedent

The proposed change is similar to NRC-approved License Amendment to Columbia Generating Station on February 1, 2015 (NRC Agencywide Documents Access and Management System (ADAMS) Accession No. ML15030A501), and to Edwin I Hatch Nuclear Plant Unit 2 on April 22, 2021 ADAMS Accession No ML21109A359.

4.3 Significant Hazards Consideration Analysis

Pursuant to 10 CFR 50.90, "Application for amendment of license, construction permit, or early site permit," Exelon Generation Company, LLC (Exelon) is requesting approval for proposed changes to the Technical Specifications (TS), Appendix A of Renewed Facility Operating License No. DPR-59 for James A. FitzPatrick Nuclear Power Plant (JAF). The proposed changes are being requested on an emergency basis pursuant to 10 CFR 50.91(a)(5).

The amendment would allow for one-time increases for several Technical Specification Action Statement Completion Times:

TS 3.5.1 ECCS - Operating, Condition A, from 7 days to 30 days
TS 3.6.1.9 RHR Containment Spray System, Condition A, from 7 days to 23 days
TS 3.6.4.1 Secondary Containment, Condition A, from 4 hours to 30 hours.

JAF has evaluated whether or not a significant hazards consideration is involved with the proposed amendment(s) by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment," as discussed below:

1. Does the proposed amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No

The proposed change involves a one-time extension to the Completion Time for Technical Specification (TS) 3.5.1 Condition A to allow necessary time to restore the “A” RHR pump to OPERABLE status. The proposed amendment does not affect accident initiators or precursors nor adversely alter the design assumptions, conditions, and configuration of the facility. The proposed amendment does not alter any plant equipment or operating practices with respect to such initiators or precursors in a manner that the probability of an accident is increased. The proposed amendment will not alter assumptions relative to the mitigation of an accident or transient event. Furthermore, the Emergency Core Cooling Systems (ECCS) will remain capable of adequately responding to a design basis event or transient during the period of the extended Completion Time.

Therefore, the proposed amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed amendment create the possibility of a new or different accident from any accident previously evaluated?

Response: No

The proposed amendment does not introduce any new or unanalyzed modes of operation. The proposed changes do not involve a physical alteration to the plant (i.e., no new or different type of equipment will be installed) or a change to the methods governing normal plant operation. The changes do not alter the assumptions made in the safety analysis.

Therefore, the proposed amendment will not create the possibility of a new or different accident from any accident previously evaluated.

3. Does the proposed amendment involve a significant reduction in a margin of safety?

Response: No.

The margin of safety is related to the ability of the fission product barriers to perform their design functions during and following an accident. These barriers include the fuel cladding, the reactor coolant system, and the containment. The performance of these fission product barriers is not affected by the proposed amendment; therefore, the margins to the onsite and offsite radiological dose limits are not significantly reduced.

In addition, during the extended Completion Time the ECCS will remain capable of mitigating the consequences of a design basis event such as a LOCA.

Therefore, the proposed amendment does not involve a significant reduction in a margin of safety.

Based on the above, JAF concludes that the proposed amendment does not involve a significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of “no significant hazards consideration” is justified.

4.4 Conclusions

In conclusion, based on the considerations discussed herein, (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.

5.0 ENVIRONMENTAL CONSIDERATION

JAF has evaluated the proposed amendment and has determined that the proposed amendment does not involve (i) a significant hazards consideration, (ii) a significant change in the types, or significant increase in the amounts, of any effluent that may be released off site, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

6.0 REFERENCES

1. Regulatory Guide 1.200, *An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities*, Revision 2, dated March 2009.
2. Regulatory Guide 1.174, *An Approach for Using Probabilistic Risk Assessment in Risk- Informed Decisions on Plant-Specific Changes to the Licensing Basis*, Revision 2, dated April 2015.
3. Regulatory Guide 1.177, *An Approach for Plant-Specific, Risk-Informed Decisionmaking: Technical Specifications*, Revision 1, dated May 2011.

ATTACHMENT 2

Emergency License Amendment Request

James A. FitzPatrick Nuclear Power Plant
Renewed Facility Operating License No. DPR-59
Docket No. 50-333

Markup of Technical Specification Pages

Subject: **Emergency License Amendment Request - One Time Extension to TS 3.5.1 Condition A, TS 3.6.1.9 Condition A, and TS 3.6.4.1 Condition A Completion Time to Support Residual Heat Removal (RHR) Pump Motor Replacement**

TS Condition Pages

3.5.1-1
3.6.4.1-1
3.6.1.9-1

TS SR Pages

3.3.3.2-2
3.3.6.1-4
3.3.6.1-5
3.5.1-3
3.5.1-4
3.7.2-4
3.7.4-3
3.8.1-5
3.8.1-6
3.8.3-2
3.8.3-3

3.5 EMERGENCY CORE COOLING SYSTEMS (ECCS), REACTOR PRESSURE VESSEL (RPV) WATER INVENTORY CONTROL, AND REACTOR CORE ISOLATION COOLING (RCIC) SYSTEM

3.5.1 ECCS-Operating

LCO 3.5.1 Each ECCS injection/spray subsystem and the Automatic Depressurization System (ADS) function of six safety/relief valves shall be OPERABLE.

----------NOTE----------

Low pressure coolant injection (LPCI) subsystems may be considered OPERABLE during alignment and operation for decay heat removal with reactor steam dome pressure less than the Residual Heat Removal (RHR) cut in permissive pressure in MODE 3, if capable of being manually realigned and not otherwise inoperable.

APPLICABILITY: MODE 1,
MODES 2 and 3, except high pressure coolant injection (HPCI) and ADS valves are not required to be OPERABLE with reactor steam dome pressure ≤ 150 psig.

ACTIONS

----------NOTE----------
LCO 3.0.4.b is not applicable to HPCI.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One low pressure ECCS injection/spray subsystem inoperable. OR One low pressure coolant injection (LPCI) pump in both LPCI subsystems inoperable.	A.1 Restore low pressure ECCS injection/spray subsystem(s) to OPERABLE status.	7 days *
B. Required Action and associated Completion Time of Condition A not met.	B.1 Be in MODE 3. AND B.2 Be in Mode 4.	12 hours 36 hours

(continued)

* The Completion Time to return the "A" RHR pump to OPERABLE is extended to 30 days, contingent on implementation of Compensatory Actions stated in Section 3.4 of letter JAFP-21-0052, dated June 13, 2021, as a one-time only change ending upon restoration the “A” RHR pump to OPERABLE, or on July 7, 2021 at 20:00 hours.

3.6 CONTAINMENT SYSTEMS

3.6.1.9 Residual Heat Removal (RHR) Containment Spray System

LCO 3.6.1.9 Two RHR containment spray subsystems shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One RHR containment spray subsystem inoperable.	A.1 Restore RHR containment spray subsystem to OPERABLE status.	7 days *
B. Two RHR containment spray subsystems inoperable.	B.1 Restore one RHR containment spray subsystem to OPERABLE status.	8 hours
C. Required Action and associated Completion Time not met.	C.1 Be in MODE 3. AND C.2 Be in MODE 4.	12 hours 36 hours

* The Completion Time is extended to 23 days, in support of the "A" RHR pump repairs, contingent on implementation of Compensatory Actions stated in Section 3.4 of letter JAFP-21-0052, dated June 13, 2021, as a one-time only change ending upon restoration of the "A" RHR pump to OPERABLE, or on July 7, 2021 at 20:00 hours.

3.6 CONTAINMENT SYSTEMS

3.6.4.1 Secondary Containment

LCO 3.6.4.1 The secondary containment shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3,
During movement of recently irradiated fuel assemblies in the secondary containment,

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Secondary containment inoperable in MODE 1, 2, or 3.	A.1 Restore secondary containment to OPERABLE status.	4 hours *
B. Required Action and associated Completion Time of Condition A not met.	B.1 Be in MODE 3. AND B.2 Be in MODE 4.	12 hours 36 hours
C. Secondary containment inoperable during movement of recently irradiated fuel assemblies in the secondary containment.	C.1 ----------NOTE---------- LCO 3.0.3 is not applicable. ---------- Suspend movement of recently irradiated fuel assemblies in the secondary containment.	 Immediately

* The Completion Time is extended to 30 hours, in support of the "A" RHR pump repairs, contingent on implementation of Compensatory Actions stated in Section 3.4 of letter JAFP-21-0052, dated June 13, 2021, as a one-time only change ending upon restoration of the "A" RHR pump to OPERABLE, or on July 7, 2021 at 20:00 hours. Multiple entries may be necessary to implement compensatory actions, or to address unforeseen circumstances related to the "A" RHR pump motor replacement.

SURVEILLANCE REQUIREMENTS

----------NOTE----------
When a channel is placed in an inoperable status solely for performance of required Surveillances, entry into associated Conditions and Required Actions may be delayed for up to 6 hours.

	SURVEILLANCE	FREQUENCY
SR 3.3.3.2.1	Perform CHANNEL CHECK for each required instrumentation channel that is normally energized.	In accordance with the Surveillance Frequency Control Program *
SR 3.3.3.2.2	Verify each required control circuit and transfer switch is capable of performing the intended function.	In accordance with the Surveillance Frequency Control Program
SR 3.3.3.2.3	Perform CHANNEL CALIBRATION for each required instrumentation channel.	In accordance with the Surveillance Frequency Control Program

* This Surveillance is not required to be performed until following the return of the "A" RHR pump to OPERABLE. This past due Surveillance will be completed as stated in Section 3.5 of letter JAFP-21-0052, dated June 13, 2021.

SURVEILLANCE REQUIREMENTS

---------- NOTES ----------

1. Refer to Table 3.3.6.1-1 to determine which SRs apply for each Primary Containment Isolation Function.

2. When a channel is placed in an inoperable status solely for performance of required Surveillances, entry into associated Conditions and Required Actions may be delayed as follows: (a) for up to 6 hours for Functions 2.d, 2.g, 7.a, and 7.b; and (b) for up to 6 hours for Functions other than 2.d, 2.g, 7.a, and 7.b provided the associated Function maintains isolation capability.

SURVEILLANCE		FREQUENCY
SR 3.3.6.1.1	Perform CHANNEL CHECK.	In accordance with the Surveillance Frequency Control Program
SR 3.3.6.1.2	Perform CHANNEL FUNCTIONAL TEST.	In accordance with the Surveillance Frequency Control Program *
SR 3.3.6.1.3	---------- NOTE ---------- For Functions 1.f and 2.f, radiation detectors are excluded. ---------- Perform CHANNEL CALIBRATION.	In accordance with the Surveillance Frequency Control Program

(continued)

* This Surveillance is not required to be performed for functions 4.a, 4.b, 4.d, 4.e and 4.f of table 3.3.6.1-1 until following the return of the "A" RHR pump to OPERABLE. This past due Surveillance will be completed as stated in Section 3.5 of letter JAFP-21-0052, dated June 13, 2021.

SURVEILLANCE REQUIREMENTS (continued)

	SURVEILLANCE	FREQUENCY
SR 3.3.6.1.4	Calibrate the trip units.	In accordance with the Surveillance Frequency Control Program *
SR 3.3.6.1.5	Perform CHANNEL CALIBRATION.	In accordance with the Surveillance Frequency Control Program *
SR 3.3.6.1.6	Calibrate the radiation detectors.	In accordance with the Surveillance Frequency Control Program
SR 3.3.6.1.7	Perform LOGIC SYSTEM FUNCTIONAL TEST.	In accordance with the Surveillance Frequency Control Program
SR 3.3.6.1.8	---------- NOTE ---------- "n" equals 2 channels for the purpose of determining the STAGGERED TEST BASIS Frequency. ---------- Verify the ISOLATION INSTRUMENTATION RESPONSE TIME is within limits.	In accordance with the Surveillance Frequency Control Program

* This Surveillance is not required to be performed for functions 4.a, 4.b, 4.d, 4.e and 4.f of table 3.3.6.1-1 until following the return of the "A" RHR pump to OPERABLE. This past due Surveillance will be completed as stated in Section 3.5 of letter JAFP-21-0052, dated June 13, 2021.

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
G. Required Action and associated Completion Time of Condition C, D, E, or F not met. OR Two or more required ADS valves inoperable.	G.1 AND G.2	Be in MODE 3. Reduce reactor steam dome pressure to ≤ 150 psig.	12 hours 36 hours
H. Two or more low pressure ECCS injection/spray subsystems inoperable for reasons other than Condition A. OR HPCI System and one or more required ADS valves inoperable.	H.1	Enter LCO 3.0.3.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.5.1.1	Verify, for each ECCS injection/spray subsystem, the piping is filled with water from the pump discharge valve to the injection valve.	In accordance with the Surveillance Frequency Control Program *

(continued)

* This Surveillance is not required to be performed until following the return of the "A" RHR pump to OPERABLE. This past due Surveillance will be completed as stated in Section 3.5 of letter JAFP-21-0052, dated June 13, 2021.

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.5.1.2	Verify each ECCS injection/spray subsystem manual, power operated, and automatic valve in the flow path, that is not locked, sealed, or otherwise secured in position, is in the correct position.	In accordance with the Surveillance Frequency Control Program *
SR 3.5.1.3	Verify ADS pneumatic supply header pressure is $\geq$ 95 psig.	In accordance with the Surveillance Frequency Control Program
SR 3.5.1.4	Verify the RHR System cross tie valves are closed and power is removed from the electrical valve operator.	In accordance with the Surveillance Frequency Control Program
SR 3.5.1.5	Cycle open and closed each LPCI motor operated valve independent power supply battery charger AC input breaker and verify each LPCI inverter output voltage is $\geq$ 576 V and $\leq$ 624 V while supplying the respective bus.	In accordance with the Surveillance Frequency Control Program

(continued)

* This Surveillance is not required to be performed until following the return of the "A" RHR pump to OPERABLE. This past due Surveillance will be completed as stated in Section 3.5 of letter JAFP-21-0052, dated June 13, 2021.

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.7.2.4	Verify each ESW subsystem actuates on an actual or simulated initiation signal.	In accordance with the Surveillance Frequency Control Program *

* This Surveillance is not required to be performed until following the return of the "A" RHR pump to OPERABLE. This past due Surveillance will be completed as stated in Section 3.5 of letter JAFP-21-0052, dated June 13, 2021.

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.4.1	Verify each control room AC subsystem has the capability to remove the assumed heat load.	In accordance with the Surveillance Frequency Control Program *

* This Surveillance is not required to be performed until following the return of the "A" RHR pump to OPERABLE. This past due Surveillance will be completed as stated in Section 3.5 of letter JAFP-21-0052, dated June 13, 2021.

SURVEILLANCE REQUIREMENTS (continued)

	SURVEILLANCE	FREQUENCY
SR 3.8.1.2	----------NOTE---------- All EDG subsystem starts may be preceded by an engine prelube period and followed by a warmup period prior to loading. ---------- Verify each EDG subsystem starts from standby conditions, force parallels, and achieves: a. In ≤ 10 seconds, voltage ≥ 3900 V and frequency ≥ 58.8 Hz; and b. Steady state voltage ≥ 3900 V and ≤ 4400 V and frequency ≥ 58.8 Hz and ≤ 61.2 Hz.	In accordance with the Surveillance Frequency Control Program *
SR 3.8.1.3	----------NOTE---------- 1. EDG loadings may include gradual loading as recommended by the manufacturer. 2. Momentary transients outside the load range do not invalidate this test. 3. This Surveillance shall be conducted on only one EDG subsystem at a time. 4. This SR shall be preceded by and immediately follow, without shutdown, a successful performance of SR 3.8.1.2. ---------- Verify each EDG subsystem is paralleled with normal, reserve, or backfeed power and each EDG is loaded and operates for ≥ 60 minutes at a load ≥ 2340 kW and ≤ 2600 kW.	In accordance with the Surveillance Frequency Control Program *

(continued)

* This Surveillance is not required to be performed until following the return of the "A" RHR pump to OPERABLE. This past due Surveillance will be completed as stated in Section 3.5 of letter JAFP-21-0052, dated June 13, 2021.

SURVEILLANCE REQUIREMENTS (continued)

	SURVEILLANCE	FREQUENCY
SR 3.8.1.4	Verify each day tank contains ≥ 327 gal of fuel oil.	In accordance with the Surveillance Frequency Control Program *
SR 3.8.1.5	Check for and remove accumulated water from each day tank.	In accordance with the Surveillance Frequency Control Program *
SR 3.8.1.6	Verify that each EDG fuel oil transfer system operates to automatically transfer fuel oil from its storage tank to the associated day tank.	In accordance with the Surveillance Frequency Control Program *
SR 3.8.1.7	----------NOTE---------- Only required to be met for each offsite circuit that is not energizing its respective 4.16 kV emergency bus. ----------	
	Verify automatic and manual transfer of plant power supply from the normal station service transformer to each offsite circuit.	In accordance with the Surveillance Frequency Control Program
SR 3.8.1.8	----------NOTE---------- If performed with the EDG subsystem paralleled with normal, reserve, or backfeed power, it shall be performed within the power factor limit. However, if grid conditions do not permit, the power factor limit is not required to be met. Under this condition, the power factor shall be maintained as close to the limit as practicable. ----------	
	Verify each EDG subsystem rejects a load greater than or equal to its associated single largest post-accident load, and following load rejection, the frequency is ≤ 66.75 Hz.	In accordance with the Surveillance Frequency Control Program

* This Surveillance is not required to be performed until following the return of the "A" RHR pump to OPERABLE. This past due Surveillance will be completed as stated in Section 3.5 of letter JAFP-21-0052, dated June 13, 2021.

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. One or more EDGs with new fuel oil properties not within limits.	D.1 Restore stored fuel oil properties to within limit.	30 days
E. One or more EDGs with required starting air receiver pressure < 150 psig and ≥ 110 psig.	E.1 Restore required starting air receiver pressure to within limits.	48 hours
F. Requires Action and associated Completion Time of Condition A, B, C, D, or E not met. OR One or more EDGs with diesel fuel oil, lube oil, or starting air subsystem not within limits for reasons other then condition A, B, C, D, or E.	F.1 Declare associated EDG inoperable.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.8.3.1	Verify each fuel oil storage tank contains ≥ a 7 day supply of fuel.	In accordance with the Surveillance Frequency Control Program *

(continued)

* This Surveillance is not required to be performed until following the return of the "A" RHR pump to OPERABLE. This past due Surveillance will be completed as stated in Section 3.5 of letter JAFP-21-0052, dated June 13, 2021.

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.3.2	Verify lube oil inventory of each EDG is ≥ a 7 day supply.	In accordance with the Surveillance Frequency Control Program *
SR 3.8.3.3	Verify fuel oil properties of new and stored fuel oil are tested in accordance with, and maintained within the limits of, the diesel Fuel Oil Testing Program.	In accordance with the Diesel Fuel Oil Testing Program
SR 3.8.3.4	Verify Each EDG required air start receiver pressure is ≥ 150 psig.	In accordance with the Surveillance Frequency Control Program *
SR 3.8.3.5	Check for and remove accumulated water from each fuel oil storage tank.	In accordance with the Surveillance Frequency Control Program

* This Surveillance is not required to be performed until following the return of the "A" RHR pump to OPERABLE. This past due Surveillance will be completed as stated in Section 3.5 of letter JAFP-21-0052, dated June 13, 2021.